

Acknowledgement

I am thankful to MES's Institute of Management and Career Courses, for giving me the opportunity to carry out my post-graduation project.

I am grateful to Dr. V. H. Inamdar, Director IMCC, Dr. Santosh Deshpande, HOD Computer Department, IMCC, Mrs Apurwa Barve Ma'am (Project Guide), Sandeep Nimbalkar sir and Dr. Manasi Bhate, TPO, IMCC for their valuable guidance & expertise suggestions, without which this project would not have been successful.

I would like to thank Mr. Atul Thombre, C.E.O of iSynergy Systems, who gave me an opportunity to develop this system. I would like to thank Mr. Nachiket Karguppikar for guiding me throughout the project. I would also like to thank all colleagues in iSynergy Systems, their support and co-operation made my tasks a lot easier and interesting.

Ruchi Bhagwat

INDEX

Chapter No.	Topic No.	Topic Name	Page No.
1		Introduction	
	1.1	Company Profile	1
	1.2	Existing System and Need for System	7
	1.3	Scope of work	12
	1.4	Operating environments : Hardware and Software	14
	1.5	Detailed description of technology used	15
2		Proposed System	
	2.1	Proposed system	19
	2.2	Objectives of the System	20
	2.3	User Requirements	21
3		Analysis and Design	
	3.1	Object Diagram	22
	3.2	Class Diagram	23
	3.3	Use case Diagram	24

	3.4	Activity Diagram	29
	3.5	Sequence Diagram	33
	3.6	Entity Relationship Diagram	37
	3.7	Module hierarchy Diagram	38
	3.8	Component Diagram	40
	3.9	Deployment Diagram	41
	3.10	Module Specification	42
	3.11	Website Map Diagram	45
	3.12	User Interface Design	46
	3.13	Data Dictionary	54
	3.14	Table Specifications	67
	3.13	Test Procedures and implementation	72
4		User Manual	
	4.1	User Manual	98
	4.2	Operations Manual / Menu Explanation	111
	4.3	Program Specifications / Flow Charts	117

5		Drawbacks and Limitations	120
6		Proposed Enhancements	121
7		Conclusion	122
8		Bibliography	
9		Annexure	
10		Annexure 1 : User Interface Screens	
11		Annexure 2 : Output Reports With Data	
12		Annexure 3 : Sample Program Code	

CHAPTER 1:
INTRODUCTION

- 1.1 COMPANY PROFILE

OVERVIEW:

iSynergy is a value-driven organization offering Outsourced Product Development and Technology Services in various technology domains. Company has a regional presence in US, India and South Africa with a customer base spread across the geographies. Most of our customers work in cutting-edge technology applications, web solutions, mobile applications, enterprise solutions, integration services and so on. They are innovative technology companies, VC funded companies on growth spree, start-up companies and mid-sized software product and services companies.

iSynergy's Outsourced Product Development Services are built around your business and technology needs. It covers the entire spectrum of services starting from conceptualization to deployment and migration support. Our expertise and experience in technology architecture, flexibility and adaptability to changes, versatile and dedicated technology culture has an

optimizing effect on your performance in designing, developing and deploying technically critical solutions.

Our teams have proven expertise in Java, Microsoft Technologies, Open Source Technologies, Mobile platforms and so on.

iSynergy's Technology Services offer full length consulting in the area of technology decisions, customised solutions and enterprise application integration. It has successfully delivered projects which demanded command over core technology.

iSynergy's technology expertise, understanding of the customers' business, value system, ability to walk with the customer, spirit of ownership, pro-activeness and responsiveness are some of the critical factors in its success story. iSynergy responsibly creates and adds value to the top-line of its customers' businesses to maintain their uniqueness.

another and businesses are turning the opportunity to deliver its advantages to their users and customers.

iSynergy understand the future available with mobile technologies and, therefore, has developed its team to work in the domain. We have successfully developed and deployed mobile applications on Blackberry using J2ME and RIM. We have delivered applications on iPhone, Android, and Windows Mobile using Microsoft .Net CF. These applications communicates with the server, builds interactivity and enables you to run your business when you are the move.

Migration

Change in the technology environment and customers operative scenario demands technology migration at different level. iSynergy provides the technology migration services to ensure such smooth transitions for all the stakeholders. It starts with assessing the technology situation and business requirements, and decides the most effective mechanism. iSynergy Migration Services covers Application Migration, Database Migration & Cross Technology Migration.

Customized Projects

Delivering a software development project is probably a service most of the companies provide today. You have already seen enough of flow charts and diagrams explaining delivery models and methodologies. Still, you had to burn your fingers earlier, which compels you to think ten times before you decide on outsourcing it to someone!

The success solely depends on the outsourcing team and their approach. Finally it's all about the people. Right people will set right processes to take care of your uniqueness! At iSynergy, this has been the

strength since inception. We have successfully delivered customised projects in Web solutions, Enterprise applications and Business solutions.

Enterprise Application Integration

Diverse IT infrastructures, fast paced business and customer needs, limitations of legacy systems architecture creates a need to integrate applications for seamless flow of information between two systems.

iSynergy's EAI delivery framework has helped organizations to crack their information barriers across enterprise. A comprehensive approach towards EAI helps to deal with the challenge of integration. Our expertise in integration of applications and tools, middleware products and expertise in enterprise solutions delivers satisfying experience to you.

1.2 EXISTING SYSTEM

The existing system manages the leads and project details manually. All the information is stored in separate excel sheets. It records details such as-

1. Enquiry details

The very first meeting or enquiry regarding project development is recorded manually excel sheets.

This information is provided to the admin official and he/she enters the information manually.

2. Client details

The client coming up with the requirement ,his details are recorded for future need.

3. Project details

Details of the project such as start date,end date,technology used,requirements,possible schedule,team members working on it is decided and recorded.

4. Keeping track of the payments

The client may decide to pay the full amount at once or in installments. These details are stored. Calculation of amount left to be paid in case of advance payment, installments is done manually and stored.

5. Generating invoices-domestic and international

Company handles domestic as well as international clients. Calculation and generation of invoices is different for each type of client. These calculations are also done manually.

6. Generating payment reminders

It is the task of the account section to keep track of payments, keep in check which client's payment has been completed and which client's payment is pending.

Calculating amount left and sending reminders to respective clients for payment is another task.

7. Reports having different views for different compliances

Existing system requires generation of reports having different views for different compliances. These reports are generated manually referring to multiple excel sheets.

DISADVANTAGES OF EXISTING SYSTEM:

Maintaining and recording these process is tedious and time consuming. This process becomes difficult to handle when the number of clients and projects increase.

There are many limitations for the existing systems.

In manual monitoring, all the work done in the existing scenario is by human intervention which may increase the chance of errors.

Generation of reports is yet another tedious task as it requires going through a lot of excel sheets and filtering of information.

Inconsistency

Manual data recording is inconsistent because the devices used need precision and it is not possible to that extent for human being. E.g. In order to get exact or accurate customization for product the data has to be recorded in a precise manner and order status has to be managed properly in order to record accurate data.

Error prone

Human based systems are always prone to errors due to miscalculations and carelessness.

Expensive

Human beings need to be paid for their work which in turn is not beneficial to the organisation due to its inaccuracy. This is a bad investment for an organisation and demands for some other alternative for the same.

NEED FOR THE SYSTEM

Lead management system is an automated version of the existing system. This system overcomes the drawbacks of the existing system by maintaining and recording the data and generating reports as and when needed in the form required by the personnel.

The above mentioned process will be automated. This will not only save time but also make it easier to maintain and retrieve information.

- **1.3 SCOPE OF WORK**

Lead management system is an application which focuses on managing leads and generation of invoice receipt.

A project starts from an idea/enquiry which is further elaborated and converted into a project.

The project goes through the development life cycle and generation of milestones and ultimately an invoice in pdf printable format.

This software records every step of the project which includes-

1. Enquiry details
2. Client details
3. Project details
4. Keeping track of the payments
5. Generating invoices-domestic and international
6. Generating payment reminders
7. Reports having different views for different compliances

What view of the report will be generated depends on the user accessing the system. Reports will be generated in the form of graphs and sheets. There will be categories eg: client wise reports, monthly reports, revenue wise reports etc.

This software automates the process.

- **1.4 OPERATING ENVIRONMENT**

(Hardware and Software)

Hardware required

- Processor: 1 gigahertz (GHz) or faster

RAM: 1 GB

Hard disk: 40 GB

Internet: Modem with speed of 1MB per second.

Display: 17' Monitor

Software Required-

Front-End-

Web browser such as Internet Explorer, Chrome or Firefox.

ReST API

Back-End-

MySQL Server 4.0

OS – windows,linux

- **1.5 DETAILED DESCRIPTION OF TECHNOLOGY USED**

- **Java:**

Writing in the Java programming language is the primary way to produce code that will be deployed as byte code in a Java Virtual Machine (JVM); byte code compilers are also available for other languages, including Ada, JavaScript, Python, and Ruby. In addition, several languages have been designed to run natively on the JVM, including Scala, Clojure and Groovy.

Java syntax borrows heavily from C and C++, but object-oriented features are modelled after Smalltalk and Objective-C. Java eschews certain low-level constructs such as pointers and has a very simple memory model where every object is allocated on the heap and all variables of object types are references. Memory management is handled through integrated automatic garbage collection performed by the JVM.

- **Spring Framework:**

The Spring Framework is an open source application framework and inversion of control container for the Java platform. The framework's core features can be used by any Java application, but there are extensions for building web applications on top of the Java EE platform. Although the framework does not impose any specific programming model, it has become popular in the Java community as an alternative to, replacement for, or even addition to the Enterprise JavaBean (EJB) model.

- **jQuery:**

jQuery is a cross-platform JavaScript library designed to simplify the client-side scripting of HTML. jQuery is the most popular JavaScript library in use today. jQuery is free, open-source software licensed under the MIT License.

jQuery's syntax is designed to make it easier to navigate a document, select DOM elements, create animations, handle events, and develop Ajax applications. jQuery also provides capabilities for developers to create plug-ins on top of the JavaScript

library. This enables developers to create abstractions for low-level interaction and animation, advanced effects and high-level, theme-able widgets. The modular approach to the jQuery library allows the creation of powerful dynamic web pages and web applications.

- **ReST API:**

REST stands for Representational State Transfer. It is sometimes spelled "ReST". It relies on a stateless, client-server, cacheable communications protocol -- and in virtually all cases, the HTTP protocol is used. REST is an architecture style for designing networked applications.

- **JSON (JavaScript Object Notation):**

JSON is a lightweight data-interchange format. It is easy for humans to read and write. It is easy for machines to parse and generate. JSON is a text format that is completely language independent but uses conventions that are familiar to programmers of the C-family of languages, including C, C++, C#, Java, JavaScript, Perl, Python, and many others.

CHAPTER 2:

PROPOSED SYSTEM

- **2.1 PROPOSED SYSTEM**

-Proposed system focuses on automating the entire process of lead management right from enquiry stage to delivery of the product.

-It makes use of latest technology and overcomes the drawbacks of manual work.

-The system being a web based application,can be updated from any place,so location is not a barrier.

-Reports can be easily generated saving lot of time and effort.

- **Middleware:**

Middleware Platform will be developed using Java.

Communication will be done using ReST APIs. Data will be sent in JSON format. Database used for storing the data will be SQL Server. It will have the following component

- **2.2 OBJECTIVES OF THE SYSTEM**

- automate system
- save time
- save efforts
- increase efficiency by reducing errors in generation of result as everything will be done by the machine.

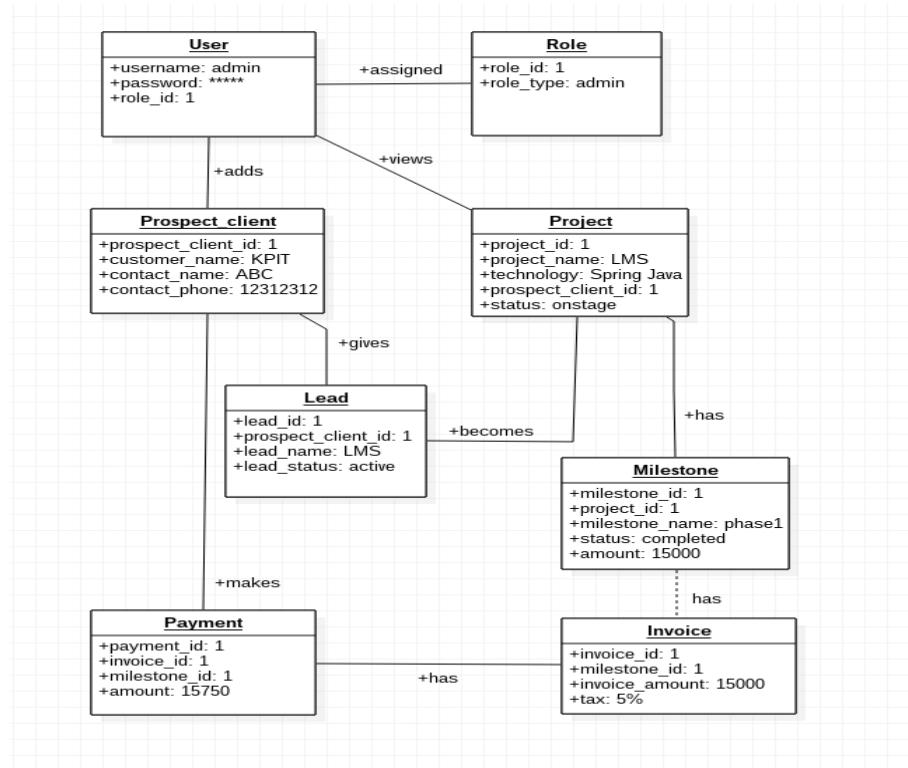
2.3 USER REQUIREMENTS

- Users of the system can be able to use the system from any place.
- Automation of the lead management process.
- Maintaining, sorting, searching data should become easier.
- Report generation should not be a tedious task.
- Using of the application should be easy and user friendly.
- Result generated by the application should be correct and reliable.
- Storing large amounts of data should be easier and faster.

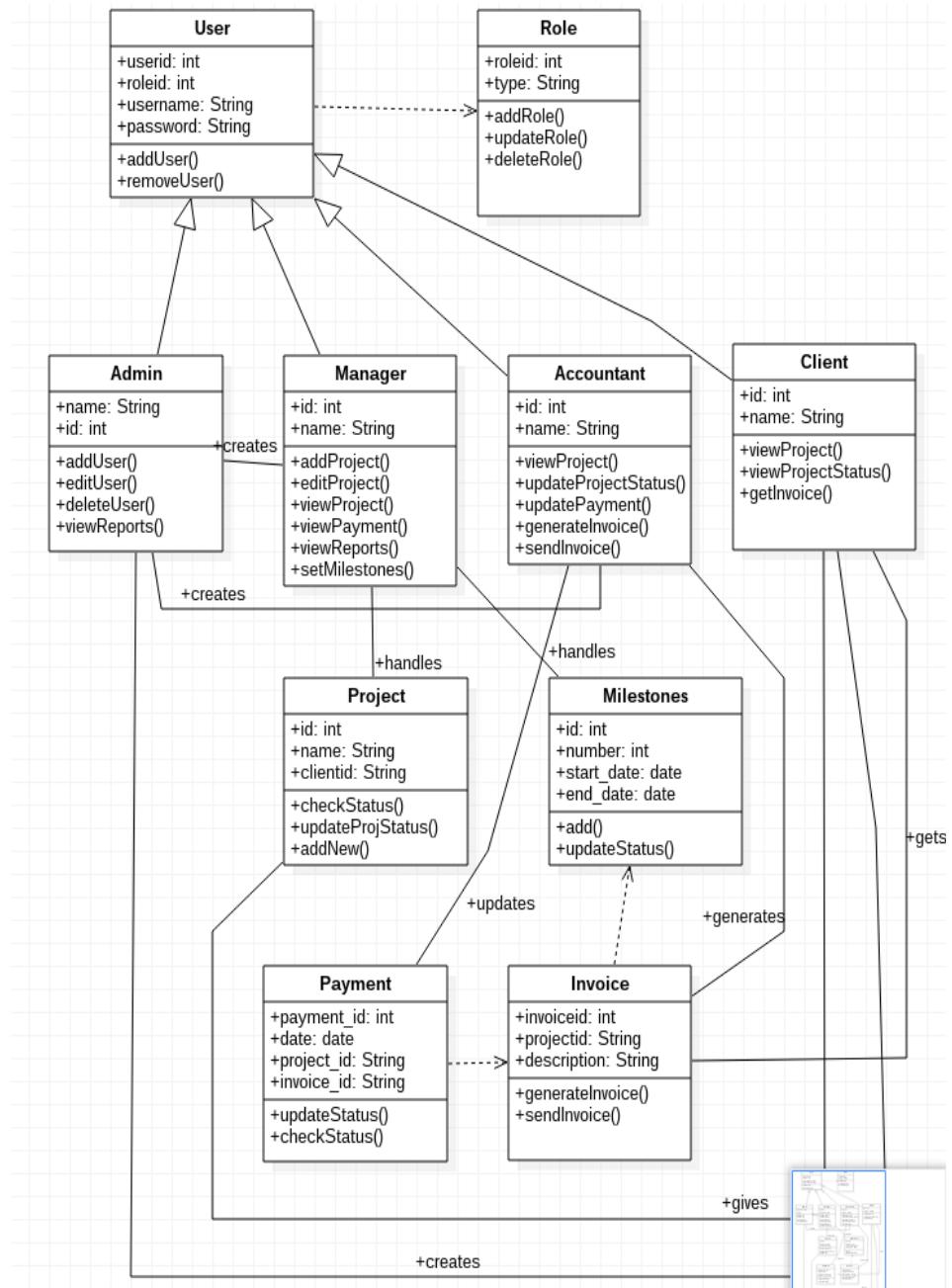
CHAPTER 3

ANALYSIS AND DESIGN

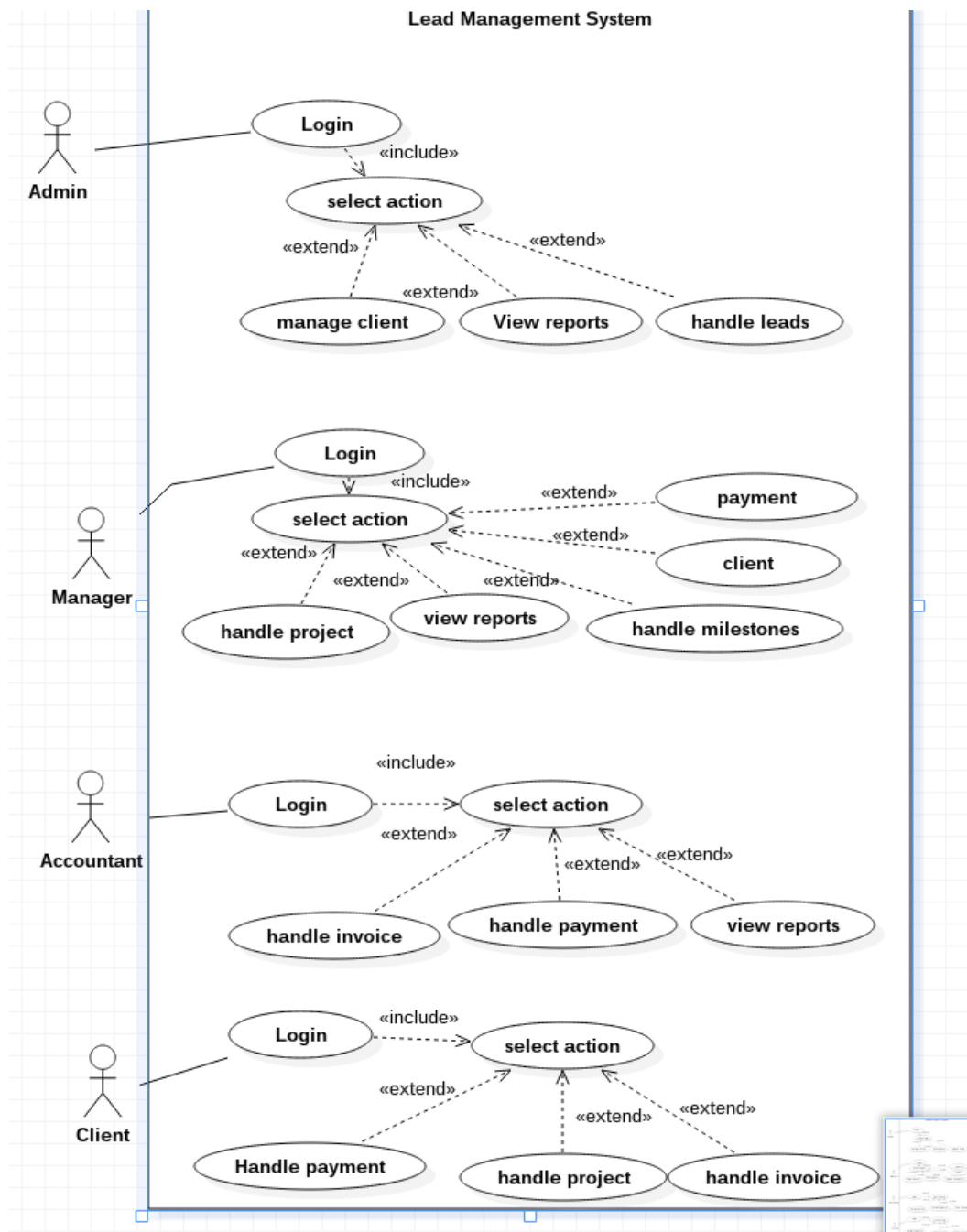
3.1 Object Diagram



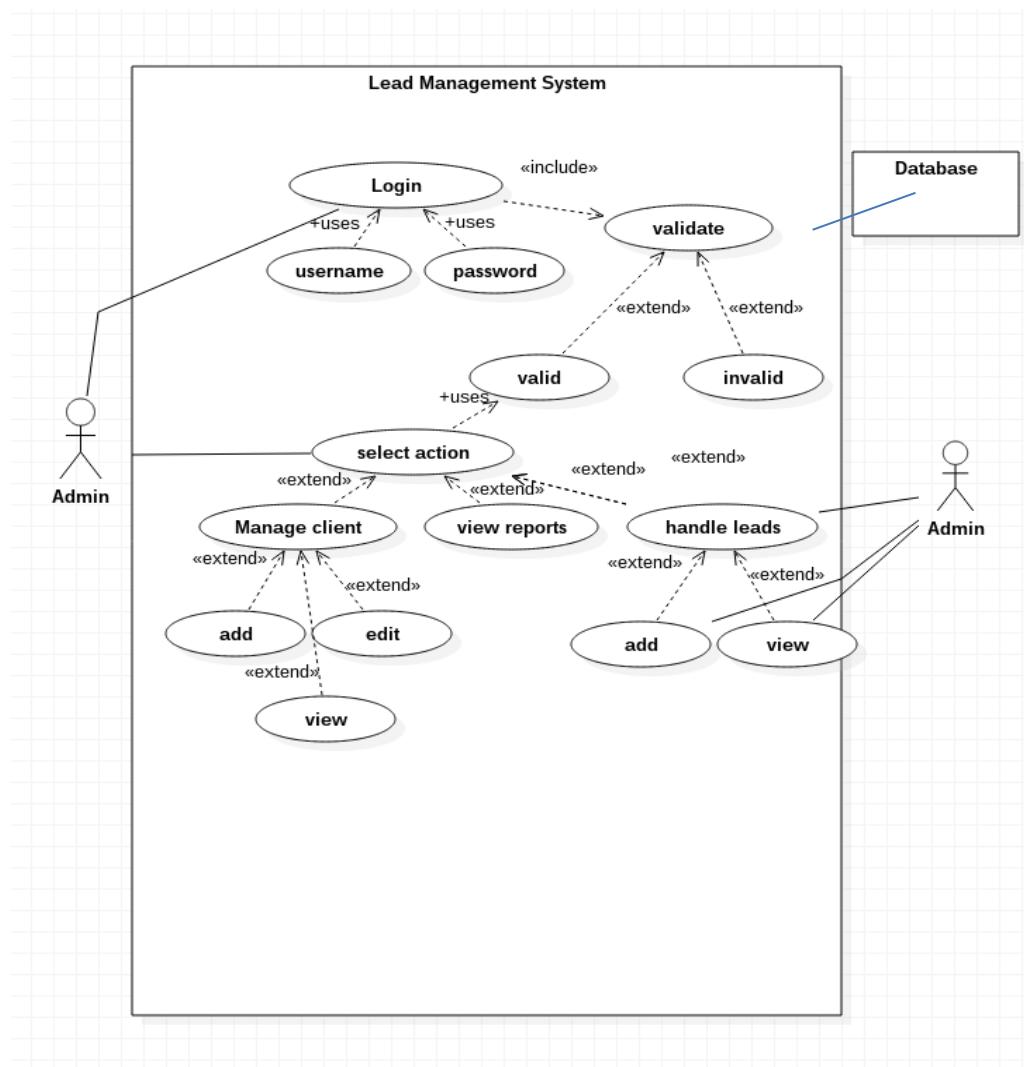
3.2 Class diagram



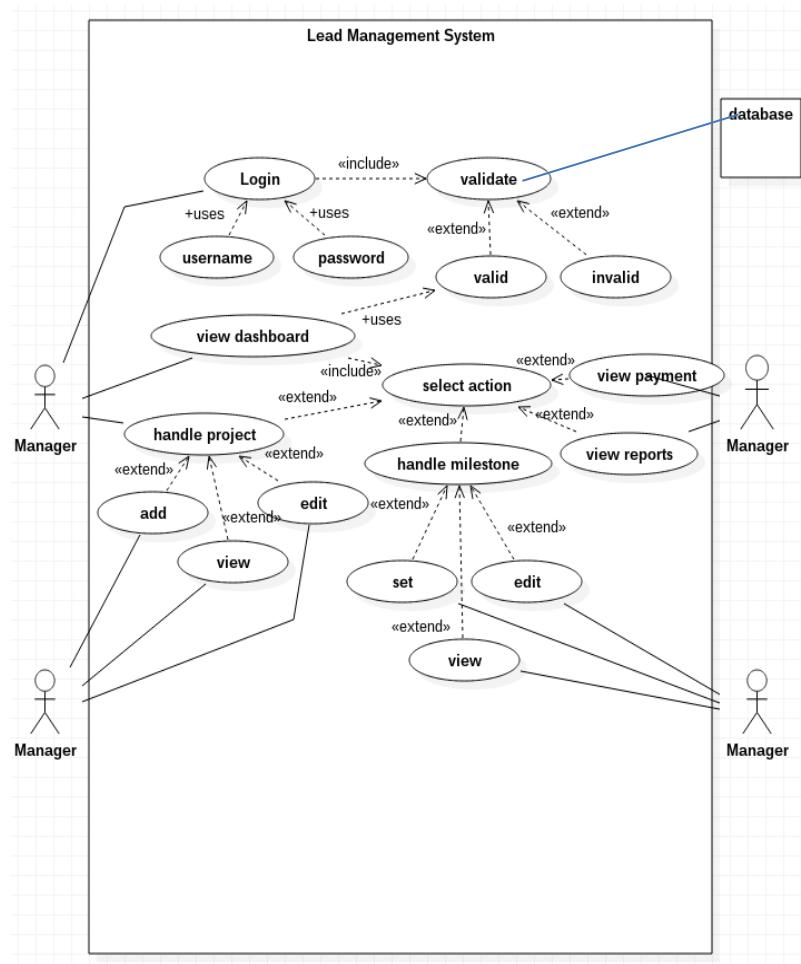
3.3 Use Case Diagram (Main Use Case)



