#### PROJECT REPORT

ON

"Security Guard Management System"

 $\mathbf{BY}$ 

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MCA-III SEM-VI

#### **SUBMITTED TO**

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#### **CERTIFICATE**

This is to certify that the Project Report entitled "SECURITY GUARD MANAGEMENT SYSTEM" is prepared by Miss. Swarada Nitin Joshi, a student of M.C.A. Course for the Academic Year 2019-20 at M.E.Society's Institute of Management & Career Courses (IMCC), Pune - 411 038. M.C.A Course is affiliated to Savitribai Phule Pune University.

To the best of our knowledge, this is original study done by the said student and important sources used by him have been duly acknowledged in this report.

The report is submitted in partial fulfilment of M.C.A. Course for the Academic Year 2019-20 as per the rules & prescribed guidelines of Savitribai Phule Pune University.

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Swarada N. Joshi

## **INDEX**

Sr. No.	Name of Topic	Page No.
1	Chapter 1: Introduction	
	1.2 Existing System and Need for System	2
	1.3 Scope of Work	3
	1.4 Operating Environment – Hardware and Software	4
	1.5 Detail Description of Technology Used	5
2	Chapter 2: Proposed system	
	2.1 Proposed System	11
	2.2 Objectives of System	12
	2.3 User Requirements	13
3	Chapter 3: Analysis & Design	
	3.1 Object Diagram	15
	3.2 Class Diagram	16
	3.3 Use Case Diagrams	17
	3.4 Activity Diagrams	22
	3.5 Sequence Diagrams	26
	3.6 Entity Relationship Diagram	30
	3.7 Module Hierarchy Diagram	31
	3.8 Component Diagram	32
	3.9 Deployment Diagram	33
	3.10 Module Specifications	34
	3.11 Web Site Map Diagram	36
	3.12 User Interface Design	37
	3.13 Data Dictionary	43
	3.14 Table specifications	45
	3.15 Test Procedures and Implementation	48
4	CHAPTER 4: USER MANUAL	
	4.1 User Manual	59
	4.2 Operations Manual / Menu Explanation	62
	4.3 Program Specifications / Flow Charts	70
5	Drawbacks and Limitations	73
6	Proposed Enhancements	75
7	Conclusions	77
8	Bibliography	79
9	ANNEXURES:	
	ANNEXURE 1: USER INTERFACE SCREENS	81
	ANNEXURE 2: OUTPUT REPORTS WITH DATA	89
	ANNEXURE 3: SAMPLE PROGRAM CODE	94

## CHAPTER 1 INTRODUCTION

#### 1.2 EXISTING SYSTEM AND NEED OF SYSTEM:

The existing manual system consists of salary calculation. The salary calculation of all employees was done manually and it is very tedious to do salary calculation of every employee. There was possibility of wrong calculation. Attendance was recorded on paper. Employee deployment was recorded manually.

There is greater possibility of human errors while keeping different types of records like attendance of employee, salary calculation and employee deployment etc. To overcome these problems there is need of the system.

Need of computerization system in day to day working is required because some qualities, accuracy, data maintain is gain by computerization, which was not all maintained manually.

Speed-computer is extremely fast. System is made in such way. Quantity-Large amount of data can be process very quickly and effectively.

Error indication – If the user done any type of mistake then system is capable of showing errors.

Accurate result -System produce the result which are accurate as per demand.

#### 1.3 SCOPE OF THE WORK:

- Admin/HR can manage his process through this system.
- This system will handle the employee data.
- It contains attendance management system.
- It also helps to manage the leave of employee.
- Calculate salary according to attendance and leave of every employee by using different salary component.
- Man power supply management will be handling through that system by providing man power to the specific client.
- Various types of report will be created like Pay slip of every employee,
   Monthly salary details, Employee report, Employee deployment report,
   Client contract report etc.

#### 1.4 OPERATIONAL ENVIORNMENT -HARDWARE

#### **AND SOFTWARE:**

#### **Hardware Requirement:**

• RAM: 1 GB

• Hard Disk: 2 GB

• Processor: Dual core and above

• Other: Monitor, Keyboard, Printer

#### **Software Requirement:**

• Operating System: Windows

• Technology: ASP.NET, C#, HTML, CSS.

• Database: Microsoft SQL Server.

• Development kit: Microsoft Visual Studio 2010.

#### 1.5 Detailed Description of Technology Used:

#### **Overview Of .Net Framework:**

.NET is a software framework which is designed and developed by Microsoft. The first version of the .Net framework was 1.0 which came in the year 2002. In easy words, it is a virtual machine for compiling and executing programs written in different languages like C#, VB.Net etc. It is used to develop Form-based applications, Web-based applications, and Web services. There is a variety of programming languages available on the .Net platform, VB.Net and C# being the most common ones. It is used to build applications for Windows, phone, web, etc. It provides a lot of functionalities and also supports industry standards.

#### **Common