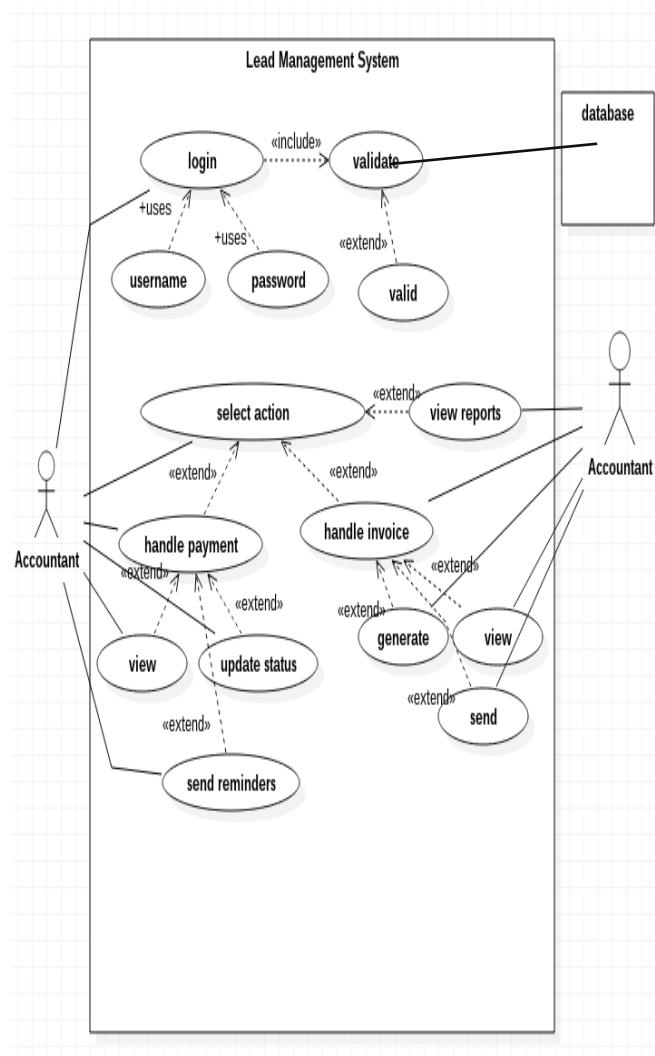
Admin use case



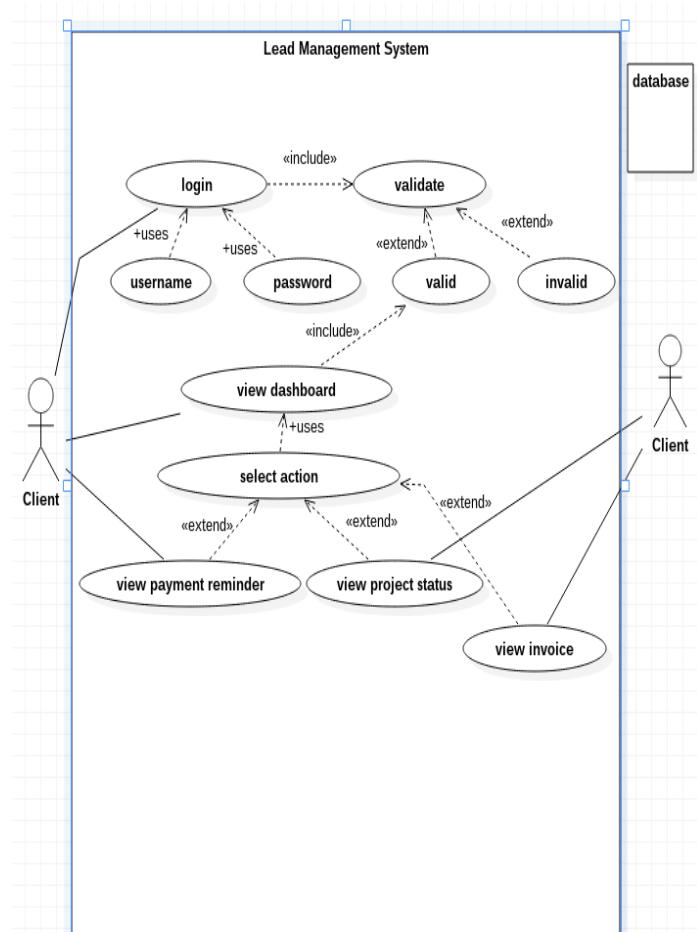
Manager use case



Accountant use case

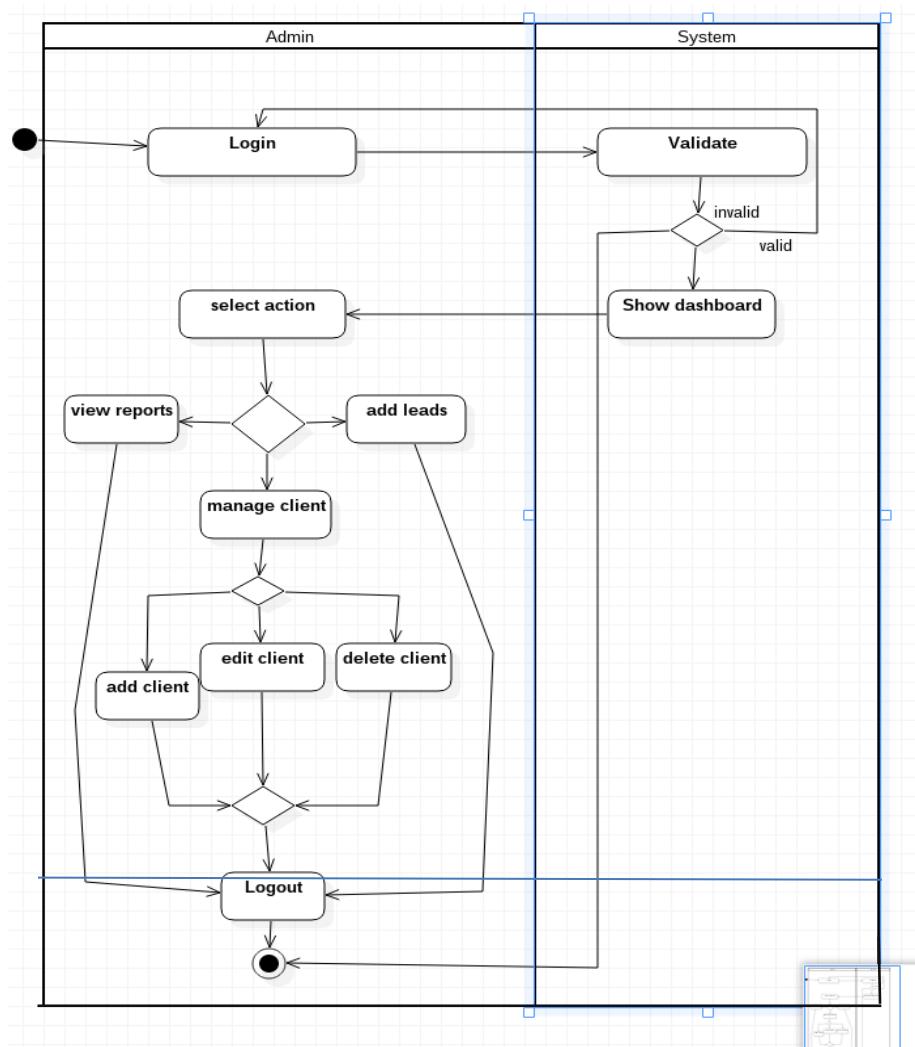


Client use case

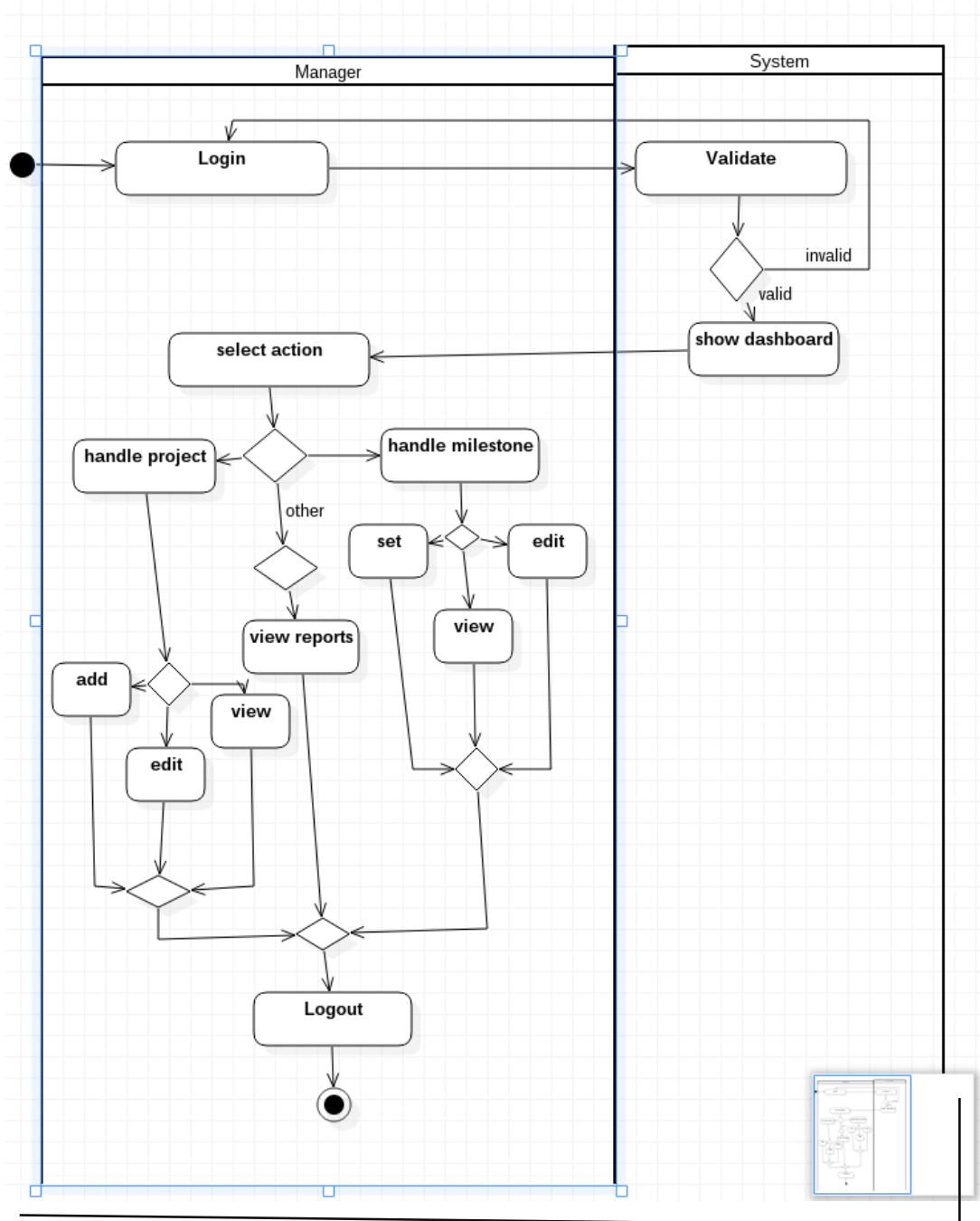


3.4 ACTIVITY DIAGRAM

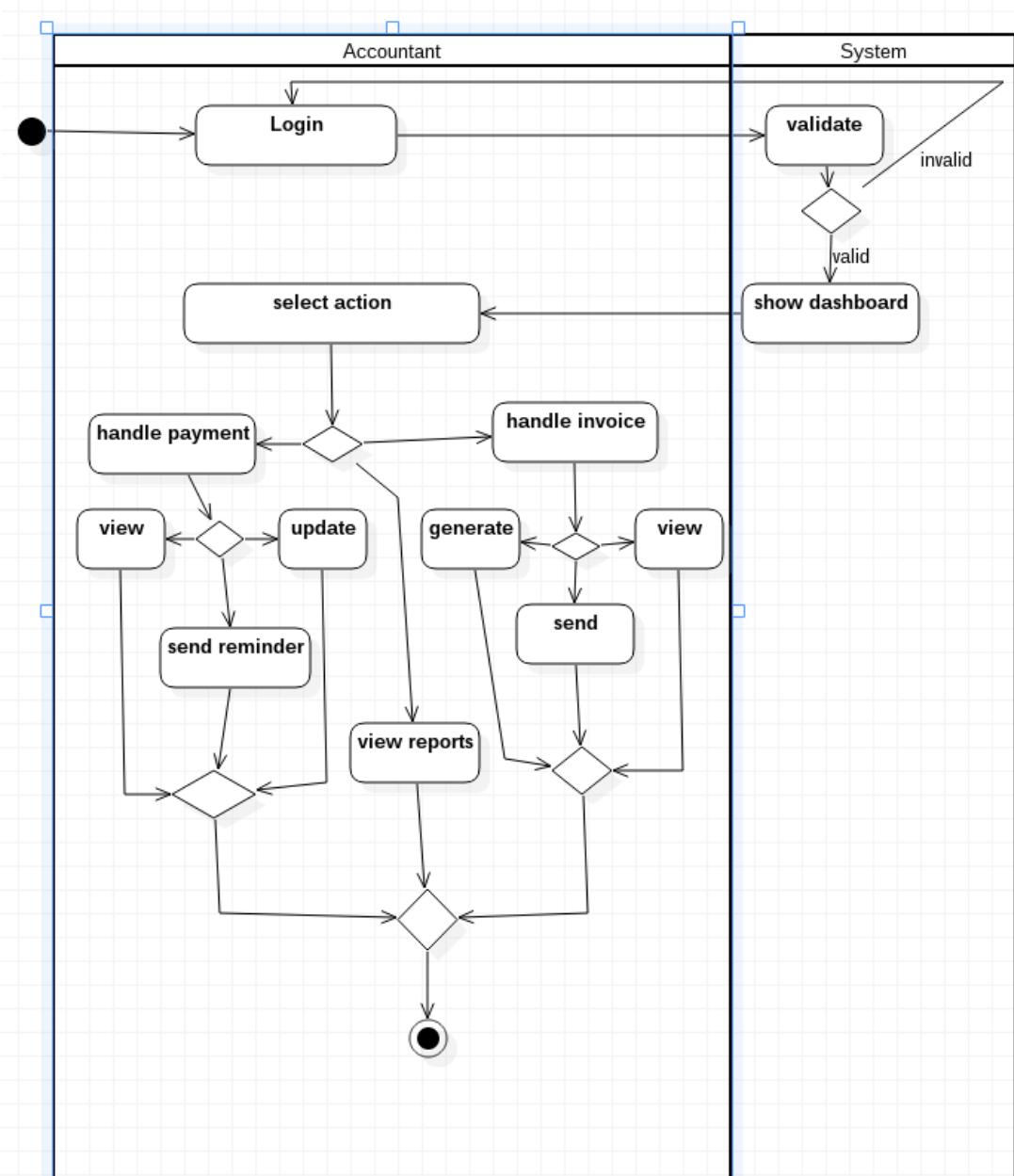
Admin activity diagram



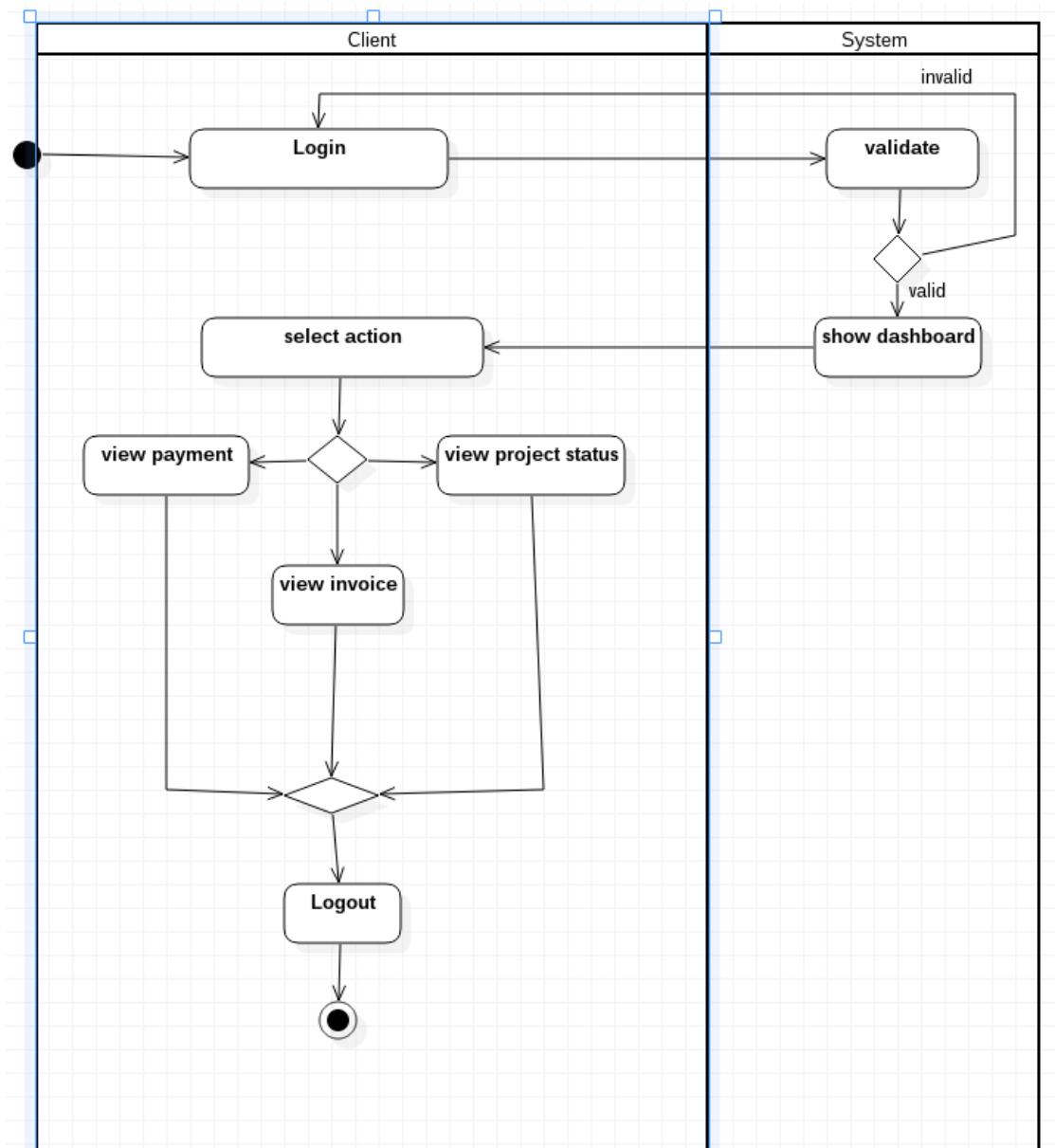
2. Manager Activity Diagram



3 Accountant Activity diagram

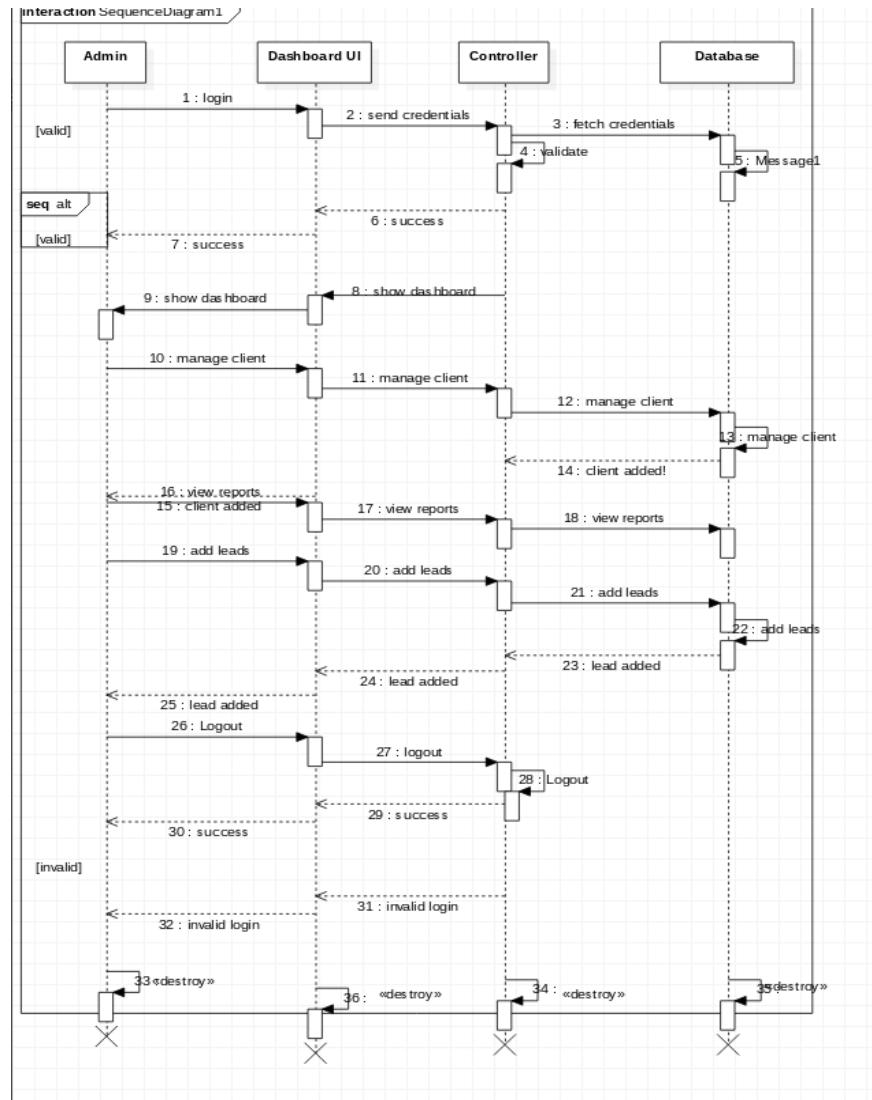


4 Client Activity Diagram

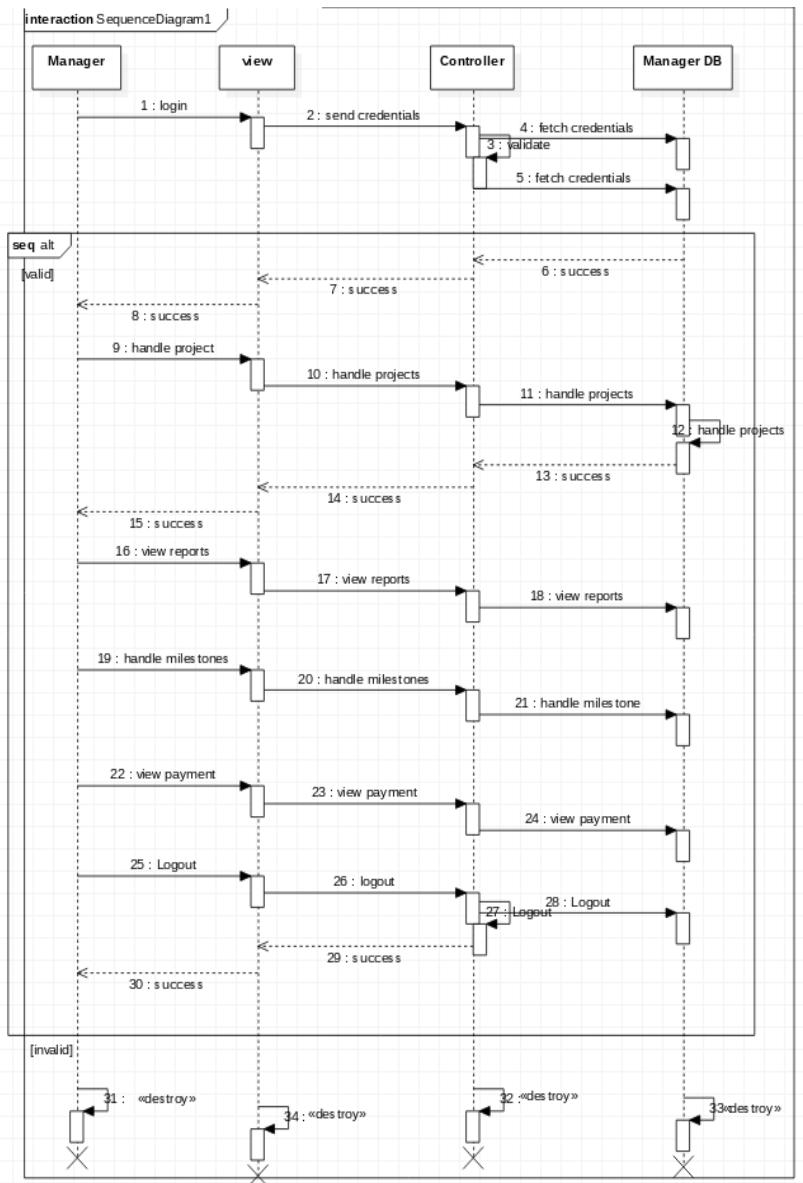


3.5 Sequence Diagram

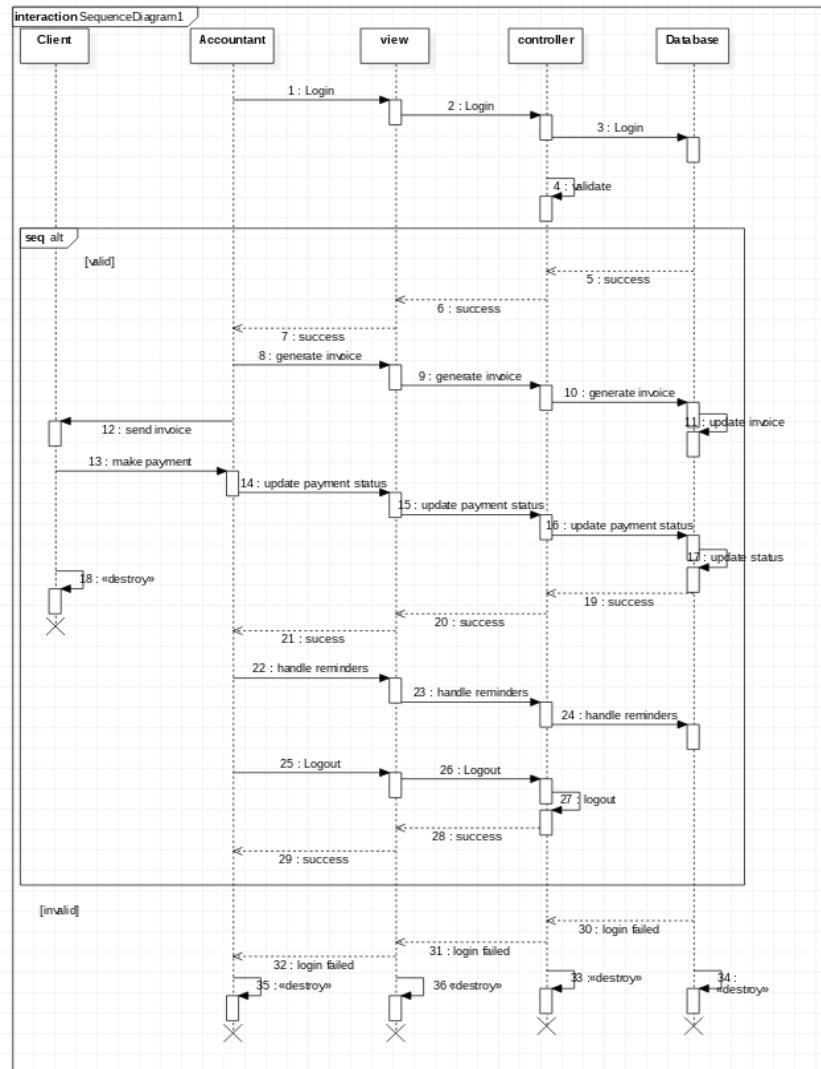
1 Admin Sequence diagram



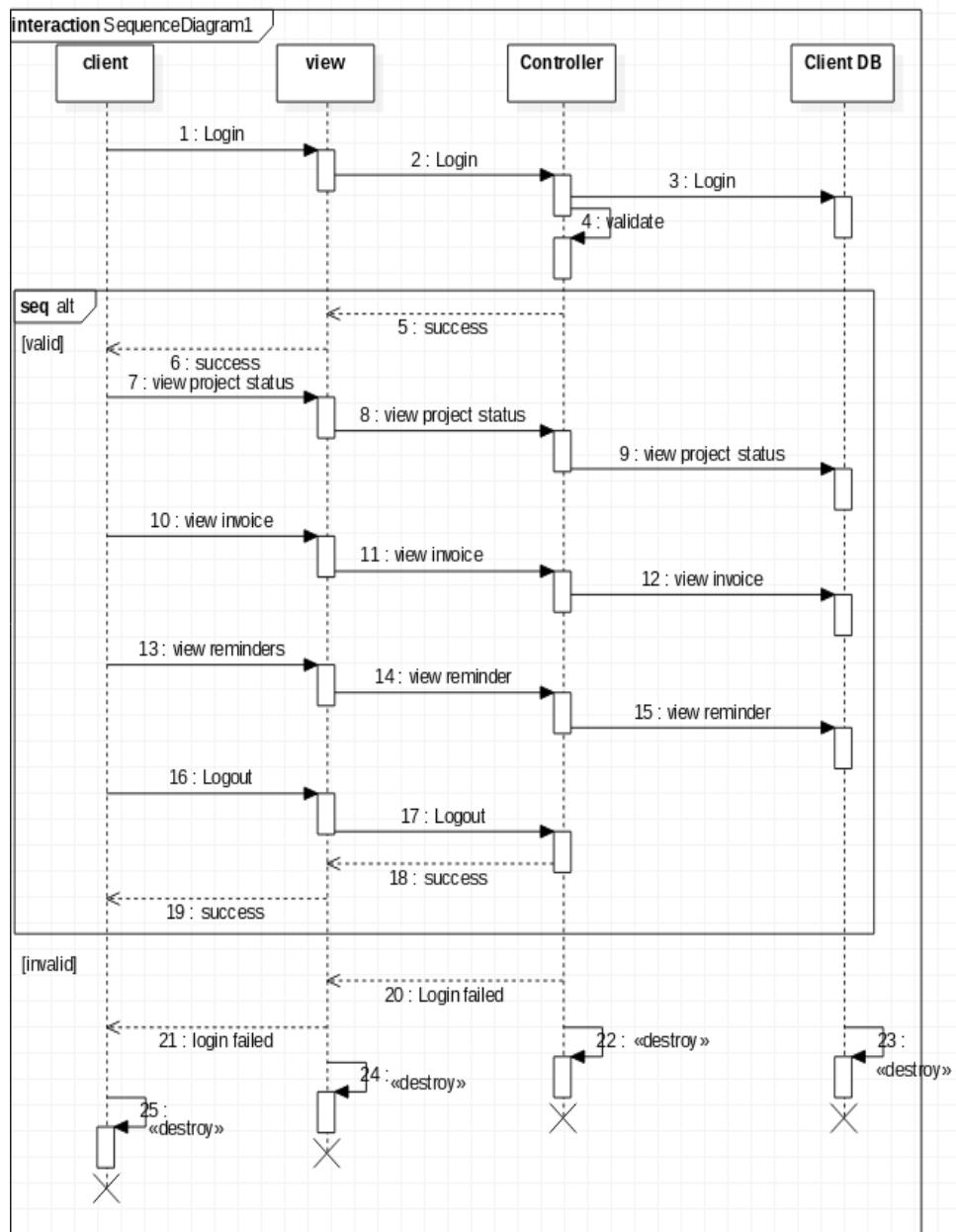
2 . Manager Sequence Diagram



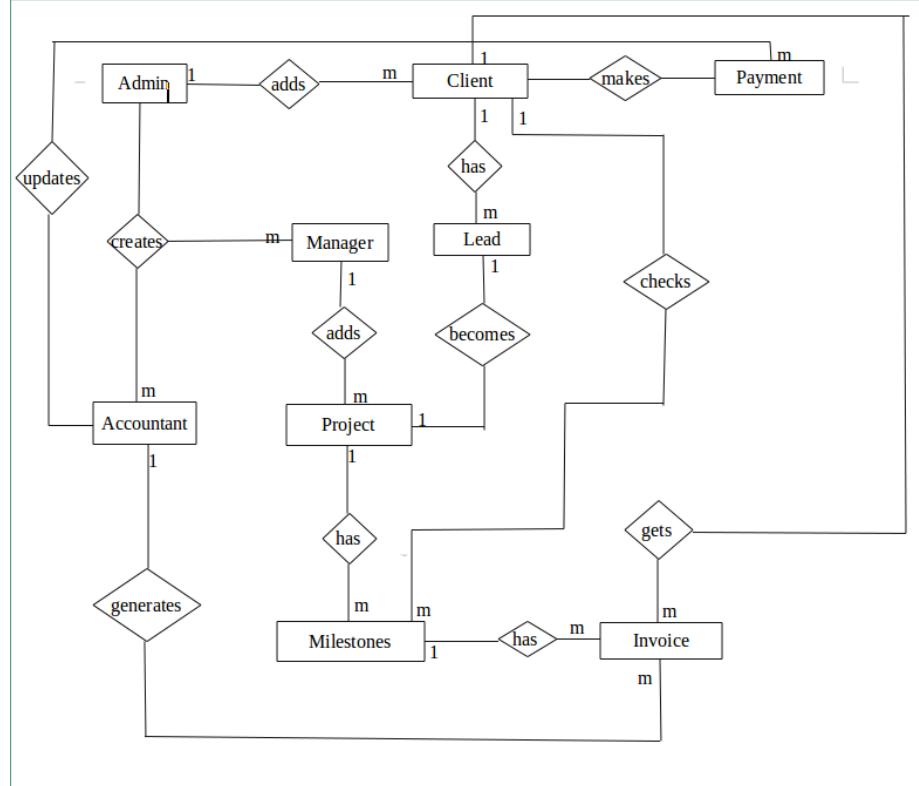
3. Accountant Sequence diagram



4. Client Sequence Diagram

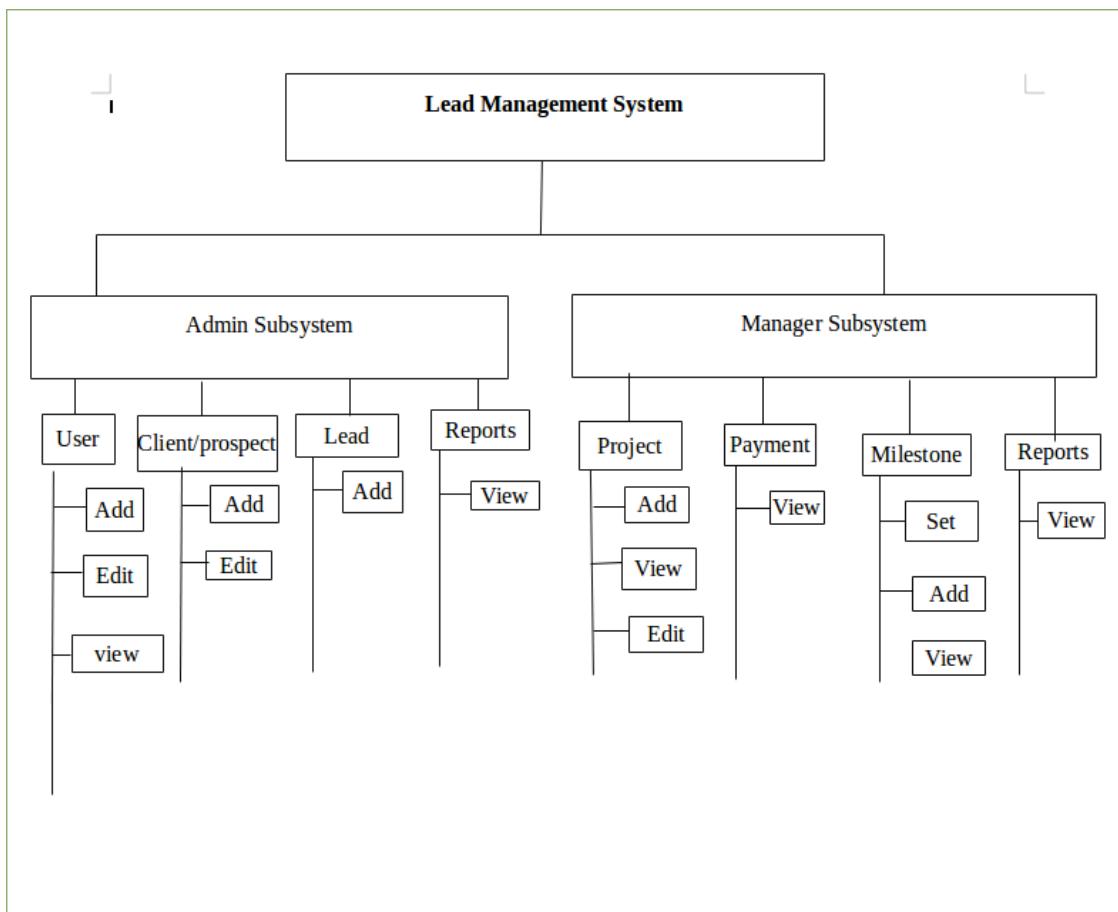


3.6 Entity relationship diagram

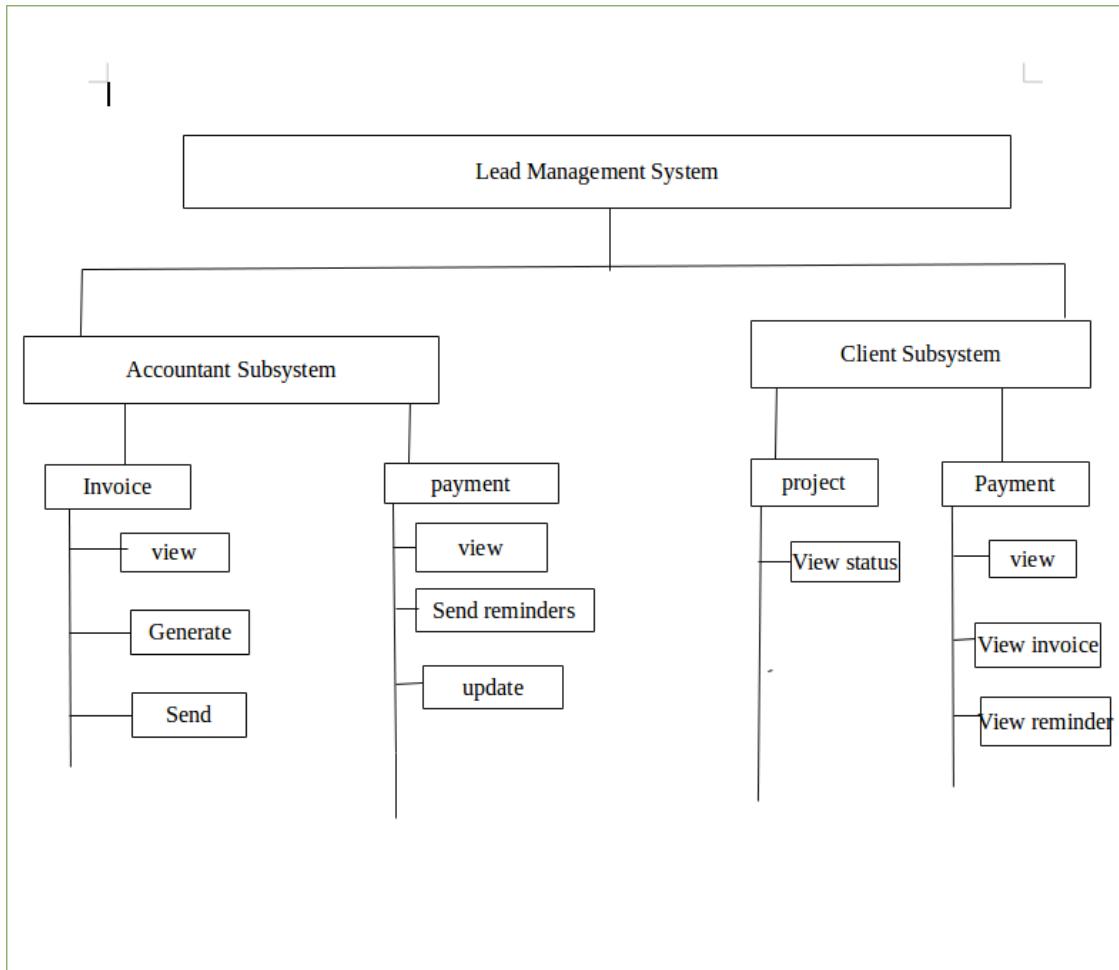


3.7 Module Hierarchy

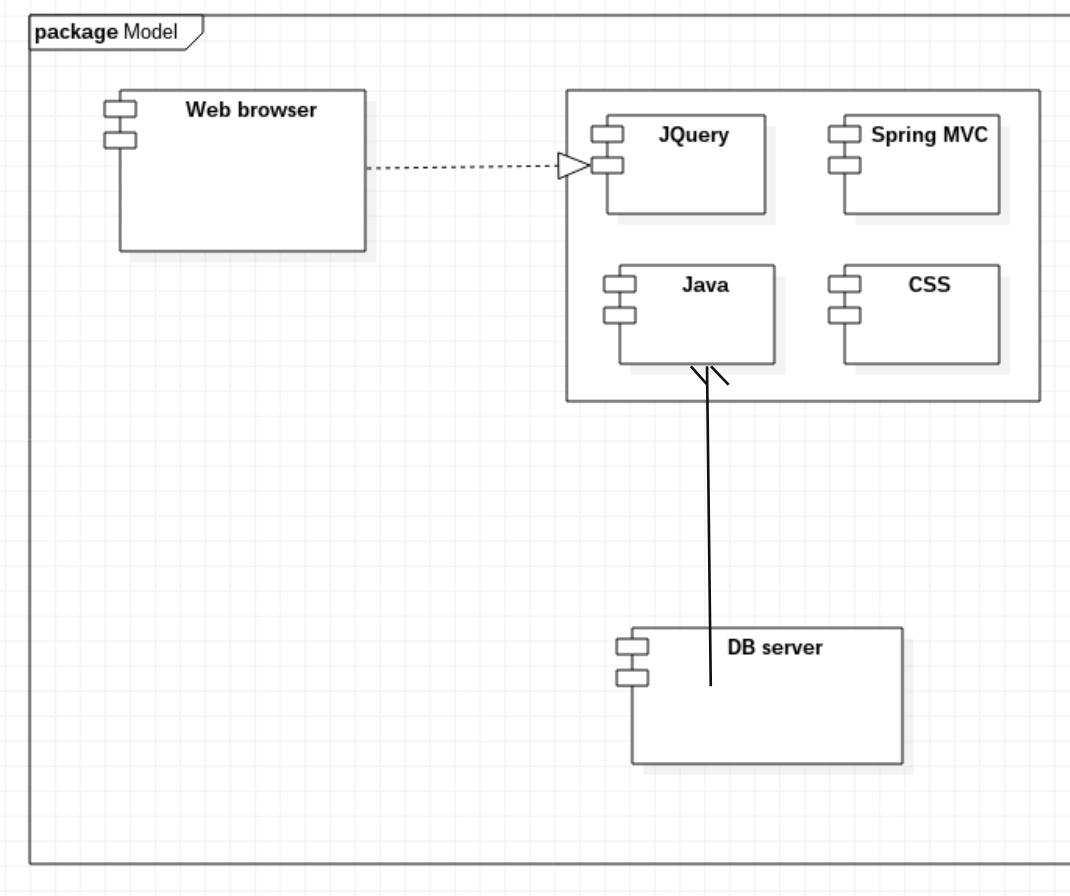
1. For Admin and Manager



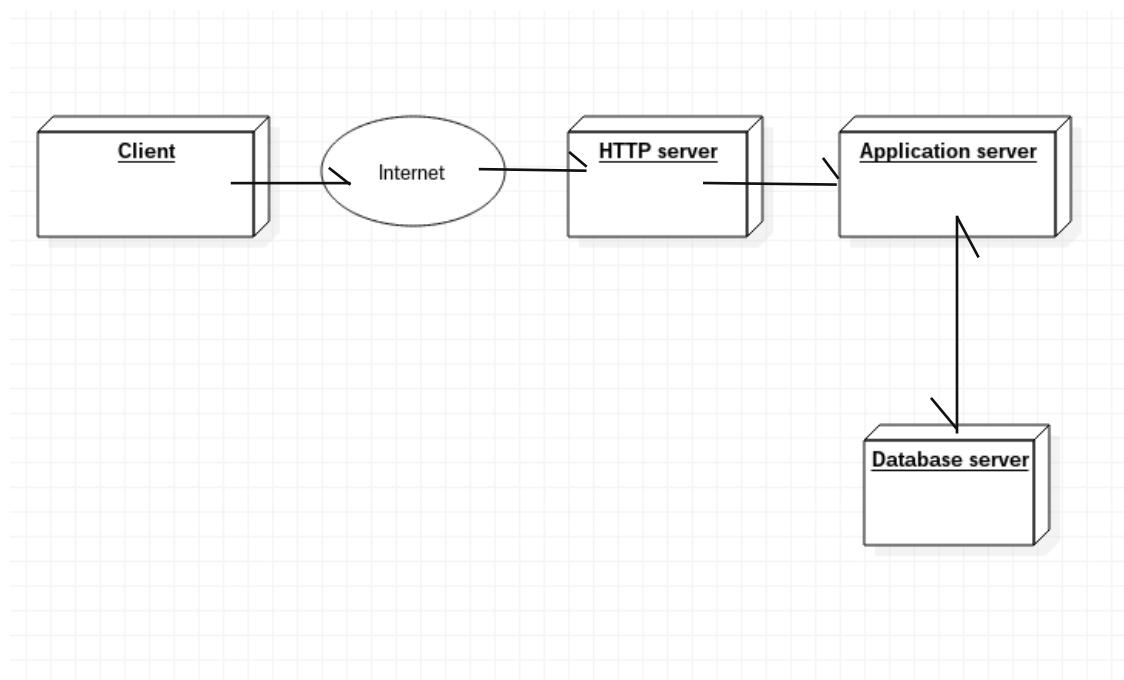
2. For Accountant and Client



3.8 Component Diagram



3.9 Deployment diagram



- **3.10 MODULE SPECIFICATION**

- **Client/Prospect -**

-Contains operations related to clients and prospects.

-It consists of operations like adding,viewing,editing of clients and prospects.

- All the forms showing the operations come under this category.

- **Lead**

-Contains operations realted to leads in the system.

-It consists of operations such as add,view,edit lead.

-Whenever a lead comes in the system,it is entered into the system through a form and saved in the database.

- Project

-Contains operations related to projects in the system.

-It consists of operations such as add,view,edit projects.

-It consists of sub module-

- Milestones.

-Contains operations related to milestones of a project.

-It consists of operations such as set milestone,edit milestones and viewing of milestones.

- Payment

-Contains operations related to payment operation.

-It consists of operations such as viewing of payment,updating the status of the payment.

-It consists of sub module such as invoice.

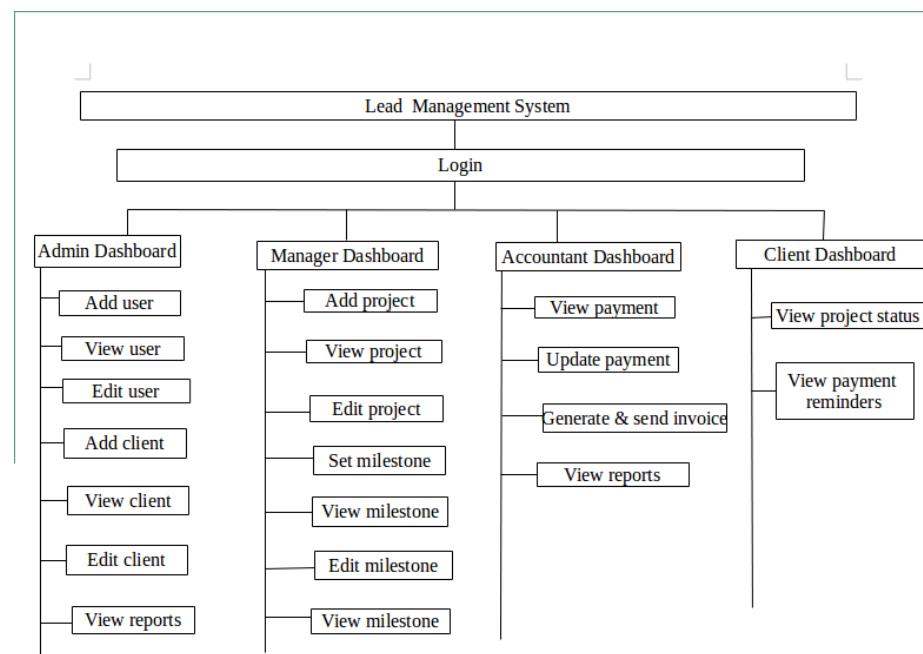
- Invoice

-Contains operation related to invoice.

-It contains of operations such as generating and sending

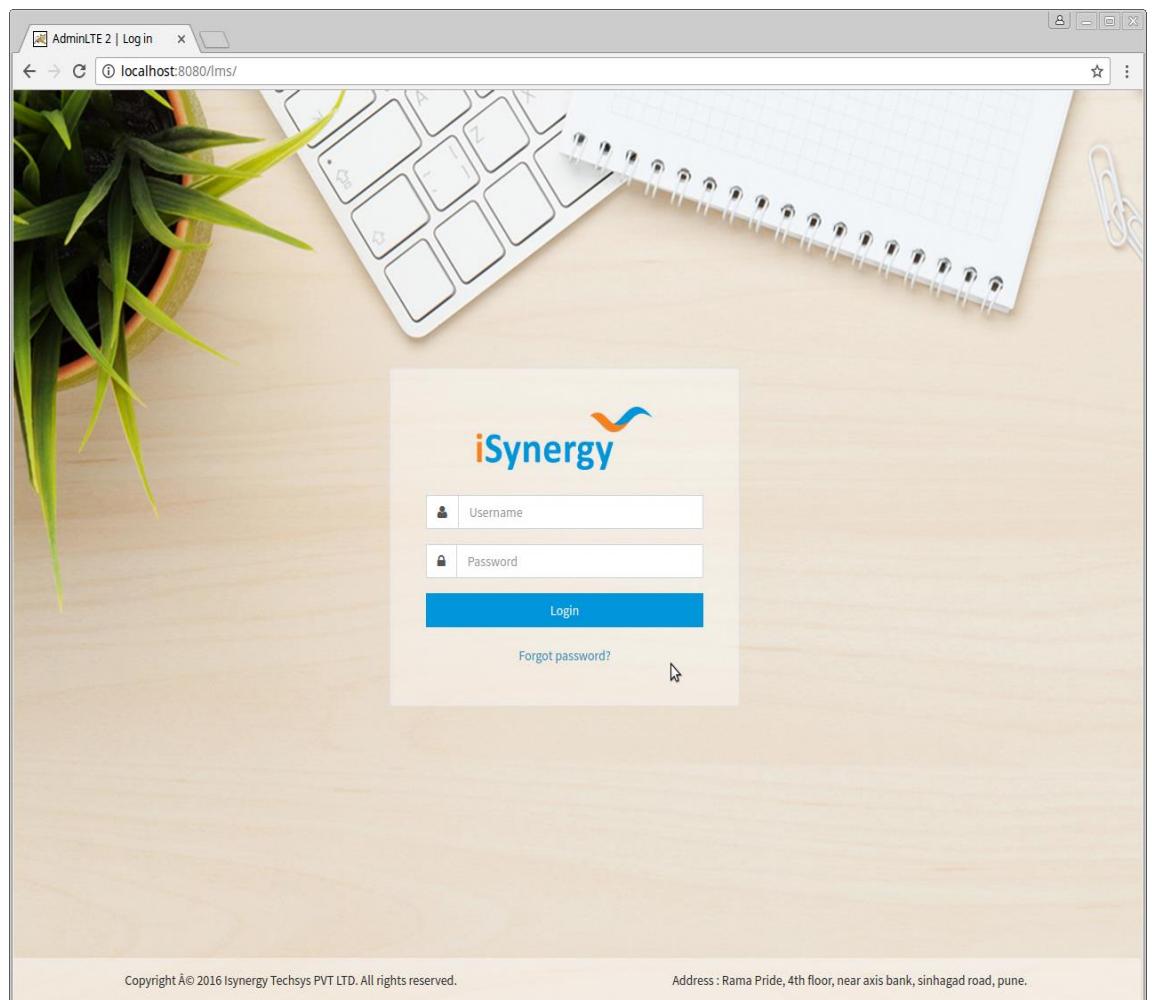
the invoice once the milestone status becomes completed.

- **3.11 Website Map Diagram**



- **3.12 USER INTERFACE DESIGN**

- 1-Login page



2- Admin Dashboard

The screenshot shows the Admin Dashboard of a Lead Management System. The top navigation bar includes the title 'Lead Management System' and the URL 'localhost:8080/ms/Index'. On the right, there is a user icon labeled 'Admin' and a power button icon.

The left sidebar contains a vertical navigation menu with the following items:

- Dashboard
- User
- Leads
- Client
- Reports

The main content area is titled 'Admin Dashboard' and features two tables:

Clients

Sr.No.	Client Name	Contact Person	Mobile No.
1	Persistent	Priya Suri	9825105611
2	TATA	komal Sharma	9600241068
3	KPIT	Harshal Joshi	8087855759
4	Skills Alpha	Priyanka Khanna	9822011785

Leads

Lead Name	Technologies	Status
LMS	Java Spring	Active
Income Tax processing	Java Struts	Active
Videanalysis	Java Spring	Active
Task Trac	.Net	Inactive

Reports

- Prospect
- Client
- Leads

At the bottom of the dashboard, a copyright notice reads: 'Copyright © 2016 Company. All rights reserved.'

- Add user

The screenshot shows a web-based application interface titled "Lead Management System". The URL in the browser is "localhost:8080/lms/Index#". The top navigation bar includes a logo for "iSynergy", a user icon labeled "Admin", and a search bar. On the left, there is a dark sidebar menu with the following items:

- Dashboard
- User
 - Add User
 - View User
- Leads
- Client
- Reports

The main content area is titled "User Details" and contains a form for "Add New User". The form includes the following fields:

Role	First Name	Last Name	Mobile Number	Email ID
Admin	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Below these fields are "Username" and "Password" fields, each with their own input boxes. At the bottom of the form is a blue "Add New User" button.

At the very bottom of the page, there is a copyright notice: "Copyright © 2016 Company. All rights reserved."

Add Lead

The screenshot shows a web-based application window titled "Lead Management System" with the URL "localhost:8080/lms/index#". The top navigation bar includes the "iSynergy" logo, a user icon labeled "Admin", and a search bar. On the left, a dark sidebar menu lists "Dashboard", "User", "Leads" (which is currently selected), "Add Lead", "View Lead", "Client", and "Reports". The main content area is titled "LEADS" and contains a sub-section titled "Add New Lead". This section includes fields for "Search by client name" (with a placeholder "Lead Name" and a dropdown "Lead Technologies" set to "Java.Spring"), "Quoted value" (a text input field containing "value"), and "Lead Status" (a dropdown set to "Active"). Below these fields is a "Lead scope" section with a large empty text input field and a blue "Add Lead" button at the bottom.

5 Manager Dashboard

The screenshot shows a web-based dashboard titled "Welcome Manager". On the left, there is a vertical sidebar with a dark background containing the "iSynergy" logo at the top, followed by three menu items: "Dashboard", "Projects", and "Reports". The main content area has a light blue header bar with the title "Welcome Manager". Below this, there are two main sections: "Ongoing Projects" and "Reports".

Ongoing Projects: This section displays a table with three rows of project information.

Sr.No.	Project Name
1	IT
2	B virtual
3	Vedioanalysis

Reports: This section lists four report categories:

- Payment wise
- Project wise
- Lead wise
- Client wise

At the bottom of the dashboard, there is a footer bar with the copyright notice: "Copyright © 2016 Company. All rights reserved."

Add projects

The screenshot shows a web-based application interface for managing projects. The title bar indicates the window is titled "Lead Management Sys" and the URL is "localhost:8080/lms/index#". The top navigation bar includes a logo for "iSynergy" and a user profile for "Manager". On the left, there is a sidebar with a dark background containing links for "Dashboard", "Projects" (which is currently selected), and "Reports". Under "Projects", there are options for "Add Project", "View Project", "Edit Project", "Set milestone", and "Edit milestone". The main content area is titled "Project Details" and contains a form for adding a new project. The form fields include:

- Client Name:** A dropdown menu showing "Persistent".
- Project Name:** A text input field.
- Description:** A text input field.
- Technologies:** A dropdown menu showing "Java Spring".
- Probable start date:** A date picker input field.
- Value:** A text input field.
- Project status:** A dropdown menu showing "Not yet started".
- Project Type:** A dropdown menu showing "Domestic".
- Pricing model:** A dropdown menu showing "Time & Money".

At the bottom of the form is a blue "Add Project" button. At the very bottom of the page, there is a copyright notice: "Copyright © 2016 Company. All rights reserved."

7) set milestone

The screenshot shows a web-based application interface for setting a milestone. The title bar reads "Lead Management System" and "iSynergy". The URL in the address bar is "localhost:8080/lms/index#". On the left, there's a dark sidebar with navigation links: "Dashboard", "Projects" (selected), "Add Project", "View Project", "Edit Project", "Set milestone" (selected), and "Edit milestone". Below "Projects" is a "Reports" section. The main content area has a blue header "SET MILESTONE". It contains a sub-header "Enter milestone details" with a user icon. There are two input fields: "Milestone Name" and "Milestone Description". Below these are two dropdown menus: "Amount" and "Status". The "Amount" dropdown has "Amount" selected. The "Status" dropdown has "Scheduled" selected. There are two date pickers: "Start Date" and "End Date". The "Set Milestone" button is at the bottom. At the very bottom of the page, there's a copyright notice: "Copyright © 2016 Company. All rights reserved."

8.) Edit milestone

The screenshot shows a web-based application interface for managing milestones. The title bar indicates the window is titled 'Lead Management Sys' and the URL is 'localhost:8080/lms/Index#'. The top navigation bar includes a logo for 'iSynergy' and a user profile for 'Admin'. On the left, there is a sidebar with 'Dashboard' and 'Projects' sections, including options like 'Add Project', 'View Project', 'Edit Project', 'Set milestone', 'Edit milestone', and 'View Project Status'. Below this is a 'Reports' section. The main content area is titled 'Edit Milestone' and contains a form for entering details. The form fields include:

- Enter details**: A search bar for 'Search by Project name' and another for 'Search by Milestone name' with a magnifying glass icon.
- Milestone Name**: An input field containing 'milestone Name'.
- Description**: An input field containing 'description'.
- Status**: A dropdown menu set to 'Scheduled'.
- Duration**: An input field.
- Actual start date**: An input field with a calendar icon.
- Actual End date**: An input field with a calendar icon.
- Amount**: An input field.

At the bottom of the form is a blue 'EDIT' button. The footer of the page displays the copyright notice: 'Copyright © 2016 Company. All rights reserved.'

3.13 DATA DICTIONARY

S R N O	Field name	Data type	Description
1	actual_end_date	Long	Stores actual end date of milestone in milestone table
2	actual_start_date	Long	Stores actual start date of milestone in milestone table
3	contact_email	varchar(45)	Stores contact email in prospect table

4	Contact_name	varchar(30)	Stores contact name in prospect table
5	contact_phone	int(10)	Stores contact phone in prospect_client table
6	comment	varchar(100)	Stores comment in quotation table
7	created_date	Long	Stores created date of new user in user table
8	customer_addressline1	varchar(50)	Stores address of customer in

			prospect_client table
9	customer_addressline2	varchar(50)	Stores addresses of customer in prospect_client table
10	customer_name	varchar(30)	Stores customer name in prospect_client table
11	duration	varchar(10)	Stores duration of project in project table
12	email	varchar(45)	Stores email addresses of user in user

			table
1 3	end_date	long	Stores end date of milest one in milest one table
1 4	first_name	varchar(15)	Stores first name of user in user table
1 5	invoice_a mount	double	Stores invoic e amoun t in invoic e table
1 6	Invoice_da te	long	Stores invoic e date in invoic e table
1 7	Invoice_id	Int(6)	Stores unique invoice_id in invoice

			e table
1 8	Last_name	varchar(15)	Stores last name of user in user table
1 9	Last_update_date	Long	Stores last update date of user in user table
2 0	Lead_id	Int(6)	Stores unique lead id in lead table
2 1	Lead_name	varchar(30)	Stores lead name in lead table
2 2	Lead_scope	varchar(100)	Stores lead scope in lead table
2 3	Lead_status	Enum{inactive,declined,active}	Stores lead status

			in lead table
2 4	Lead_technologies	varchar(15)	Stores lead technologies in lead table
2 5	location	varchar(15)	Stores location of client in prospect_client table
2 6	Milestone_amount	double	Stores milestone amount in milestone table
2 7	Milestone_description	varchar(100)	Stores description of milestone in milestone table

2 8	Milestone_id	Int(6)	Stores unique milestone id in milestone table
2 9	Milestone_name	varchar(30)	Stores name of the milestone in milestone table
3 0	Mobile_no	Int(10)	Stores mobile number of user in user table
3 1	password	varchar(10)	Stores password for user in user table
3 2	Payment_currency	varchar(10)	Stores currency in payment

			table
3 3	Pricing_m odel	Enum{time & money/fixed cost}	Stores pricin g model in project table
3 4	Probable_s tart_date	long	Stores probab le start date of project in project table
3 5	Project_de scription	varchar(100)	Stores descri ption of project in project table
3 6	Project_id	Int(6)	Stores unique project id of project in project table
3	Project_na	varchar(30)	Stores

7	me		project name in project table
3 8	Prospect_client_id	Int(6)	Stores unique prospect client id in prospect_client table
3 9	Quotation_id	Int(6)	Stores unique quotation id in quotation table
4 0	Quoted_value	double	Stores quoted value in the lead table
4 1	reference	varchar(15)	Stores reference name in prospect

			ct_client table
4 2	Role_id	Int(6)	Stores unique role id in role table
4 3	status	Enum{not yet started,ongoing,completed,delivered}	Stores status of the project in project table
4 4	tax	Double	Stores tax in invoice table
4 5	technologies	varchar(15)	Stores technologies used in project table
4 6	type	Enum{domestic/international}	Stores type of project in project table

4 7	User_id	Int(6)	Stores unique user id in user table
4 8	username	varchar(30)	Stores unique username in user table
4 9	value	double	Stores value of the project in project table

- **3.15 TABLE SPECIFICATION**

1) Role

Field name	Data type	width	Constraints
Role_id	int	6	PK
Role_type	Enum{admin/manager/accountant/client}		Not null

2) User

Field name	Data type	width	Constraints
User_id	Int	6	Pk
Role_id	int	6	Fk
First_name	varchar	15	Not null
Last_name	varchar	15	Not null
username	varchar	30	Not null,unique
password	varchar	10	Not null
Mobile_no	int	10	Not null
email	varchar	45	Not null
Last_update_date	long		Not null
Created_date	long		Not null

3) Prospect_client

Field name	Data type	width	Constraints
Prospect_client_id	int	6	Pk
Customer_name	varchar	30	Not null
location	varchar	15	Not null
Customer_addressline1	varchar	50	Not null
Customer_addressline2	varchar	50	Can be null

Customer_phone	int	10	Not null
Contact_name	varchar	30	Not null
Contact_phone	int	10	Not null
Contact_email	Varchar	45	Not null
Project_descriptio n	varchar	100	Not null
reference	varchar	15	Not null
status	Enum{prospect/c lient}		Not null
Created_date	long		Not null

4) Project

Field name	Data type	wid th	Constr aints
project_id	int	6	Pk
Prospect_cli ent_id	int	6	Fk
Project_nam e	varchar	30	Not null
Project_desc ription	varchar	100	Not null
technologies	varchar	15	not null
Probable_sta rt_date	long		Not null
duration	varchar	10	Not null
value	double		Not null
status	Enum{not yet started/ongoing/complet ed/delivered}		Not null
type	Enum{domestic/internat ional}		Not null
Pricing_mod el	Enum{fixed cost/time & money}	15	Not null
Created_dat e	Long		Not null
Last_update _date	long		Not null

5) Lead

Field name	Data type	width	Constraint
Lead_id	int	6	Pk
Prospect_client_id	int	6	Fk
Lead_scope	varchar	100	Not null
Lead_technologies	varchar	15	Not null
Lead_status	Enum{declined/inactive/active}		Not null
Quoted_value	double		Not null
Lead_name	varchar	30	Not null
Created_date	long		Not null
Last_update_date	long		Not null

6) Milestone

Field name	Data type	width	Constraints
Milestone_id	int	6	Pk
Project_id	int	6	Fk
Start_date	long		Not null
End_date	long		Not null
Milestone_name	varchar	30	Not null
Milestone_description	varchar	100	Not null
Milestone_amount	double		Not null
Milestone_status	Enum{completed/partial}		Not null
Actual_start_date	long		Not null
Actual_end_date	long		Not null

7) Invoice

Field name	Data type	width	Constraints
Invoice_id	int	6	Pk
Milestone_id	int	6	Fk
Invoice_date	long		Not null
Invoice_amount	Float		Not null
Tax	Float		Not null

8) Payment

Field name	Data type	width	Constraints
Payment_id	int	6	Pk
Project_id	int	6	Fk
Payment_amount	Float		Not null
Payment_date	long		Not null
Payment_currency	varchar	10	Not null

9) Invoice_payment

Field name	Data type	width	Constraints
Payment_id	int	6	fk
invoice_id	int	6	Fk

10) Quotation_history

Field name	Data type	width	Constraints
quotation_id	int	6	Pk
lead_id	int	6	Fk
Quoted_value	Float		Not null
comment	varchar	100	Not null
Create_date	long		Not null
Last_update_date	long		Not null

- **3.16 TEST PROCEDURES AND IMPLEMENTATION**

Test case ID	1
Test case name	Validate login

Test case Description	Test steps			Status
	Input	Expected output	Actual output	
To verify that userna me and passw ord on login page should not be	Do not enter username and password on login page and submit form	An error message "Please enter username and password" should display	An error message "Please enter username and password" is displayed	Pass
	Do not enter	An error message	An error message	Pass

	empty	username on login page and submit form	"Please enter username" should display	"Please enter username" is displayed	
	Do not enter password on login page and submit form	An error message "Please enter password" should display	An error message "Please enter password" is displayed	Pass	
1.	To verify that userna me and passw ord on login page	Enter username and password where username and/or and/or password not exists in	An error message "Incorrect username and/or password" should display	An error message "Incorrect username and/or password" is displayed	Pass

	exists	database			
	in	Enter			
	databa	username			
	se	and	Should	Redirected	
		password	redirect to	to Home	Pass
		which	Home page	page	
		exists in			
		database			

Test case ID	2
Test case name	Add User

Test case Description	Test steps			Status
	Input	Expected output	Actual output	
1.Mandatory fields validation	Do not enter any data and submit registration form	An error message "Please enter details" should display	An error message "Please enter details" is displayed	Pass
	Leave mandatory fields as blank one at a time and submit registration form	An error message for empty mandatory field should display	An error message for empty mandatory field displayed	

2.	UserName existence validation	Enter UserName which exists in database	An error message "UserName already exists" should display	An error message "Username already exists" is displayed
	Enter UserName which does not exists in database	Registration should be successful	Registration is successful	Pass

Test case ID	3
---------------------	---

Test case Description	Test steps			Status
	Input	Expected output	Actual output	
1.Mandatory fields validation	Do not enter any data and submit registration form	An error message "Please enter details" should display	An error message "Please enter details" is displayed	Pass
	Leave mandatory fields as blank one at a time and submit registration form	An error message for empty mandatory field should display	An error message for empty mandatory field should display	

Test case ID	4
---------------------	---

Test case Description	Test steps			Status
	Input	Expected output	Actual output	
	Do not enter any data and submit registration form	An error message "Please enter details" should display	An error message "Please enter details" is displayed	Pass
1.Mandatory fields validation	Leave mandatory fields as blank one at a time and submit registration form	An error message for empty mandatory field should display	An error message for empty mandatory field displayed	Pass

Test case ID	5
Test case name	Add Project

Test case	Test steps			Status
	Description	Input	Expected output	
1.Mandatory fields validation	Do not enter any data and submit registration form	An error message "Please enter details" should display	An error message "Please enter details" is displayed	Pass
	Leave mandatory fields as blank one at a time and submit registration	An error message for empty mandatory field should display	An error message for empty mandatory field displayed	

	form		
--	------	--	--

Test case ID	6
Test case name	Edit project

Test case Description	Test steps			Status
	Input	Expected output	Actual output	
1.Mandatory fields validation	Do not enter any data and submit registration form	An error message "Please enter details" should display	An error message "Please enter details" is displayed	Pass
	Leave mandatory fields as blank one at a time and submit registration	An error message for empty mandatory field should display	An error message for empty mandatory field displayed	

	form			
2. Project Name existence validation	Enter Project name to search	An error message “Project does not exist” should display	An error message “Project does not exist” is displayed	Pass
	Enter Project Name	Details displayed successfully	Details displayed successfully	Pass

Test case ID	7
---------------------	---

Test case Description	Test steps			Status
	Input	Expected output	Actual output	
1.Mandatory fields validation	Do not enter any data and submit registration form	An error message "Please enter details" should display	An error message "Please enter details" is displayed	Pass
	Leave mandatory fields as blank one at a time and submit registration form	An error message for empty mandatory field should display	An error message for empty mandatory field should display	

2. Date validation	Enter invalid start date and end date	An error message “Invalid date” should display	An error message “Invalid date ” is displayed	Pass
	Enter valid dates	Date accepted	Date accepted	Pass

Test case ID	8
Test case name	Edit milestone-1

Test case Description	Test steps			Status
	Input	Expected output	Actual output	
1.Mandatory fields validation	Do not enter any data and submit registration form	An error message "Please enter details" should display	An error message "Please enter details" is displayed	Pass
	Leave mandatory fields as blank one at a time and submit registration form	An error message for empty mandatory field should display	An error message for empty mandatory field should display	Pass

2. Enter by Project Name	Enter Project name to search	An error message “Project does not exist” should display	An error message “Project does not exist” is displayed	Pass
	Enter Project Name	Details of project should be displayed successfully	Details displayed successfully	Pass

Test case ID	9
Test case name	Edit milestone-2

Test case Description	Test steps			Status
	Input	Expected output	Actual output	
1.Mandatory fields validation	Do not enter any data and submit registration form	An error message "Please enter details" should display	An error message "Please enter details" is displayed	Pass
	Leave mandatory fields as blank one at a time and submit registration form	An error message for empty mandatory field should display	An error message for empty mandatory field should display	Pass

Name	Enter milestone name to search	An error message “ milestone name does not exist” should display	An error message “ milestone name does not exist” is displayed	Pass
	Enter milestone Name	Details of project should be displayed successfully	Details displayed successfully	Pass

Test case ID	10
Test case name	Update payment

Test case Description	Test steps			Status
	Input	Expected output	Actual output	
1. Enter by client Name	Enter client name to search	An error message “client does not exist” should display	An error message “client does not exist” is displayed	Pass
	Enter client name for search	“projects of the following client displayed”	“projects of the following client displayed”	Pass
2. Enter by amount			“Amount	pass

	Enter Amount paid and update status	“Amount updated”	“updated”	
--	---	---------------------	-----------	--

Test case ID	11
Test case name	Show Reports-1

Test case	Test steps			Status
	Description	Input	Expected output	
1.Mandatory fields validation	Do not enter any data and “Show report”	An error message "Please enter details" should display	An error message "Please enter details" is displayed	Pass
	Leave mandatory fields as blank one at a time and submit registration form	An error message for empty mandatory field should display	An error message for empty mandatory field displaye	Pass

2. Enter Date	Enter invalid date	An error message “Invalid date” is displayed	An error message “Invalid date” is displayed	Pass
3. Enter Category	Select Category	“Report generated”	Report generated”	Pass

Test case ID	12
Test case name	Generate invoice

Test case Description	Test steps			Status
	Input	Expected output	Actual output	
1. Mandatory feilds	Do not enter any data and click on “generate invoice”	Error message “Select project name” will be displayed	Error message as “Select project name is displayed”	Pass
	Select project name and click on generate button	Message displayed as “invoice generated for the milestone”	Message displayed as “invoice generated for the milestone”	pass

CHAPTER 4

USER MANUAL

- **4.1 USER MANUAL**

Admin -

1) Add user

Steps are as follows -

1. Adding a new user to the system is done by admin.
2. Select the user widget on the dashboard after loggin in.
3. Select the add user option on the loaded page.
4. Fill out the form and click “ADD USER” button.
5. A message will appear on the window “User added successfully”.

2) Edit user

Steps are as follows -

1. Select the user widget on the dashboard after loggin in.
2. Select the edit user option.
3. Form with the list of users will appear on the page.

4. Click on the user you want to edit. A pop up with all the editable fields will appear.
5. Edit the values and click on “Save” button.
6. New Values will be saved with a message displayed as “Edited successfully”.

3) View User

Steps are as follows-

1. Select the user widget on the dashboard after loggin in.
2. Select the view user option.
3. A list of system users will be displayed.
4. Click on any value to view detailed information.

4) Delete User

Steps are as follows -

1. Select the user widget on the dashboard after loggin in.
2. Select delete option.
3. A list of system user will be displayed with a delete icon next to each value.
4. Select the delete icon and the respective value will be deleted.
5. A message will be displayed on the page “Deleted successfully”

Client/Prospect

1) Add client/prospect

1. Select the client/prospect widget on the dashboard after loggin in.
2. Select add new client/prospect option.
3. Fill out the form and click on “ADD “ button.
4. A message will be displayed “Added successfully!”

2) Edit client/prospect

1. Select the client/prospect widget on the dashboard after loggin in.
2. Select Edit option .
3. A list of existing clients/prospect will be displayed .
4. Click on the value in the list.
5. A pop up will appear with all editable values.
6. Edit the values and click on “Save” button.
7. New values will be saved with a message displayed as “Edited successfully”.

3) View client/prospect

1. Select the client/prospect widget on the dashboard after loggin in.
2. Select the view client/prospect option.
3. List of existing client/prospects will be displayed.
4. Click on any value to view detailed information.

Lead

1) Add Lead

1. Click on the lead widget on the dashboard after loggin in.
2. Select add lead option.
3. Fill out the form.
4. Click “Add Lead” option.
5. A message will be displayed “Added successfully”.

2) View Lead

1. Click on the lead widget on the dashboard after loggin in.
2. Select view lead option.
3. List of leads will be displayed.
4. Click on any value to get detailed information about the lead

Reports

1)View Report

1. Select the report widget on the dashboard after loggin in.
2. Select the type of report you want.
3. Report will be displayed on the screen.

Manager

Project

1)Add Project

1. Click on the project widget on the dashboard after loggin in.
2. Select add project option.
3. Fill out the form and click “add button”.
4. Message will appear as “Project added successfully”.

2) View Project

1. Click on the project widget on the dashboard after loggin in.
2. Select view project option.
3. Project list will be displayed.
4. Select any value.
5. A pop up window will be displayed showing detailed information about the projects.
6. Select any value to get detailed information .

3) Edit Project

1. Click on the project widget on the dashboard after loggin in.
2. Select edit project option.
3. Project list will be displayed.
4. Select any value.
5. Pop up message will appear with editatble values.
6. Edit and click the save button.
7. Message will appear “Edited successfully”.

Client

1) View client

1. Click on the client widget on the dashboard after loggin in.
2. Select view client option.
3. List of client will be displayed.

Payment

1) View payment

1. Click on the payment widget on the dashboard.
2. Select view payment
3. List of projectwise payment will be displayed.

Milestones

1) Set milestone

1. Click on the milestone widget after loggin in.
2. Select set milestone option.
3. Fill in the form and click on the button “set milestone”
4. Message will be displayed “milestone set”

2) View milestone

1. Click on the milestone widget after loggin in
2. Select view milestone option.
3. List of project wise milestone will be displayed.

Reports

1) View Reports

1. Select Report widget on the dashboard after loggin in.
2. Select view reports
3. Select the criteria for reports.
4. Click on view reports.

Accountant

Payment

1)Add Payment

1. Select Payment widget on the dashboard after loggin in.
2. Select add payment option.
3. Fill in the form and click “Save” button.
4. Message will be displayed “Payment added succesfully.

2) View Payment

1. Select Payment widget on the dashboard after loggin in.
2. Select view payment option.
3. List of projectwise payments will be displayed.
4. Click on any value to see detailed information.

3) Edit Payment

1. Select Payment widget on the dashboard after loggin in.
2. Select edit payment option
3. List of payment will be displayed.
4. Click on any value.
5. Pop up window will be displayed with editable values.
6. Edit and click on save

4) Update payment status

1. Select Payment widget on the dashboard after loggin in.
2. Select update payment status.
3. Enter the status,details and click on update.
4. Message will be displayed “Updated successfully”.

5) Send payment reminders

1. Select Payment widget on the dashboard after loggin in.
2. Select send payment reminder option.

3. Check status of project.
4. Select client.
5. Fill in the payment details.
6. Click on send reminder button.
7. Message will be displayed “Reminder sent”.

Invoice

1) Generate invoice

1. Select invoice widget on the dashboard after loggin in.
2. Select generate invoice option.
3. Select client.
4. Click on generate invoice option.
5. Invoice will be generated in pdf format.

2) View invoice

1. Select invoice widget on the dashboard after loggin in.
2. Select view invoice option.
3. Select category.
4. Invoice for the selected category will be displayed.

3) Send invoice

1. Select invoice widget on the dashboard after loggin in.
2. Select send invoice option.
3. Select the client name.
4. Click on send invoice option.

Client

Project

1) View project

1. Select project widget on the dashboard after loggin in.
2. Select option view project.
3. List of project given by the client will be displayed.
4. Click on the any value ,pop up window will be displayed.
5. Details of the project will be displayed.

2) View payment reminder

1. Select payment widget on the dashboard after loggin in.
2. Select view payment reminder
3. List of payment reminders(if any) will be displayed for the corresponding project.
- 4.

- **4.2 MENU EXPLANATION**

I) Admin

Admin Dashboard-

1)User

1. Add User

Admin can “ADD USER” to the system by clicking on the ADD USER button. A form appears having various fields for data. Filling the form and submitting it results in successful addition of user to the system.

2. View User

Admin can “View User” of the system by selecting this option.

A list of the system users will be displayed on the screen.

3. Edit User

Admin can select on the “view user” option.A link appears on the names of the users.Admin can select any user to edit the user.Editable form appears on the screen.

2) Lead

1. Add Lead

Admin can “Add Lead” to the system by clicking on this option.

A form appears on the screens having various feilds.Filling the form and submitting it results in successful addition of lead to the system.

2. View Lead

Admin can “View Leads” in the system by selecting this option.

A list appears on the screens showing the leads in the system.

3. Edit Lead

Admin can “Edit Lead” in the system by selecting this option.

List of leads will be displayed. Select the lead to be edited. A form with editable fields will appear on the screen. Fill it and click the edit button. This will result in successful editing of lead.

II) Manager

Manager dashboard

1) Add project

Manager can “ADD Project” to the system by clicking on the ADD Project button. A form appears having various fields for data. Filling the form and submitting it results in successful addition of project to the system.

2) View Projects

Manager can “View Project” added to the system by clicking this option.

A List of existing projects will be displayed on the screen.

3) Edit Projects

Manager can “Edit project” by clicking this option. Enter the project name to be edited. Fill out the values that need to be changed. Click the edit button to save the changes.

4) Set milestones

Manager can set milestones for a project by selecting this option.

Manager can fill out a form and then click the “set milestone” button.

5) Edit milestone

Manager can “edit milestone” by selecting this option. Enter the project name and milestone name and the details will appear in the editable format. Enter the details to be changed and click the “edit” button.

III) Accountant

1) View Payment

Accountant can view payment details by selecting this option.

List of projects and payment details will be displayed on the screen.

2) Update payment status

Accountant can update the payment status by selecting this option. Payment is done manually and the status is updated in the system.

3) Generate and send invoice

Accountant can generate and send invoice by selecting this option.

A list of project whose milestone status is “completed” will be selected.

Select it and click the generate and send the invoice.

IV) Client

1) View project status

Client can view the status of the project by selecting this option.

Select the current project from the list and project details will be displayed.

2) View Payment reminder

Client can view payment reminders of the project by selecting this option.

Project details(payment related) will be displayed on the screen.

• 4.3 PROGRAM SPECIFICATION

Following are the program specification used in the development process explained with the help of flow chart.

User Authentication (Login)

Module Name	Authentication and Authorization	
Program Name	Login to the system	
Purpose	Check authentication of user	
Event	Click on “Login” Button.	
Input	Constraints	Description
Login Detail	The required field should not be null	Login details gets checked against database
Output	Login details get checked against database to check the authentication of the user and user get direction to their respective page.	

Add User

Module Name	Add user.	
Program Name	Add user details.	
Purpose	Add user details.	
Event	Click on “Save” Button.	
Input	Constraints	Description
User Detail	The required field should not be null	User Details are stored
Output	User details are stored in the User table and Admin gets acknowledgement message of record added.	

Add Project

Module Name	Add project	
Program Name	Add project details.	
Purpose	Add project details.	
Event	Click on “Add Project” Button.	
Input	Constraints	Description
User Detail	The required field should not be null	ProjectDetails are stored
Output	Project details are stored in the project table and Manager gets acknowledgement message of record added.	

Add Lead

Module Name	Add lead	
Program Name	Add lead details.	
Purpose	Add lead details.	
Event	Click on “Add Lead” Button.	
Input	Constraints	Description
User Detail	The required field should not be null	Lead details are stored
Output	Leads details are stored in the Lead table and Admin gets acknowledgement message of record added.	

DRAWBACKS AND LIMITATIONS

-Currently the system handles the payment manually.

Payment gateway is not included in the system.Payment is accepted manually and only the status is maintained in the system.

-Client after loggin in has only 2 options available-check project status and check payment reminders.Entire payment summary is not available to the client currently.

PROPOSED ENHANCEMENT

- Including payment gateway for online payment.
- Including “service provider” gateway to send payment reminders via messages on cell phone.
- Including the facility to show the payment summary to the client.

CONCLUSION

- System automated Lead management system.
- System proves useful for company as it manages all the tasks related to management of leads till invoice generation.
- Information provided is reliable and analytical.
- System provides management of all leads from any place via internet.
- System provides statistics about all leads and projects using attractive tables.
- System reduces cost and efforts of maintaining records.

BIBLIOGRAPHY

Bibliography:

Mastering Spring MVC 4

By: Geoffroy Warin

Websites:

<http://docs.spring.io/>

1. <http://projects.spring.io/spring-framework/>
2. <http://www.w3schools.com/>
3. <http://www.restapitutorial.com/lessons/>
4. <http://www.javatpoint.com/spring-JdbcTemplate-tutorial>

ANNEXURE 1:

USER INTERFACE

Admin Screens

1. Admin dashboard

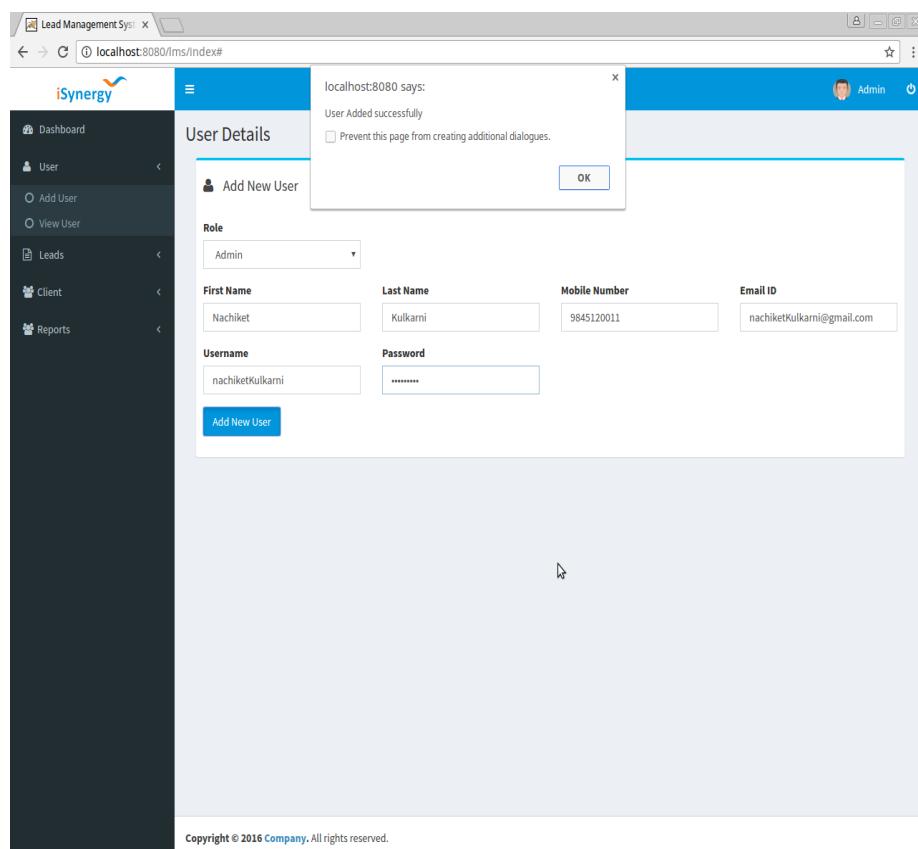
The screenshot shows the Admin Dashboard of a Lead Management System. The interface includes a left sidebar with navigation links for Dashboard, User, Leads, Client, and Reports. The main content area features three sections: 'Clients' (listing 4 entries), 'Leads' (listing 5 entries), and 'Reports' (listing 3 items). The 'Clients' section has a 'More Details' button. The 'Leads' section has a 'More Details' button. The 'Reports' section lists 'Prospect', 'Client', and 'Leads'. The bottom of the screen displays a copyright notice: 'Copyright © 2016 Company. All rights reserved.'

Sr.No.	Client Name	Contact Person	Mobile No.
1	Persistent	Priya Suri	9825105611
2	TATA	komal Sharma	9600241068
3	KPIT	Harshal Joshi	8087855759
4	Skills Alpha	Priyanka Khanna	9822011785

Lead Name	Technologies	Status
LMS	Java Spring	Active
Income Tax processing	Java Struts	Active
Videanalysis	Java Spring	Active
Task Trac	.Net	Inactive

Copyright © 2016 Company. All rights reserved.

2 Add user



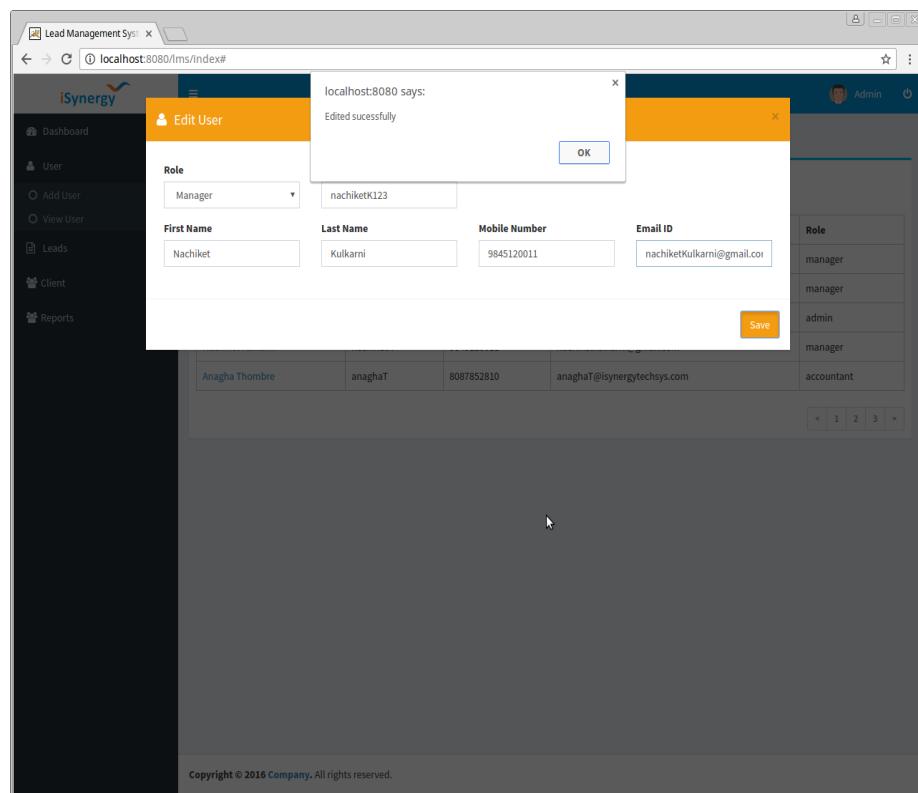
View user

The screenshot shows a web-based application interface for a Lead Management System (LMS). The top navigation bar includes a logo for 'iSynergy', a search bar with the URL 'localhost:8080/lms/index#', and a user profile for 'Admin'. The left sidebar has a dark theme with white icons and text, listing 'Dashboard', 'User' (selected), 'Add User', 'View User', 'Leads', 'Client', and 'Reports'. The main content area is titled 'View All User' and contains a sub-section titled 'Existing Users'. A table displays five user records:

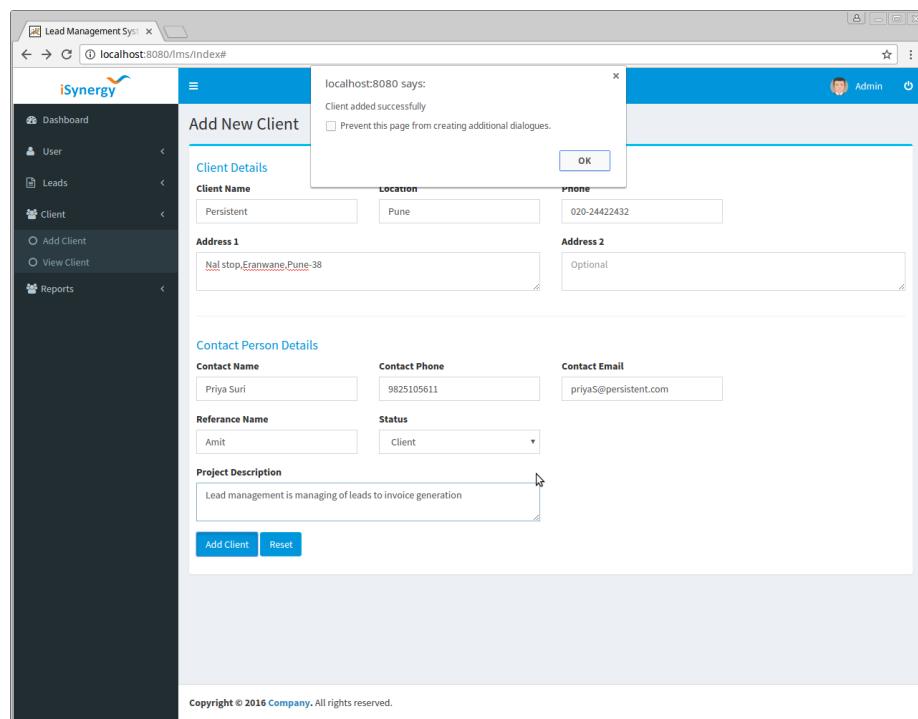
Name	Username	Mobile No.	Email Id	Role
RUCHI BHAGWAT	ruchi30oct	125	ruchi30oct@yahoo.co.in	manager
rucha khot	rucha123	123122	test@test.com	manager
a a	a	123	ruchi30oct@yahoo.co.in	admin
Nachiket Kularki	nachiketK	9845120011	nachiketkularki@gmail.com	manager
Anagha Thombre	anaghaT	8087852810	anaghaT@isynergytechsys.com	accountant

At the bottom of the page, there is a copyright notice: 'Copyright © 2016 Company. All rights reserved.' and a small cursor icon.

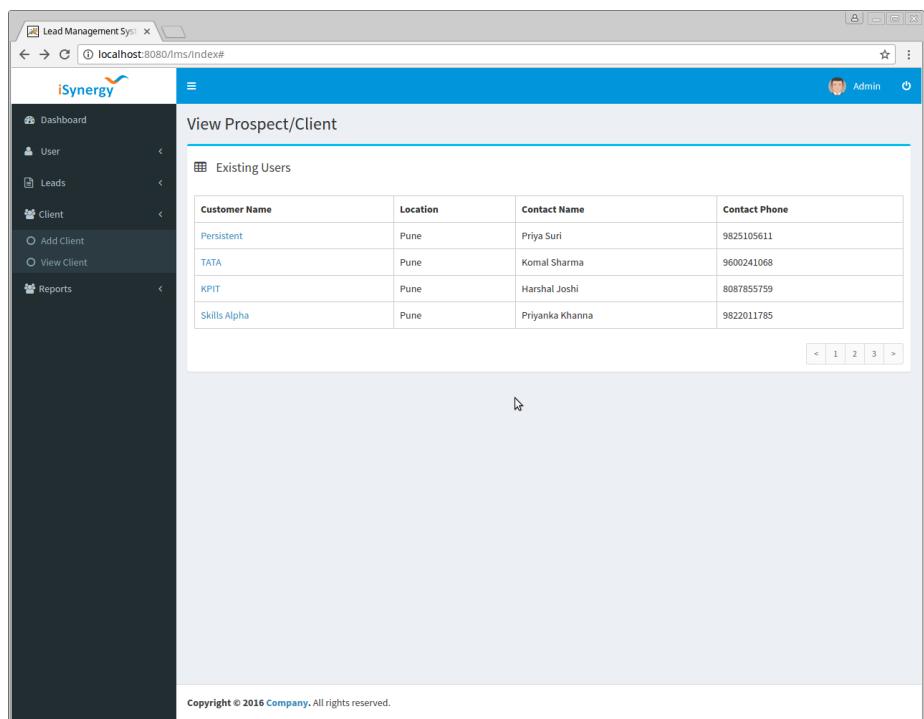
Edit user



5 . Add client



5. View client

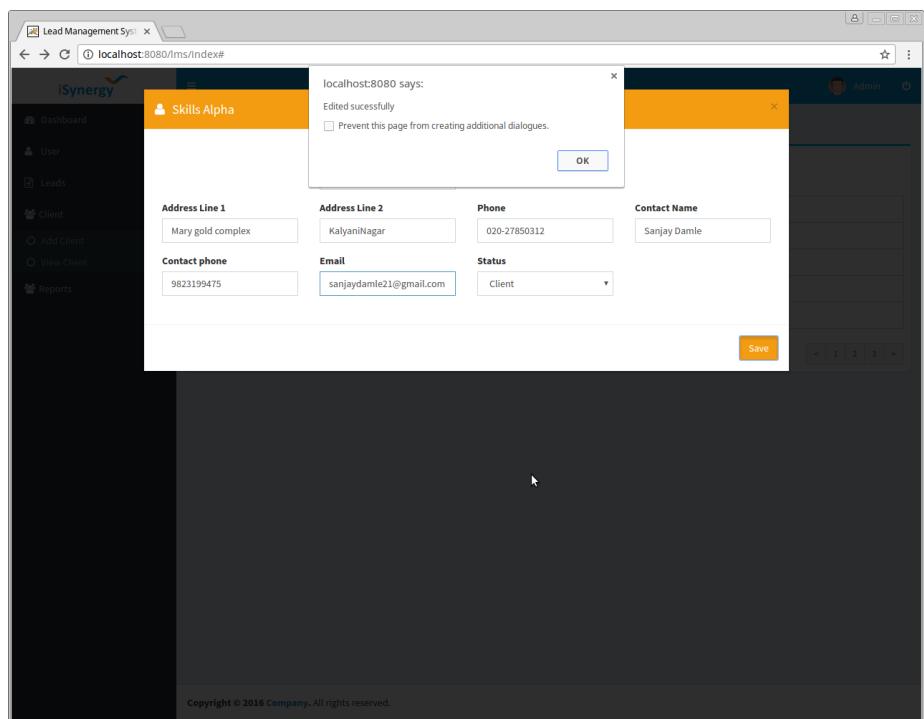


The screenshot shows a web-based application interface for a Lead Management System (LMS). The title bar indicates the URL is `localhost:8080/lms/index#`. The top navigation bar includes a logo for "iSynergy", a user icon labeled "Admin", and a settings gear icon. On the left, a dark sidebar menu lists "Dashboard", "User", "Leads", "Client" (which is currently selected), "Add Client", "View Client", and "Reports". The main content area has a header "View Prospect/Client" and a section titled "Existing Users". Below this is a table with the following data:

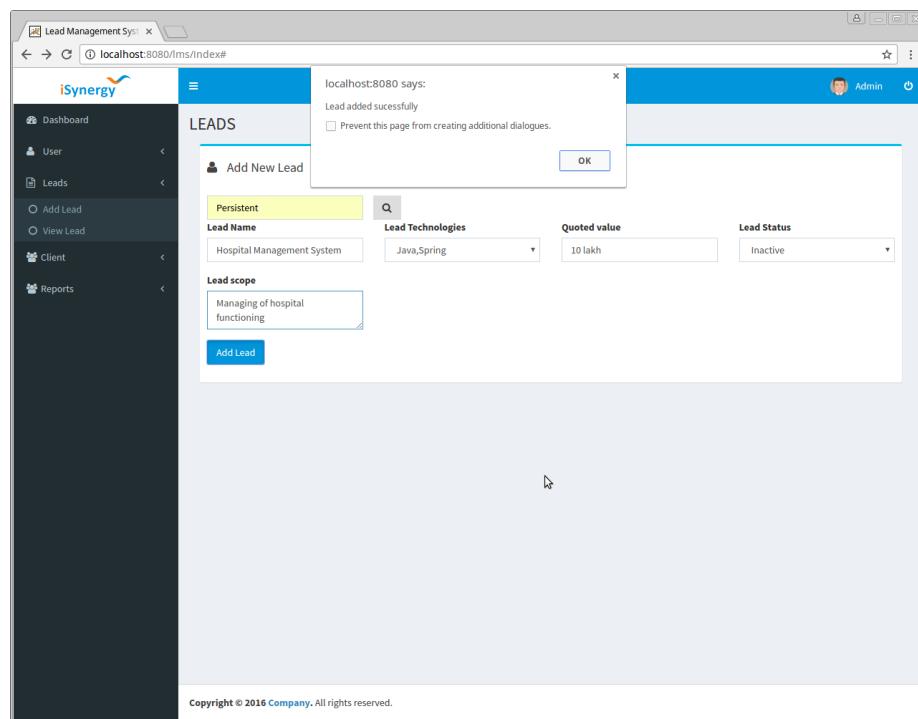
Customer Name	Location	Contact Name	Contact Phone
Persistent	Pune	Priya Suri	9825105611
TATA	Pune	Komal Sharma	9600241068
KPIT	Pune	Harshal Joshi	8087855759
Skills Alpha	Pune	Priyanka Khanna	9822011785

At the bottom of the content area, there is a small navigation bar with icons for back, forward, and search. The footer of the page contains the copyright notice: "Copyright © 2016 Company. All rights reserved."

6. Edit client



7. Add lead



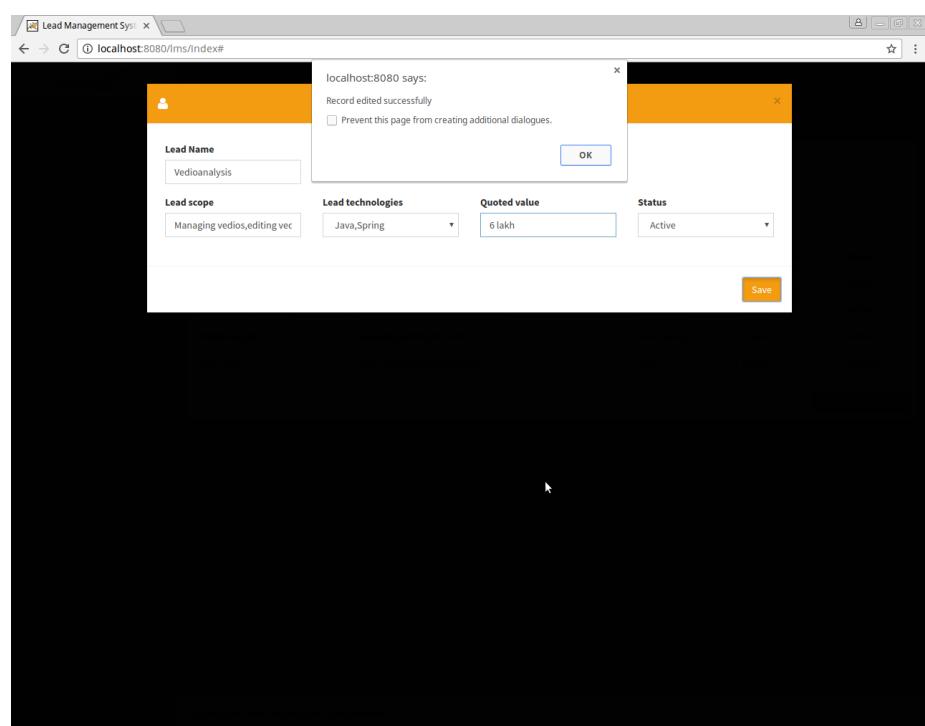
8. View lead

The screenshot shows a web-based application titled "Lead Management System" (lms). The URL in the browser is "localhost:8080/lms/index#". On the left, there is a dark sidebar menu with the "iSynergy" logo at the top. The menu items include "Dashboard", "User", "Leads" (which is currently selected), "Add Lead", "View Lead", "Client", and "Reports". The main content area is titled "VIEW LEADS" and contains a section titled "Existing Leads". A table displays five rows of lead information:

Lead Name	Scope	Technologies	Quoted value	Status
LMS	Storing leads to generating project invoices	Java Spring	2 lakhs	Active
Income Tax processing	Generation of income tax from salary	Java Struts	6 Lakh	Active
Vedioanalysis	Managing,editing of vedios	Java Spring	7 lakh	Active
Task Trac	Task management of projects	.Net	3 lakh	Inactive
Hospital Management System	Managing of hospital functioning	Java Spring	10 lakh	Inactive

At the bottom of the page, there is a copyright notice: "Copyright © 2016 Company. All rights reserved."

9. Edit lead



Manager screens

1. Manager Dashboard

The screenshot shows a web-based Manager Dashboard. On the left, a sidebar menu includes 'Dashboard', 'Projects' (selected), and 'Reports'. Under 'Projects', options like 'Add Project', 'View Project', and 'Edit Project' are listed. The main content area has a header 'Welcome Manager'. It displays a table titled 'Ongoing Projects' with four rows:

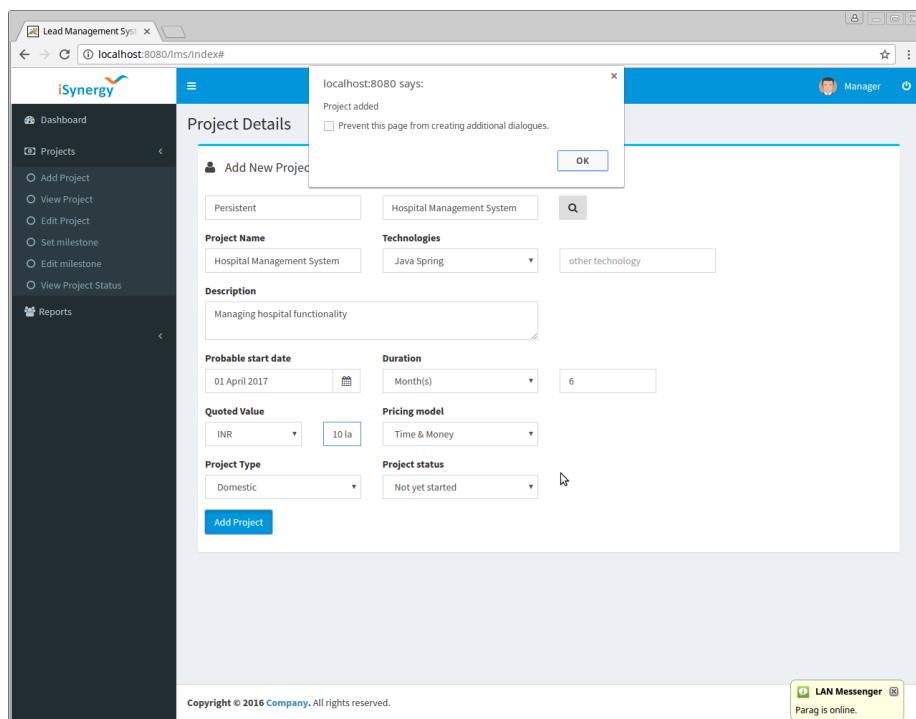
Sr.No.	Project Name
1	Careerclap
2	E-Learning
3	Helping Hand
4	Payroll

To the right of the project list is a section titled 'Reports' containing a bulleted list:

- Payment wise
- Project wise
- Lead wise
- Client wise

At the bottom of the page, a copyright notice reads: 'Copyright © 2016 Company. All rights reserved.'

2. Add Project



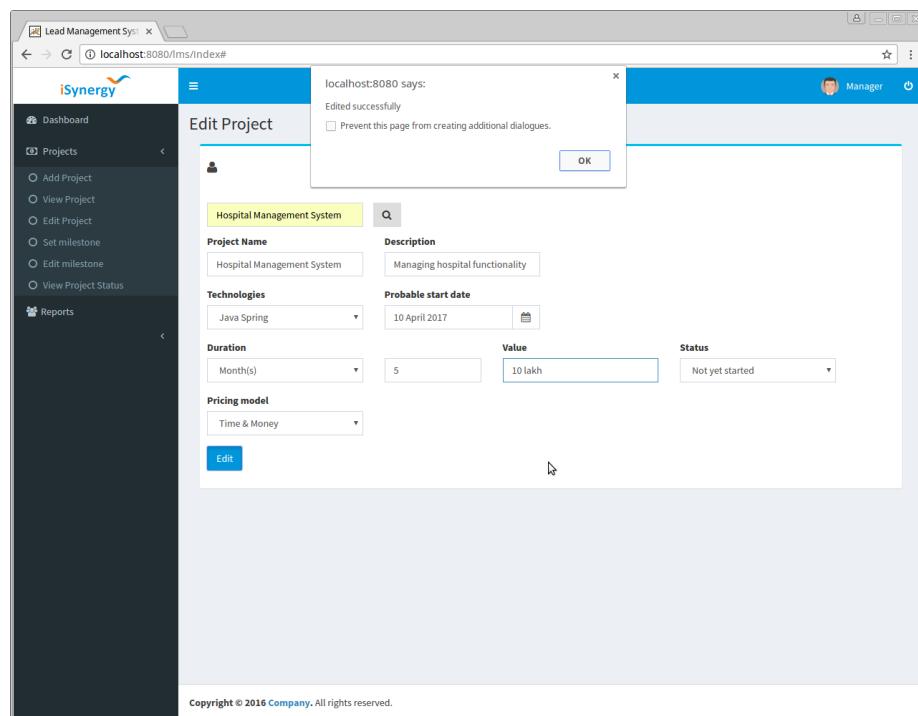
View Project

The screenshot shows a web-based application window titled "Lead Management System" with the URL "localhost:8080/lms/index#". The interface includes a sidebar on the left with "iSynergy" branding and navigation links for Dashboard, Projects (Add Project, View Project, Edit Project, Set milestone, Edit milestone, View Project Status), and Reports. The main content area is titled "Project List" and displays a table with 12 rows of project data:

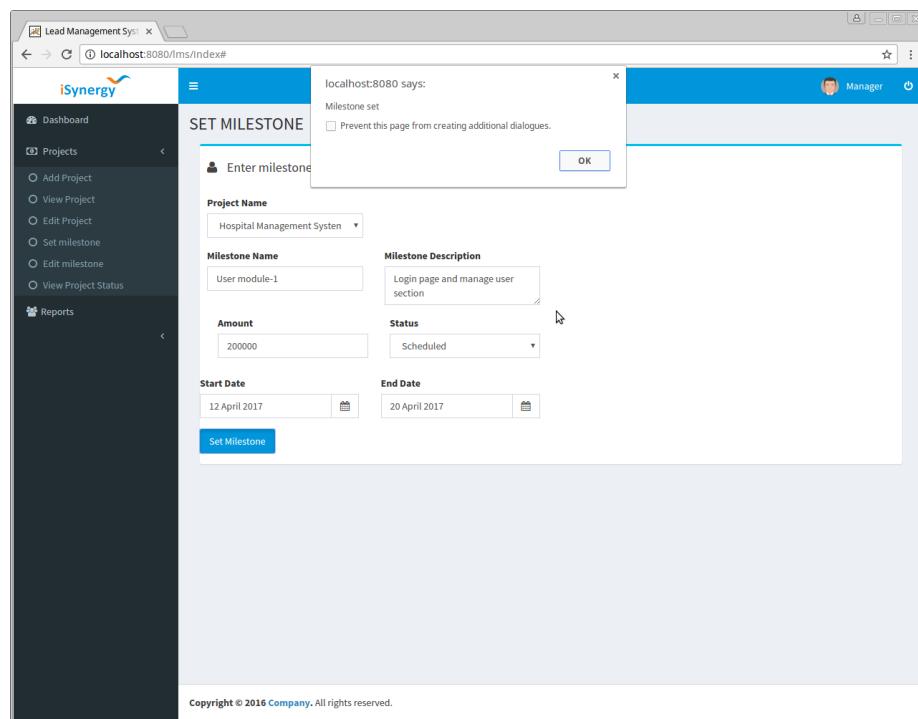
Project Id	Project Name	Status
2	LMS	completed
3	ABC	partial
4	IT	Ongoing
5	B virtual	onstage
6	Vedioanalysis	onstage
7	Vedioanalysis	onstage
8	Vedioanalysis	onstage
9	CareerClap	delivered
10	CareerClap-2	delivered
11	foody	not yet st
12	Hospital Management System	Not yet st

At the bottom of the page, there is a copyright notice: "Copyright © 2016 Company. All rights reserved."

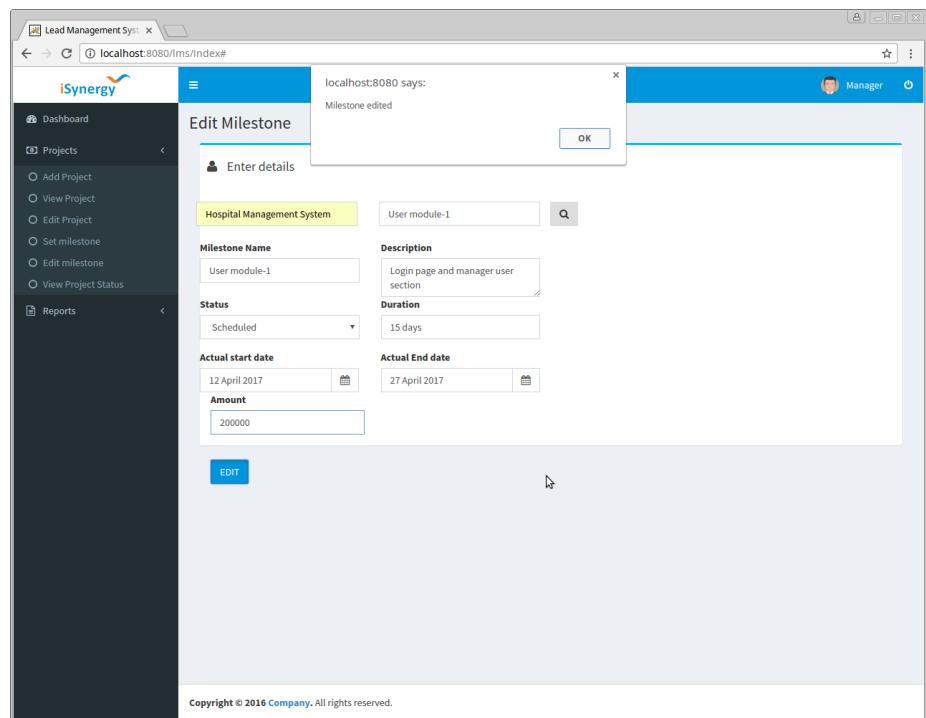
Edit Project



Set milestone

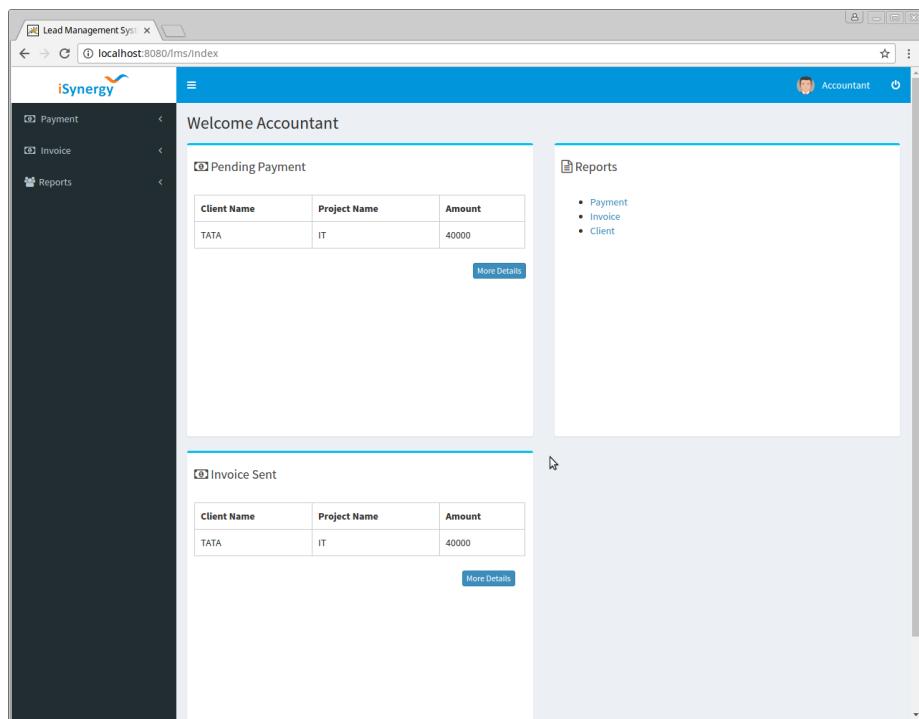


7 . Edit milestone



Accountant screens

1. Accountant dashboard



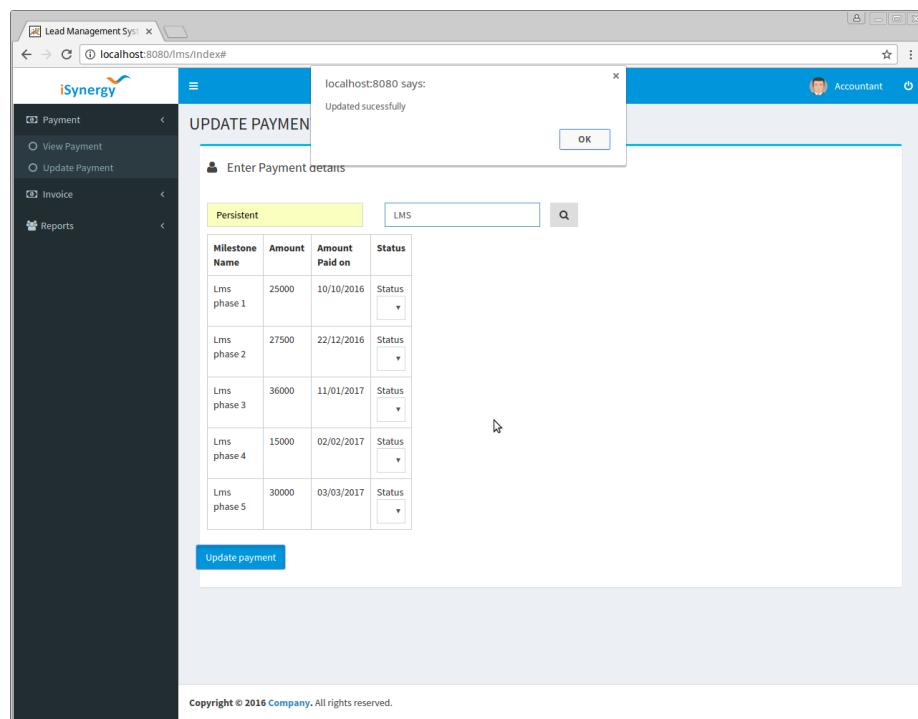
2. View payment

The screenshot shows a web-based application titled "Lead Management System" (LMS). The URL in the browser is "localhost:8080/lms/index#". The interface includes a sidebar with navigation links for "Payment" (selected), "View Payment", "Update Payment", "Invoice", and "Reports". The main content area is titled "View Payment" and contains a section titled "Payment Details". A table lists four entries:

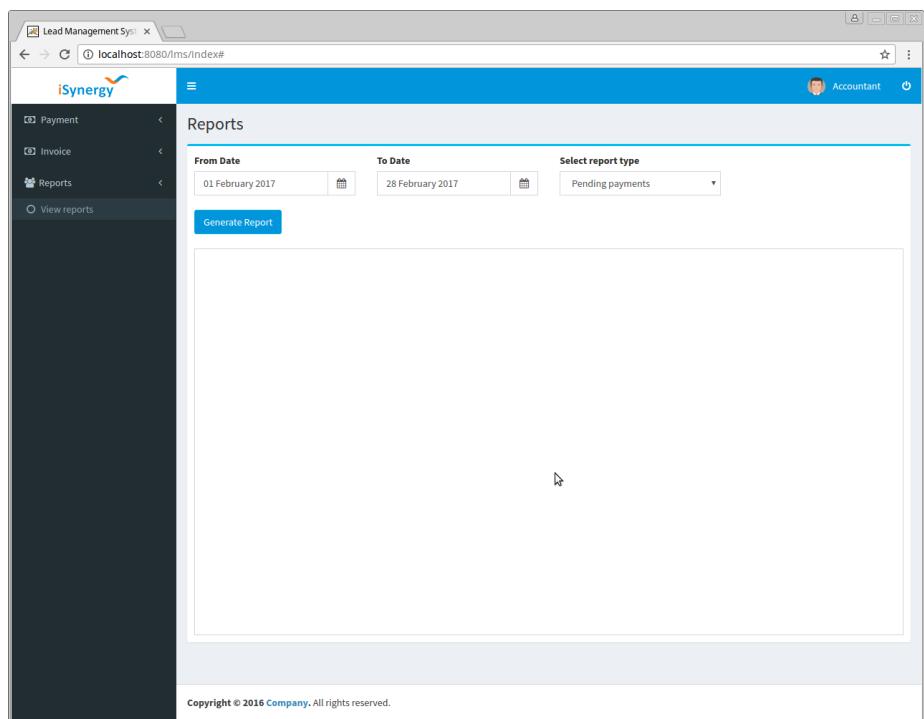
Client Name	Project Name	Total Amount	Final status
Persistent	LMS	133500	Paid
TATA	IT	40000	Unpaid
KPIT	B Virtual	500000	Paid
Skills Alpha	Helping Hands	27500	Paid

At the bottom of the page, there is a copyright notice: "Copyright © 2016 Company. All rights reserved."

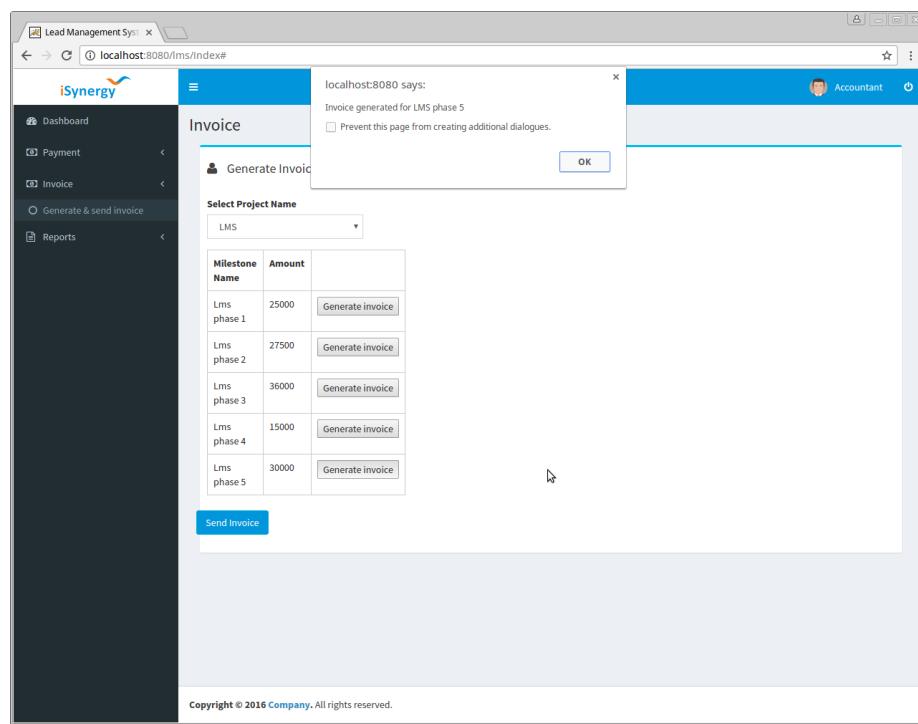
3. Update payment



4. view report

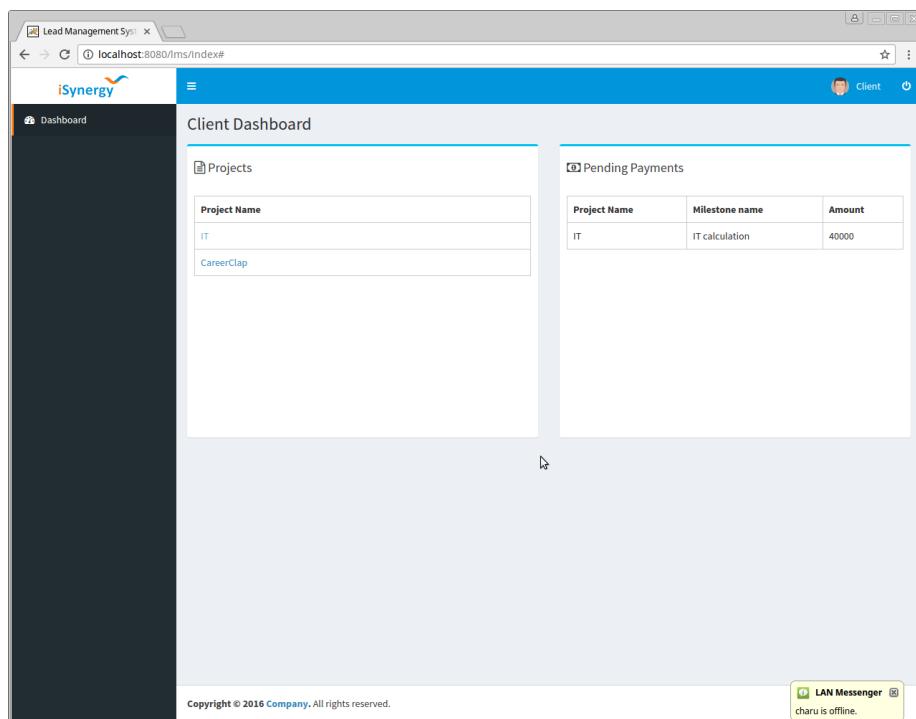


5. Generate invoice

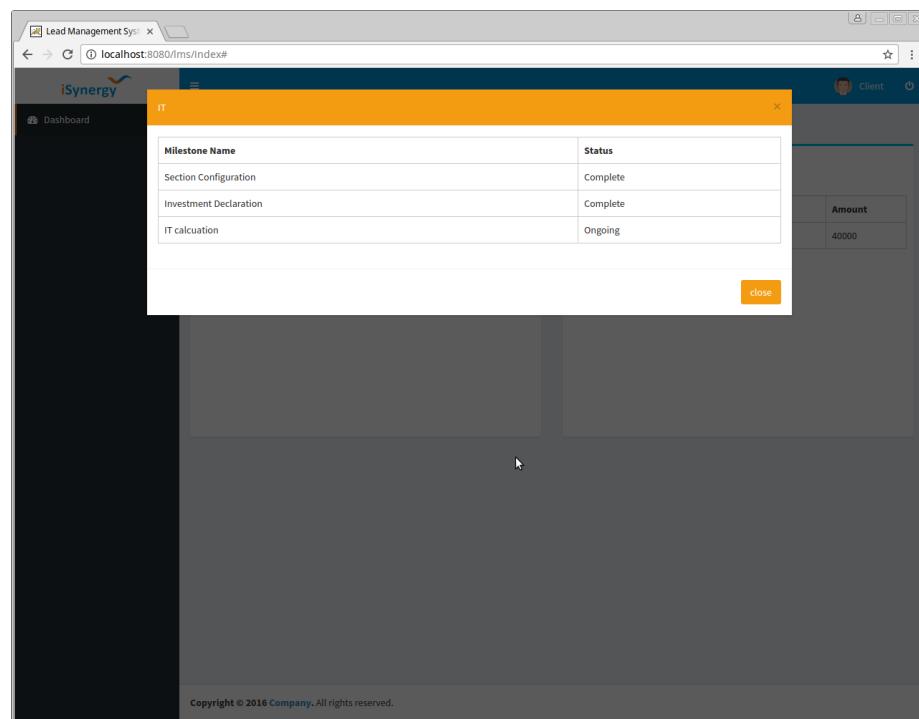


Client screens

1. client dashboard



2. Client project status



ANNEXURE 2:

REPORTS

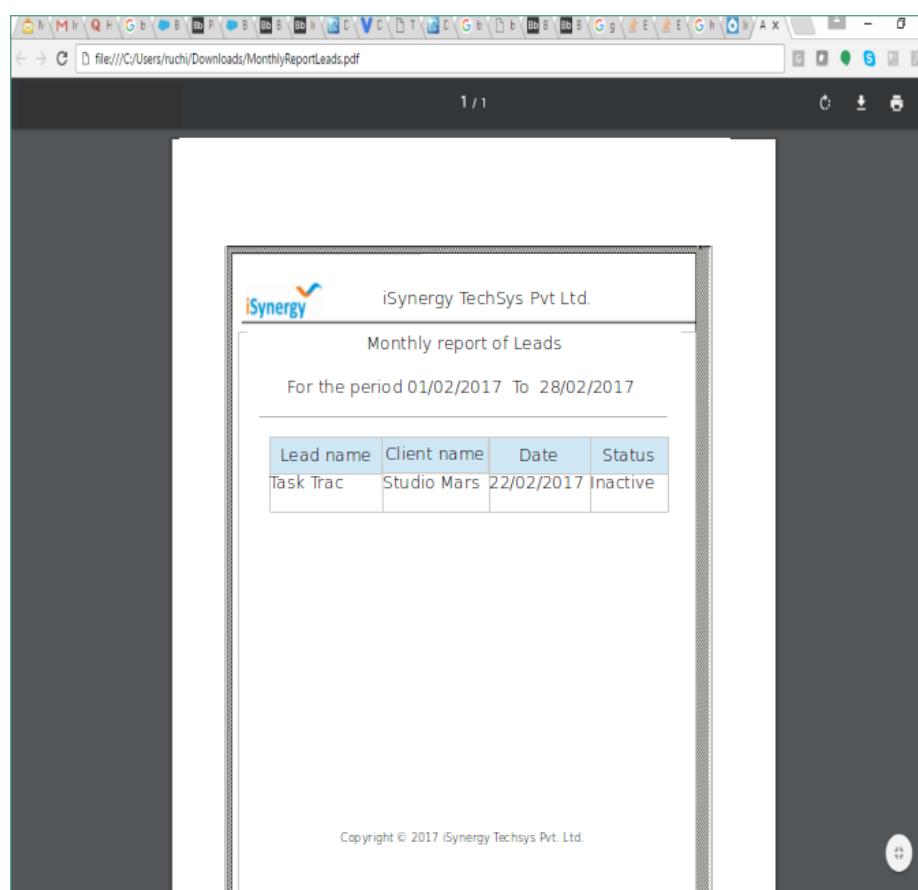
1. Yearly report of Leads

The screenshot shows a PDF document titled "Yearly report of Leads" for the period from 01/06/2016 to 01/06/2017. The document contains a table with five rows of lead information. The table has three columns: Lead name, Client name, and Date.

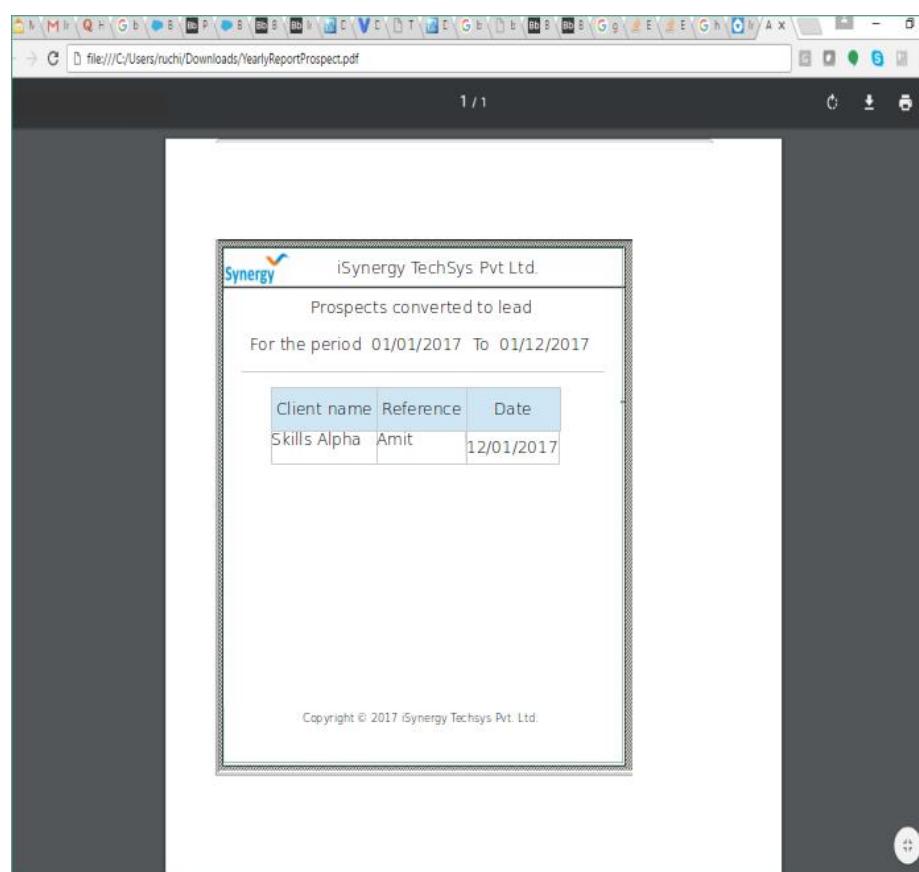
Lead name	Client name	Date
LMS	Persistent	27/06/2016
Income Tax Processing	KPIT	13/10/2016
Vedioanalysis	TATA	01/12/2016
Task Trac	Studio Mars	22/02/2017
Hospital Management System	Persistent	01/04/2017

Copyright © 2017 isynergy Techsys Pvt. Ltd.

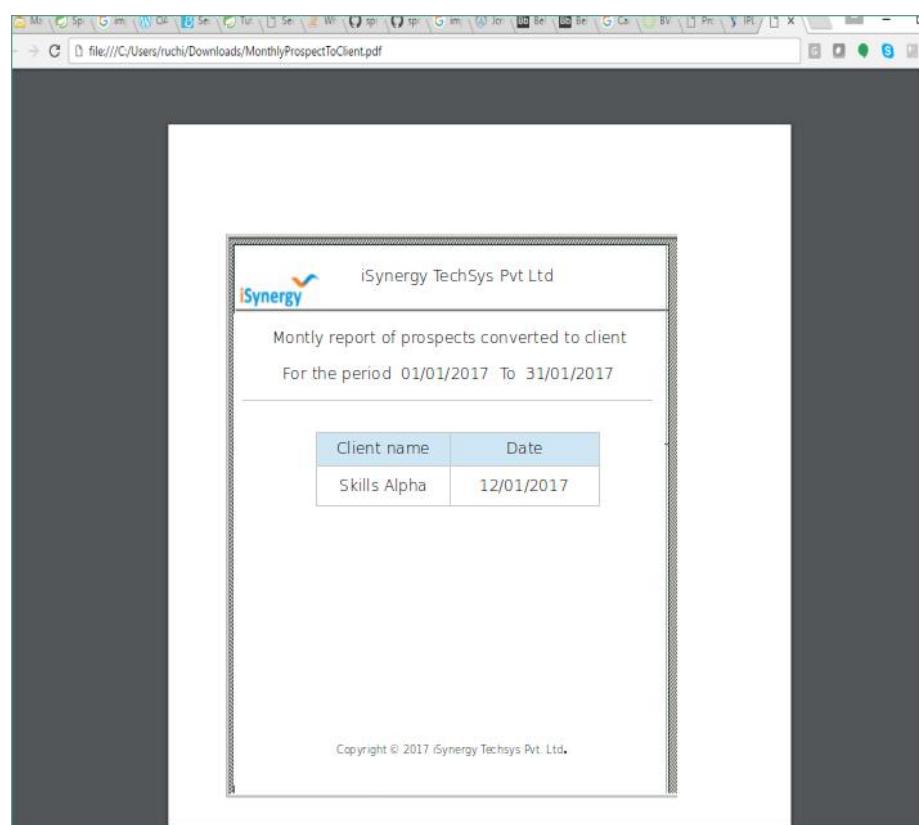
2. Monthly report of leads



3. Yearly client to prospect



4. Monthly prospect to client



5. Best client yearly-payment wise

The screenshot shows a PDF document titled "Yearly Report for Best Client Payment wise" for the period "01/01/2017 To 31/12/2017". The document contains a table with three columns: "Client name", "Project", and "Amount". A single row is present in the table, showing "Persistent" as the client name, "LMS" as the project, and "1050000" as the amount.

Client name	Project	Amount
Persistent	LMS	1050000

Copyright © 2017 iSynergy Techsys Pvt. Ltd.

6. Best client project wise

The screenshot shows a PDF document titled "Yearly report for Best client project wise" for the period from 01/06/2016 to 01/06/2017. The document is generated by iSynergy TechSys Pvt Ltd. It contains a table with two rows, each representing a project for the client "Persistent".

Client name	Project	Date
Persistent	LMS	27/06/2016
Persistent	Hospital Management System	01/04/2017

Copyright © 2017 iSynergy Techsys Pvt. Ltd.

7. Domestic project

The screenshot shows a PDF document titled "Yearly Report for domestic projects" from "iSynergy TechSys Pvt Ltd." for the period "01/06/2016 To 01/06/2017". The document contains a table with two columns: "Client name" and "Project". The data in the table is as follows:

Client name	Project
Persistent	LMS
KPIT	Income Tax Processing
TATA	Vedioanalysis
Studio Mars	Task Trac
Persistent	Hospital Manaement System

At the bottom of the document, there is a copyright notice: "Copyright © 2017 iSynergy Techsys Pvt. Ltd."

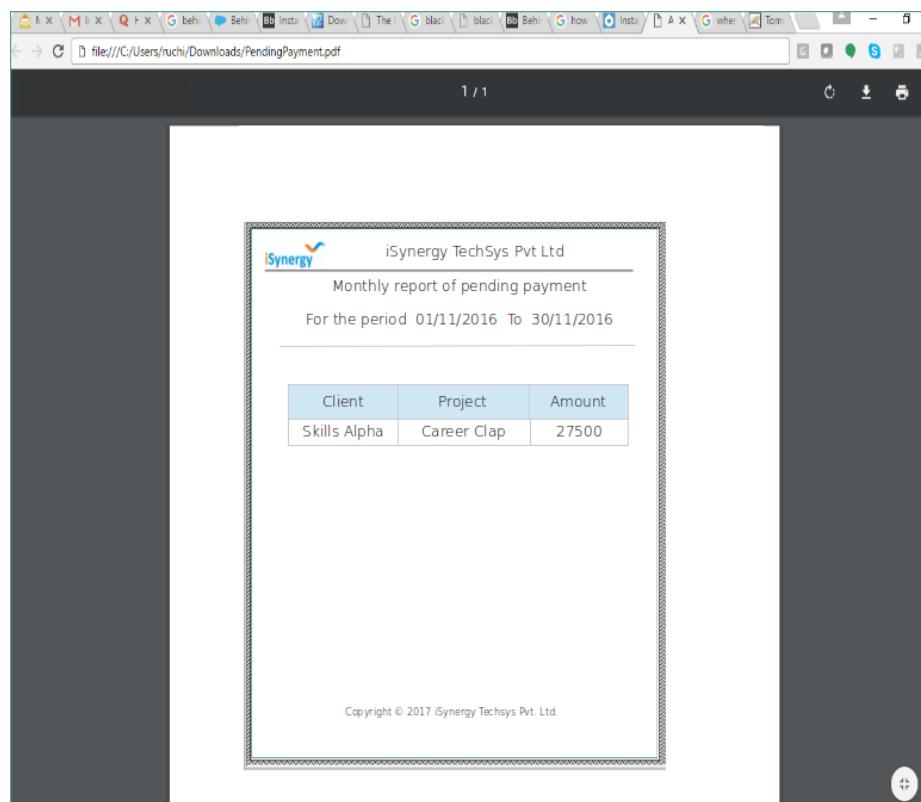
8.Ongoing projects

The screenshot shows a PDF document titled "Monthly report for Ongoing projects" from "iSynergy TechSys Pvt Ltd." for the period "01/04/2017 To 30/04/2017". The document contains a table with three rows:

Project name	Client name
IT	TATA
B virtual	KPIT
Vedioanalysis	TATA

At the bottom of the page, there is a copyright notice: "Copyright © 2017 iSynergy Techsys Pvt. Ltd."

9.Pending payment



userController.java

```
package com.isynergy.lms.controller;

import java.util.ArrayList;
import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.ResponseBody;

import com.isynergy.lms.manager.UserManager;
/*import com.isynergy.lms.vo.LeadVO;
import com.isynergy.lms.vo.Prospect_ClientVO;*/
import com.isynergy.lms.vo.ResponseMessageVO;
import com.isynergy.lms.vo.UserVO;

//@Response body is used when u want to return the response back to UI

@Controller
@RequestMapping(value="/user")

public class UserController
```

```

@Autowired
UserManager usermanager;

//-----ADD NEW USER-----
@RequestMapping(value="/addNewUser",method =
RequestMethod.POST,consumes = "application/json")
public @ResponseBody ResponseMessageVO addNewUser(@RequestBody
UserVO uservo) throws Exception
{
    try
    {
        ResponseMessageVO result =
usermanager.addNewUser(uservo);
        System.out.println("result in controller:"+result);

        return result;
    }

    catch(Exception e)
    {
        throw e;
    }
}

//-----VIEW ALL USERS IN THE SYSTEM -----
@RequestMapping(value="/viewAllUsers",method = RequestMethod.GET)
public @ResponseBody List<UserVO> viewAllUsers() throws Exception
{
}

```

```

try
{
    List<UserVO>userlist = new ArrayList<UserVO>();
    return userlist = usermanager.viewAllUsers();

}
catch(Exception e)
{
    throwe;
}

}

//-----GET USER BY ID-----

@RequestMapping(value="/getUserById/{userID}",method =
RequestMethod.GET)
public@ResponseBody UserVO getUserById(@PathVariableintuserID)

throws Exception
{
    try
{
    // List<UserVO> userList = new ArrayList<UserVO>();
    UserVO userList = usermanager.getUserById(userID);
    System.out.println("user....."+userList.getUserName());
    return userList;
}
catch(Exception e)
{
}

```

```
        throwe;  
    }  
  
}  
  
//-----EDIT USER-----  
  
@RequestMapping(value="/editUser(userID/{userID}",method  
=RequestMethod.POST,consumes = "application/json")  
  
public@ResponseBody ResponseMessageVO  
editUser(@PathVariableintuserID) throws Exception  
{  
    try  
    {  
        ResponseMessageVO result = (ResponseMessageVO)  
usermanager.editUser(userID);  
        returnresult;  
    }  
    catch(Exception e)  
    {  
        throwe;  
    }  
}  
  
}
```

userManager.java

```
package com.isynergy.lms.manager;

import java.util.ArrayList;
import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Component;

import com.isynergy.lms.dao.UserDAO;
/*import com.isynergy.lms.vo.LeadVO;
import com.isynergy.lms.vo.Prospect_ClientVO;*/
import com.isynergy.lms.vo.ResponseMessageVO;
import com.isynergy.lms.vo.UserVO;

@Component
public class UserManager
{
    @Autowired
    UserDAO userdao;

    //-----ADD NEW USER-----
    public ResponseMessageVO addNewUser(UserVO uservo) throws
Exception
    {
        try
        {

```

```

        ResponseMessageVO result =
userdao.addNewUser(uservo);
//System.out.println("result in projectManager is:"+result);
returnresult;
}

catch(Exception e)
{
    throwe;
}

}

//-----VIEW ALL USERS IN THE SYSTEM-----
public List<UserVO> viewAllUsers() throws Exception
{
try
{
List<UserVO>userlist = new ArrayList<UserVO>();
returnuserlist = userdao.viewAllUsers();
}
catch(Exception e)
{
    throwe;
}
}

//-----EDIT USER-----
public ResponseMessageVO editUser(intuserID) throws Exception
{
try

```

```
{  
    ResponseMessageVO result = userdao.editUser(userID);  
    return result;  
  
}  
  
catch(Exception e)  
{  
    throw e;  
}  
  
}  
  
public UserVO getUserById(int userID) throws Exception  
{  
    try  
    {  
        //  
        List<UserVO> userList = new ArrayList<UserVO>();  
        UserVO userList = userdao.getUserById(userID);  
        return userList;  
    }  
  
catch(Exception e)  
{  
    throw e;  
}  
}  
  
}
```

ANNEXURE 3:

SAMPLE CODE

userDao.java

```
package com.isynergy.lms.dao;

import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.ArrayList;
import java.util.List;

import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.core.env.Environment;
import org.springframework.jdbc.core.RowMapper;
import org.springframework.jdbc.core.namedparam.MapSqlParameterSource;
import org.springframework.jdbc.core.namedparam.NamedParameterJdbcTemplate;
import org.springframework.stereotype.Component;

/*import com.isynergy.lms.vo.LeadVO;
import com.isynergy.lms.vo.MilestoneVO;
import com.isynergy.lms.vo.ProjectVO;
import com.isynergy.lms.vo.Prospect_ClientVO;*/
```

```

import com.isynergy.lms.vo.ResponseMessageVO;
import com.isynergy.lms.vo.RoleVO;
import com.isynergy.lms.vo.UserVO;

@Component

public class UserDAO {

    public Logger logger = LoggerFactory.getLogger(UserDAO.class);

    @Autowired
    NamedParameterJdbcTemplate jdbcTemplate;

    @Autowired
    Environment env;

    // -----QUERIES-----
    private final static String INSERT_USER = " INSERT INTO `user`  

        (role_id,first_name,last_name,username,password,mobile,email,last_update_date,cre  

        ate_date)"  

        +  

        "VALUES(:roleid,:firstname,:lastname,:username,:password,:mobileno,:email,:last_u  

        pdate_date,:create_date)";
}

```

```

privatefinalstatic String VIEW_USER = "SELECT
user_id,first_name,last_name,username,mobile,email,role_type FROM user,role "+
" WHERE user.role_id = role.role_id ORDER BY user_id";

privatefinalstatic String UPDATE_USER = " UPDATE USER SET
first_name =: first_name ,last_name= :last_name,"+
" username = :username, mobile = :mobile, email = :email" +
" WHERE user_id = :user_id " ;

privatefinalstatic String GET_USER_BY_ID = "SELECT
first_name,last_name,username,mobile,email ,role_type FROM user,role" +
" WHERE user.role_id = role.role_id AND user_id= :user_id";

public ResponseMessageVO addNewUser(UserVO uservo) {

    ResponseMessageVO messageVO = newResponseMessageVO();

    try {
        MapSqlParameterSource parameterSource =
newMapSqlParameterSource();
}

```

```

        parameterSource.addValue("roleid",
uservo.getRoleID());// values

// same as

// query

parameterSource.addValue("firstname",
uservo.getFirstName());

parameterSource.addValue("lastname",
uservo.getLastName());

parameterSource.addValue("username",
uservo.getUserName());

parameterSource.addValue("password",
uservo.getPassword());

parameterSource.addValue("mobileno",
uservo.getMobileNo());

parameterSource.addValue("email", uservo.getEmail());

parameterSource.addValue("last_update_date",System.currentTimeMillis());

parameterSource.addValue("create_date",
System.currentTimeMillis());

if (jdbcTemplate.update(INSERT_USER,
parameterSource) > 0)

{

messageVO.setStatusCode(env.getProperty("RES_SUCCESS_CODE"));
}

```

```

        messageVO.setStatusMessage(env.getProperty("RES_MESSAGE_ADD_U
SER"));

    }

else

    {

        messageVO.setStatusCode(env.getProperty("ERR_ERROR_CODE"));

        messageVO.setStatusMessage(env.getProperty("ERR_MESSAGE_ADD_U
SER"));

    }

}

catch (Exception e)

{

    messageVO.setStatusMessage(env.getProperty("ERR_MESSAGE_ADD_U
SER"));

}

returnmessageVO;

}

public List<UserVO> viewAllUsers()

{

```

```

MapSqlParameterSource parameterSource =
new MapSqlParameterSource();

List<UserVO>userlist = jdbcTemplate.query(VIEW_USER, new
MapSqlParameterSource(),
new RowMapper<UserVO>() {

    @Override
    public UserVO mapRow(ResultSet rs,
    int rowNum)
        throws
SQLException {
}

UserVO uservo =
new UserVO();
RoleVO rolevo =
new RoleVO();

uservo.setUserID(rs.getInt("user_id"));

uservo.setFirstName(rs.getString("first_name"));

```

```
uservo.setLastName(rs.getString("last_name"));

uservo.setUserName(rs.getString("username"));

//uservo.setPassword(rs.getString("password"));

uservo.setMobileNo(rs.getString("mobile"));

uservo.setEmail(rs.getString("email"));

rolevo.setRoleType(rs.getString("role_type"));

/*obj.setLastUpdateDate(rs.getLong("last_update_date"));

obj.setCreateDate(rs.getLong("create_date"));*/

uservo.setRolevo(rolevo);;

returnuservo;

}

});

returnuserlist;

}
```

public ResponseMessageVO editUser(**int**userID) **throws** Exception

```

{

    UserVO uservo = newUserVO();

    ResponseMessageVO messageVO = newResponseMessageVO();

    try

    {

        MapSqlParameterSource parameterSource = newMapSqlParameterSource();

        parameterSource.addValue("userID",userID);

        parameterSource.addValue("first_name",uservo.getFirstName());

        parameterSource.addValue("last_name",uservo.getLastName());

        parameterSource.addValue("username",uservo.getUserName());

        parameterSource.addValue("mobile",uservo.getMobileNo());

        parameterSource.addValue("email",uservo.getEmail());

        if(jdbcTemplate.update(UPDATE_USER,
parameterSource)>0)

        {

            messageVO.setStatusCode(env.getProperty("RES_SUCCESS_CODE"));

            System.out.println(messageVO.getStatusCode());

            messageVO.setStatusMessage(env.getProperty("RES_MESSAGE_EDIT_U

SER"));

        }

    }

}


```

```

        System.out.println(messageVO.getStatusMessage());
    }

    else

    {

        messageVO.setStatusCode(env.getProperty("ERR_ERROR_CODE"));
        System.out.println(messageVO.getStatusCode());

        messageVO.setStatusMessage(env.getProperty("ERR_MESSAGE_EDIT_U
SER"));

        System.out.println(messageVO.getStatusMessage());


    }

    catch(Exception e)
    {

        messageVO.setStatusMessage(env.getProperty("ERR_MESSAGE_EDIT_U
SER"));

    }

    return messageVO;
}

//-----GET USER BY ID-----

public UserVO getUserId(intuserID) throws Exception

```

```
try
{
    MapSqlParameterSource parameterSource =
new MapSqlParameterSource();
    parameterSource.addValue("user_id", userID);

    System.out.println("Id is :" + userID);

    List<UserVO> userList = jdbcTemplate.query(
        GET_USER_BY_ID, parameterSource,
        new RowMapper<UserVO>() {

            @Override
            public UserVO
mapRow(ResultSet rs, int rowNum)
            throws
SQLException {
}

    UserVO uservo =
newUserVO();
    RoleVO rolevo =
newRoleVO();

    uservo.setFirstName(rs.getString("first_name"));
    uservo.setLastName(rs.getString("last_name"));
    uservo.setAddress(rs.getString("address"));
    uservo.setCity(rs.getString("city"));
    uservo.setState(rs.getString("state"));
    uservo.setZip(rs.getString("zip"));
    uservo.setCountry(rs.getString("country"));
    uservo.setPhone(rs.getString("phone"));
    uservo.setEmail(rs.getString("email"));
    uservo.setRole(rolevo);
    uservo.setUser(uservo);
}
```

```
System.out.println("first name :" + uservo.getFirstName());  
  
uservo.setLastName(rs.getString("last_name"));  
  
uservo.setUserName(rs.getString("username"));  
  
uservo.setMobileNo(rs.getString("mobile"));  
  
uservo.setEmail(rs.getString("email"));  
  
rolevo.setRoleType(rs.getString("role_type"));  
  
uservo.setRolevo(rolevo);  
  
return uservo;  
}  
});  
  
return userList.get(0);  
  
}  
catch(Exception e)  
{  
    throw e;  
}
```

}

}

projectController.java

```
package com.isynergy.lms.controller;

import java.util.ArrayList;
import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.ResponseBody;

import com.isynergy.lms.manager.ProjectManager;
import com.isynergy.lms.vo.MilestoneVO;
import com.isynergy.lms.vo.ProjectVO;
```

```

import com.isynergy.lms.vo.Prospect_ClientVO;
import com.isynergy.lms.vo.ResponseMessageVO;

@Controller
@RequestMapping(value="/project")
public class ProjectController
{
    @Autowired
    ProjectManager projectManager;

    // use logger - org.slf4j.logger

    //-----ADD NEW PROJECT

    @RequestMapping(value="/addProject",method =
RequestMethod.POST,consumes = "application/json")
    public @ResponseBody ResponseMessageVO addProject(@RequestBody
ProjectVO projectvo) throws Exception
    {
        try
        {
            ResponseMessageVO result =
projectManager.addProject(projectvo);

            return result;
        }

        catch(Exception e)
        {
            throw e;
        }
    }
}

```

```

        }

    }

//-----VIEW ALL PROJECTS IN THE SYSTEM

@RequestMapping(value = "/viewProject",method = RequestMethod.GET)
public@ResponseBody List<ProjectVO> viewProject() throws Exception
{
    try
    {
        List<ProjectVO>projectlist = new
ArrayList<ProjectVO>();

        return projectlist = projectManager.viewProject();
    }

    catch(Exception e)
    {
        throwe;
    }
}

//-----UPDATE PROJECT STATUS -PROJECT NAME

@RequestMapping(value =
"/updateProjectStatus/projectStatus/{projectStatus}/project_name/{project_name}",
method = RequestMethod.PUT)
public@ResponseBody ResponseMessageVO
updateProjectStatus(@PathVariable String projectStatus,@PathVariable String
project_name) throws Exception

```

```

    {

        try

        {

            ResponseMessageVO messagevo = projectManager.updateProjectStatus(projectStatus,project_name);

            returnmessagevo;

        }

        catch(Exception e)

        {

            throwe;

        }

    }

//-----GET MILESTONE DETAILS PROJECT WISE

@RequestMapping(value = "/getProjectMilestoneList",method = RequestMethod.GET)

public@ResponseBody List<ProjectVO> getProjectMilestoneList() throws Exception

{

    try

    {

        List<ProjectVO>projectList = new ArrayList<ProjectVO>();

        projectManager.getProjectMilestoneList();

        returnprojectList;

    }

}

```

```

catch(Exception e)
{
    throwe;
}

}

//-----GET MILESTONES BY PROJECT_ID-----

```

@RequestMapping(value="/getMilestoneByProjectID/project_id/{project_id}",method = RequestMethod.GET)

```

public @ResponseBody List<MilestoneVO>
getMilestoneByProjectID(@PathVariableintproject_id) throws Exception
{
    try
{
    List<MilestoneVO>milestoneList = new
ArrayList<MilestoneVO>();
    milestoneList =
projectManager.getMilestoneByProjectID(project_id);
    return milestoneList;
}
catch(Exception e)
{
    throwe;
}

```

```

}

//-----GET PROJECT DETAILS CLIENT WISE

@RequestMapping(value = "/getProjectListClientWise",method =
RequestMethod.GET)

public@ResponseBody List<Prospect_ClientVO>
getProjectListClientWise() throws Exception

{

try

{

List<Prospect_ClientVO>projectList = new

ArrayList<Prospect_ClientVO>();

projectList =

projectManager.getProjectListClientWise();

returnprojectList;

}

catch(Exception e)

{

throwe;

}

}

}

```

//-----GET PROJECT COUNT CLIENT WISE

```

    @RequestMapping(value="/getProjectCountClientWise/customer_name/{c
ustomer_name}",method =RequestMethod.GET)

    public@ResponseBody List<ProjectVO>
    getProjectCountClientWise(@PathVariable String customer_name) throws
    Exception
    {
        try
        {
            List<ProjectVO>projectCountList = new
            ArrayList<ProjectVO>();
            projectCountList =
            projectManager.getProjectCountClientWise(customer_name);
            return projectCountList;
        }
        catch(Exception e)
        {
            throwe;
        }
    }

//-----GET PROJECT LIST STATUS WISE

    @RequestMapping(value="/getProjectListStatusWise/project_status/{projec
t_status}",method = RequestMethod.GET)

```

```

public@ResponseBody List<ProjectVO>
getProjectListStatusWise(@PathVariable String project_status) throws Exception
{
    try
    {
        List<ProjectVO>projectList = new
ArrayList<ProjectVO>();
        projectList =
projectManager.getProjectListStatusWise(project_status);
        returnprojectList;
    }
    catch(Exception e)
    {
        throwe;
    }
}

//edit project

//-----ADD NEW MILESTONES

@RequestMapping(value = "/addNewMilestone",method =
RequestMethod.POST,consumes = "application/json")
public@ResponseBody ResponseMessageVO
addNewMilestone(@RequestBody MilestoneVO milestonevo) throws Exception
{
}

```

```

try
{
    ResponseMessageVO messagevo =
projectManager.addNewMilestone(milestonevo);

    return messagevo;
}

catch(Exception e)
{
    throw e;
}

}

-----SET MILESTONE STATUS-----
@RequestMapping(value =
"/setMilestoneStatus/milestoneStatus/{milestoneStatus}/milestoneID/{milestoneID}"
,method = RequestMethod.PUT)

public @ResponseBody ResponseMessageVO
setMilestoneStatus(@PathVariable String
milestoneStatus,@PathVariable int milestoneID) throws Exception
{

try
{
    ResponseMessageVO messagevo =
projectManager.setMilestoneStatus(milestoneStatus,milestoneID);

    return messagevo;
}

catch(Exception e)

```

```

    {
        throwe;
    }

}

//-----REPORTS-----



    @RequestMapping(value="/getProjectListTypeWise/project_type/{project_
type}",method =RequestMethod.GET)
    public@ResponseBody List<ProjectVO>
    getProjectListTypeWise(@PathVariable String project_type) throws Exception
    {

        try
        {

            List<ProjectVO>projectTypeList = new ArrayList<ProjectVO>();
            projectTypeList =
            projectManager.getProjectListTypeWise(project_type);

            returnprojectTypeList;
        }

        catch(Exception e)
        {

            throwe;
        }
    }

}

```

```
}
```

projectManager.java

```
package com.isynergy.lms.manager;

import java.util.ArrayList;
import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Component;

/*import com.isynergy.lms.dao.UserDAO;*/
import com.isynergy.lms.dao.ProjectDAO;
import com.isynergy.lms.vo.MilestoneVO;
import com.isynergy.lms.vo.ProjectVO;
import com.isynergy.lms.vo.Prospect_ClientVO;
import com.isynergy.lms.vo.ResponseMessageVO;

@Component
public class ProjectManager
```

```
{
```

```

@Autowired
ProjectDAO projectdao;

public ResponseMessageVO addProject(ProjectVO projectvo) throws
Exception
{
    try
    {
        ResponseMessageVO result =
projectdao.addProject(projectvo);

        System.out.println("Result in projectManager:" +result);
        returnresult;
    }
    catch(Exception e)
    {
        throwe;
    }
}

public List<ProjectVO> viewProject() throws Exception
{
    try
    {
        List<ProjectVO>projectlist = new
ArrayList<ProjectVO>();
        returnprojectlist = projectdao.viewProject();
    }
}

```

```

catch(Exception e)

{
    throwe;

}

public ResponseMessageVO updateProjectStatus(String
projectStatus,String project_name) throws Exception
{
    try
    {
        ResponseMessageVO messagevo =
projectdao.updateProjectStatus(projectStatus,project_name);
        returnmessagevo;
    }
    catch(Exception e)
    {
        throwe;
    }
}

public List<ProjectVO> getProjectMilestoneList() throws Exception
{
    try
    {
        List<ProjectVO>projectList = new
ArrayList<ProjectVO>();
}

```

```
projectList = projectdao.getProjectMilestoneList();
```

```
return projectList;
```

```
}
```

```
catch(Exception e)
```

```
{
```

```
throw e;
```

```
}
```

```
}
```

```
public List<Prospect_ClientVO> getProjectListClientWise() throws
```

```
Exception
```

```
{
```

```
try
```

```
{
```

```
List<Prospect_ClientVO> projectList
```

```
= projectdao.getProjectListClientWise();
```

```
return projectList;
```

```
}
```

```
catch(Exception e)
```

```
{
```

```
throw e;
```

```
}
```

```
}
```

```
public List<ProjectVO> getProjectListTypeWise(String project_type)
```

```
throws Exception
```

```
{
```

```
try
```

```

    {

        List<ProjectVO>projectTypeList = new
            ArrayList<ProjectVO>();

        projectTypeList =
            projectdao.getProjectListTypeWise(project_type);

        returnprojectTypeList;

    }

    catch(Exception e)

    {
        throwe;
    }

}

public List<ProjectVO> getProjectCountClientWise(String
customer_name) throws Exception
{
    try

    {
        List<ProjectVO>projectCountList = new
            ArrayList<ProjectVO>();

        projectCountList =
            projectdao.getProjectCountClientWise(customer_name);

        returnprojectCountList;

    }

    catch(Exception e)

    {
        throwe;
    }

}

```

```

}

public List<ProjectVO> getProjectListStatusWise(String project_status)

throws Exception

{

    try

    {

        List<ProjectVO>projectList = new

ArrayList<ProjectVO>());

        projectList =


projectdao.getProjectListStatusWise(project_status);

        returnprojectList;

    }

    catch(Exception e)

    {

        throwe;

    }

}

//----- MILESTONE-----


public ResponseMessageVO addNewMilestone(MilestoneVO milestonevo)

throws Exception

{

    try

    {

        ResponseMessageVO messagevo =


projectdao.addNewMilestone(milestonevo);

        returnmessagevo;

    }

}

```

```

        }

catch(Exception e)

{
    throwe;

}

}

public ResponseMessageVO setMilestoneStatus(String
milestoneStatus,int milestoneID) throws Exception

{

    try

    {

        ResponseMessageVO messagevo =
projectdao.setMilestoneStatus(milestoneStatus,milestoneID);

        returnmessagevo;

    }

    catch(Exception e)

    {

        throwe;

    }

}

//-----GET MILESTONE LIST BY PROJECT ID-----

public List<MilestoneVO> getMilestoneByProjectID(intproject_id) throws
Exception
{
}

```

```

try
{
    List<MilestoneVO> milestoneList = new
    ArrayList<MilestoneVO>();

    milestoneList =
        projectdao.getMilestoneByProjectID(project_id);

    return milestoneList;
}

}

catch(Exception e)
{
    throwe;
}

}

```

projectDAO.java

```
package com.isynergy.lms.dao;
```

```

import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.ArrayList;

```

```

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.core.env.Environment;
import org.springframework.jdbc.core.RowMapper;
import org.springframework.jdbc.core.namedparam.MapSqlParameterSource;
import org.springframework.jdbc.core.namedparam.NamedParameterJdbcTemplate;
import org.springframework.stereotype.Component;

import com.isynergy.lms.vo.MilestoneVO;
import com.isynergy.lms.vo.ProjectVO;
import com.isynergy.lms.vo.Prospect_ClientVO;
import com.isynergy.lms.vo.ResponseMessageVO;

@Component
public class ProjectDAO
{
    @Autowired
    NamedParameterJdbcTemplate jdbcTemplate;
    @Autowired
    Environment env;
}

```

//-----QUERIES

```
privatefinalstatic String INSERT_PROJECT ="INSERT INTO
project(prospect_client_id,project_name,project_description,project_technologies,pro
bable_start_date,"+
"duration,VALUE,project_status,project_type,created_date,last_update_date
)VALUES"+

"(:prospectclientid_fk,:projectname,:projectdescription,:technologies,:proba
blestartdate,:duration,:value,:project_status,:project_type,:createdate,:lastupdatedate)
";

privatefinalstatic String VIEW_PROJECT ="SELECT
project_name,project_description,"+
"project_technologies,probable_start_date,duration,VALUE FROM
project";

privatefinalstatic String UPDATE_PROJECT_STATUS = "UPDATE
project SET project_status =:project_status"+
" WHERE project_name =
:project_name";
```

```

privatefinalstatic String GET_PROJECT_LIST = "SELECT
project_id,project_name,project_status FROM project";

privatefinalstatic String GET_MILESTONE_DETAILS = "SELECT
milestone_name,milestone_amount, milestone_status"
+ " FROM milestone WHERE milestone.project_id =
:project_id";

privatefinalstatic String GET_CLIENT_LIST ="SELECT
prospect_client_id, customer_name FROM prospect_client";

privatefinalstatic String GET_PROJECT_DETAILS ="SELECT
project_name,project_status,project_type,project_technologies from project" +
" WHERE project.prospect_client_id =
:prospect_client_id";

privatefinalstatic String GET_PROJECT_TYPE_LIST ="SELECT
project_name ,project_description,project_technologies,project_status,"+
"pricing_model FROM project WHERE
project_type=:project_type";

```

```

privatefinalstatic String PROJECT_COUNT_CLIENTWISE ="SELECT
customer_name, COUNT(project.prospect_client_id ) "+

"FROM prospect_client ,project
WHERE "+

" prospect_client.prospect_client_id = project.prospect_client_id "+

" GROUP BY customer_name
";

privatefinalstatic String PROJECT_LIST_STATUSWISE ="SELECT
project_name ,project_description,project_type"+

" FROM project WHERE
project_status=:project_status";

privatefinalstatic String ADD_NEW_MILESTONE ="INSERT INTO
milestone(project_id,start_date,end_date,milestone_name,"+
"milestone_description,milestone_amount,milestone_status,actual_start_dat
e,"+

"actual_end_date)+"+

```

```
"VALUES(:projectId,:startDate,:endDate,:milestoneName,:milestoneDescri  
ption,"+  
":milestoneAmount,:milestoneStatus,:actual_start_date,:actual_end_date);  
  
privatefinalstatic String UPDATE_MILESTONE_STATUS = "UPDATE  
milestone SET milestone_status= :milestone_status "+  
  
"WHERE milestone_id =  
:milestone_id";  
  
  
  
  
privatefinalstatic String GET_MILESTONE_BY_PROJECTID = "  
SELECT milestone_name,"+  
"  
milestone_amount,milestone_status FROM milestone"+  
  
" WHERE project_id =  
:project_id";
```

```

public ResponseMessageVO addProject(ProjectVO projectvo)
{
    ResponseMessageVO messageVO = new ResponseMessageVO();

    try
    {
        MapSqlParameterSource parameterSource =
        new MapSqlParameterSource();

        parameterSource.addValue("prospectclientid_fk",projectvo.getProspectClientID());//values same as query

        parameterSource.addValue("projectname",projectvo.getProjectName());

        parameterSource.addValue("projectdescription",projectvo.getProjectDescription());

        parameterSource.addValue("technologies",projectvo.getTechnologies());

        parameterSource.addValue("probablestartdate",projectvo.getProbableStartDate());

        parameterSource.addValue("duration",projectvo.getDuration());

        parameterSource.addValue("value",projectvo.getValue());

        parameterSource.addValue("project_status",projectvo.getProjectStatus());
    }
}

```

```

parameterSource.addValue("project_type",projectvo.getProjectType());

parameterSource.addValue("createdate",System.currentTimeMillis());

parameterSource.addValue("lastupdatedate",System.currentTimeMillis());

if(jdbcTemplate.update(INSERT_PROJECT,
parameterSource)>0)

{

messageVO.setStatusCode(env.getProperty("RES_SUCCESS_CODE"));

messageVO.setStatusMessage(env.getProperty("RES_MESSAGE_ADD_P
ROJECT"));

}

else

{

messageVO.setStatusCode(env.getProperty("ERR_ERROR_CODE"));

messageVO.setStatusMessage(env.getProperty("ERR_MESSAGE_ADD_P
ROJECT"));

}

```

```
        }

    catch(Exception e)

    {
        e.printStackTrace();

    }

    returnmessageVO;

}

public List<ProjectVO> viewProject()

{
    MapSqlParameterSource parameterSource =
newMapSqlParameterSource();

    List<ProjectVO>projectlist =
    jdbcTemplate.query(VIEW_PROJECT, new MapSqlParameterSource(),
                      new RowMapper<ProjectVO>() {

    }

    @Override

    public ProjectVO mapRow(ResultSet
rs, introwNum)

throws

SQLException {

}

}

ProjectVO obj =
newProjectVO();
```

```
//obj.setProjectID(rs.getInt("project_id")); // values from db

// tables

//obj.setProspectClientID(rs.getInt("prospect_client_id"));

obj.setProjectName(rs.getString("project_name"));

obj.setProjectDescription(rs.getString("project_description"));

obj.setTechnologies(rs.getString("project_technologies"));

obj.setProbableStartDate(rs.getLong("probable_start_date"));

obj.setDuration(rs.getString("duration"));

obj.setValue(rs.getFloat("VALUE"));

/*obj.setCreateDate(rs.getLong("created_date"));

obj.setLastUpdateDate(rs.getLong("last_update_date"));*/

returnobj;

}
```

```

    return projectlist;
}

public ResponseMessageVO updateProjectStatus(String
projectStatus,String project_name)
{
    ResponseMessageVO messageVO = new ResponseMessageVO();
    MapSqlParameterSource source = new MapSqlParameterSource();

    //values that are passed in the parameters are stored in the variables
    //so pass them directly
    source.addValue("project_status", projectStatus);
    source.addValue("project_name", project_name);

    if(jdbcTemplate.update(UPDATE_PROJECT_STATUS,
source)>0)
{
    messageVO.setStatusCode(env.getProperty("RES_SUCCESS_CODE"));

    messageVO.setStatusMessage(env.getProperty("RES_MESSAGE_PROJEC
TSTATUS_UPDATE"));
}

```

```

else
{
    messageVO.setStatusCode(env.getProperty("ERR_ERROR_CODE"));

    messageVO.setStatusMessage(env.getProperty("ERR_MESSAGE_PROJE
CTSTATUS_UPDATE"));
}

returnmessageVO;

}

public List<ProjectVO> getProjectMilestoneList() //viewProject.jsp
{
    //

    //private final static String GET_PROJECT_LIST = "SELECT
project_id,project_name,project_status FROM project";

    //private final static String GET_MILESTONE_DETAILS =
"SELECT milestone_name,milestone_amount, milestone_status,actual_start_date,"
// + "actual_end_date FROM milestone WHERE
milestone.project_id = :project_id";
}

```

```

List<ProjectVO>projectList =
    jdbcTemplate.query(GET_PROJECT_LIST, new MapSqlParameterSource(),
        new RowMapper<ProjectVO>() {
            @Override
            public ProjectVO mapRow(ResultSet
                rs, int rowNum)
                throws SQLException {
                ProjectVO projectvo =
                    new ProjectVO();
                projectvo.setProjectID(rs.getInt("project_id"));
                projectvo.setProjectName(rs.getString("project_name")); // values from db
                projectvo.setProjectStatus(rs.getString("project_status"));
            }
        }
    );
}

MapSqlParameterSource parameterSource = new MapSqlParameterSource();
parameterSource.addValue("project_id", projectvo.getProjectID());
}

List<MilestoneVO>milestonesList =
    jdbcTemplate.query(GET_MILESTONE_DETAILS, parameterSource,
        new RowMapper<MilestoneVO>() {

```

@Override

```
public MilestoneVO mapRow(ResultSet rs, introwNum)
```

```
throws SQLException {
```

```
MilestoneVO milestonevo = newMilestoneVO();
```

```
milestonevo.setMilestoneName(rs.getString("milestone_name"));
```

```
milestonevo.setMilestoneAmount(rs.getFloat("milestone_amount"));
```

```
milestonevo.setMilestoneStatus(rs.getString("milestone_status"));
```

```
/*milestonevo.setActual_start_date(rs.getLong("actual_start_date"));
```

```
milestonevo.setActual_end_date(rs.getLong("actual_end_date"));*/
```

```
returnmilestonevo;
```

```
}
```

```

    });

projectvo.setMilestoneList(milestonesList);

returnprojectvo;

}

});

returnprojectList;

}

```

```

public List<Prospect_ClientVO> getProjectListClientWise()

{

    List<Prospect_ClientVO>clientList =


        jdbcTemplate.query(GET_CLIENT_LIST, new MapSqlParameterSource(),
                    new RowMapper<Prospect_ClientVO>() {

                        @Override

                        public Prospect_ClientVO

                        mapRow(ResultSet rs, introwNum)

                            throws

                        SQLException {

                            Prospect_ClientVO clientvo =


                                new Prospect_ClientVO();




                                //clientvo.setProspectClientID(rs.getInt("prospect_client_id"));

```

```
clientvo.setCustomerName(rs.getString("customer_name")); // values from  
db  
  
MapSqlParameterSource  
parameterSource = new MapSqlParameterSource();  
  
parameterSource.addValue("prospect_client_id",  
clientvo.getProspectClientID());  
  
List<ProjectVO>projectList =  
jdbcTemplate.query(GET_PROJECT_DETAILS, parameterSource,  
new  
RowMapper<ProjectVO>() {  
  
@Override  
  
public ProjectVO mapRow(ResultSet rs, introwNum)  
  
throws SQLException {
```

```
ProjectVO projectVO = new ProjectVO();

projectVO.setProjectName(rs.getString("project_name"));

projectVO.setProjectStatus(rs.getString("project_status"));

projectVO.setProjectType(rs.getString("project_type"));

projectVO.setTechnologies(rs.getString("project_technologies"));

return projectVO;
}

});

clientvo.setProjectList(projectList);

return clientvo;
}

});

return clientList;
}

//-----PROJECT TYPE PROJECT LIST-----
```

```

public List<ProjectVO> getProjectListTypeWise(String project_type)

throws Exception

{

    try

    {

        MapSqlParameterSource parameterSource =  

new MapSqlParameterSource();

        parameterSource.addValue("project_type", project_type);

        List<ProjectVO> projectTypeList = jdbcTemplate.query(  

            GET_PROJECT_TYPE_LIST,
```

parameterSource,

```

new RowMapper<ProjectVO>() {
```

@Override

```

public ProjectVO  

mapRow(ResultSet rs, int rowNum)

throws  

SQLException {
```

//lead_name,lead_scope,lead_technologies,quoted_value

```

ProjectVO obj =  

new ProjectVO();
```

obj.setProjectName(rs.getString("project_name"));

```

        obj.setProjectDescription(rs.getString("project_description"));

        obj.setTechnologies(rs.getString("project_technologies"));

        obj.setProjectStatus(rs.getString("project_status"));

        obj.setPricingModel(rs.getString("pricing_model"));

    }

}

returnobj;

});

returnprojectTypeList;

}

catch(Exception e)

{

    throwe;

}

}

//-----GET PROJECT COUNT CLIENT WISE

public List<ProjectVO> getProjectCountClientWise(String

customer_name) throws Exception

```

```

    {
        try {
            MapSqlParameterSource parameterSource =
                new MapSqlParameterSource();
            parameterSource.addValue("customer_name",
                customer_name);

            List<ProjectVO> ProjectCountList = jdbcTemplate.query(
                PROJECT_COUNT_CLIENTWISE,
                parameterSource,
                new RowMapper<ProjectVO>() {

                    @Override
                    public ProjectVO
                    mapRow(ResultSet rs, int rowNum)
                        throws
                    SQLException {
                        return null;
                    }
                });
            return ProjectCountList;
        }
        catch(Exception e)
    }

```

```

    {
        throws;
    }

}

public List<ProjectVO> getProjectListStatusWise(String project_status)
throws Exception
{
    try
{
    MapSqlParameterSource parameterSource =
new MapSqlParameterSource();
    parameterSource.addValue("project_status",
project_status);

    List<ProjectVO>projectList = jdbcTemplate.query(
        PROJECT_LIST_STATUSWISE,
parameterSource,
new RowMapper<ProjectVO>() {

    @Override
    public ProjectVO
mapRow(ResultSet rs, introwNum)
throws
SQLException {

```

```
ProjectVO obj =  
  
    new ProjectVO();  
  
    obj.setProjectName(rs.getString("project_name"));  
  
    obj.setProjectDescription(rs.getString("project_description"));  
  
    obj.setProjectType(rs.getString("project_type"));  
  
    return obj;  
  
}  
  
});  
  
return projectList;  
}  
  
catch(Exception e)  
{  
    throw e;  
}  
  
}  
  
//-----milestones-----
```

```

public ResponseMessageVO addNewMilestone(MilestoneVO milestonevo)

{
    ResponseMessageVO messageVO = new ResponseMessageVO();

    try {

        MapSqlParameterSource parameterSource =
            new MapSqlParameterSource();

        parameterSource.addValue("projectID",
            milestonevo.getProjectID());// values

        // same as

        // query

        parameterSource.addValue("startDate",
            milestonevo.getStartDate());

        parameterSource.addValue("endDate",
            milestonevo.getEndDate());

        parameterSource.addValue("milestoneName",
            milestonevo.getMilestoneName());

        parameterSource.addValue("milestoneDescription",
            milestonevo.getMilestoneDescription());

        parameterSource.addValue("milestoneAmount",
            milestonevo.getMilestoneAmount());

        parameterSource.addValue("milestoneStatus",
            milestonevo.getMilestoneStatus());
    }
}

```

```

parameterSource.addValue("actual_start_date", milestonevo.getActual_start
_date());

parameterSource.addValue("actual_end_date", milestonevo.getActual_end_d
ate());

if (jdbcTemplate.update(ADD_NEW_MILESTONE,
parameterSource) > 0)

{

messageVO.setStatusCode(env.getProperty("RES_SUCCESS_CODE"));

messageVO.setStatusMessage(env.getProperty("RES_MESSAGE_ADD_M
ILESTONE"));

}

else

{

messageVO.setStatusCode(env.getProperty("ERR_ERROR_CODE"));

messageVO.setStatusMessage(env.getProperty("ERR_MESSAGE_ADD_
MILESTONE"));

}

}

```

```

catch (Exception e)
{
    messageVO.setStatusMessage(env.getProperty("ERR_MESSAGE_ADD_
MILESTONE"));

}
returnmessageVO;

}

public ResponseMessageVO setMilestoneStatus(String
milestoneStatus,int milestoneID)
{
    ResponseMessageVO messageVO = newResponseMessageVO();
    MapSqlParameterSource source = newMapSqlParameterSource();

    //values that are passed in the parameters are stored in the variables
    //so pass them directly
    source.addValue("milestone_status", milestoneStatus);
    source.addValue("milestone_id", milestoneID);

    if(jdbcTemplate.update(UPDATE_MILESTONE_STATUS,
source)>0)
{

```

```

        messageVO.setStatusCode(env.getProperty("RES_SUCCESS_CODE"));

        messageVO.setStatusMessage(env.getProperty("RES_MESSAGE_UPDAT
E_MILESTONE_STATUS"));

    }

else

{

    messageVO.setStatusCode(env.getProperty("ERR_ERROR_CODE"));

    messageVO.setStatusMessage(env.getProperty("ERR_MESSAGE_MILES
TONE_STATUS_UPDATE"));

}

returnmessageVO;

}

public List<MilestoneVO> getMilestoneByProjectID(intproject_id) throws
Exception
{
    try
{
    MapSqlParameterSource parameterSource =
newMapSqlParameterSource();
    parameterSource.addValue("project_id", project_id);
}

```

```

List<MilestoneVO>milestoneList = jdbcTemplate.query(
    GET_MILESTONE_BY_PROJECTID, parameterSource,
    new RowMapper<MilestoneVO>() {

        @Override
        public MilestoneVO
        mapRow(ResultSet rs, int rowNum)
            throws
            SQLException {
    }

    MilestoneVO obj =
    new MilestoneVO();
    obj.setMilestoneName(rs.getString("milestone_name"));
    /*obj.setActual_start_date(rs.getLong("actual_start_date"));

    obj.setActual_end_date(rs.getLong("actual_end_date"));*/
    obj.setMilestoneAmount(rs.getFloat("milestone_amount"));
    obj.setMilestoneStatus(rs.getString("milestone_status"));
    return obj;
}

```

```
        }
```

```
    };
```

```
    return milestoneList;
```

```
}
```

```
catch(Exception e)
```

```
{
```

```
    throw e;
```

```
}
```

```
}
```

```
}
```

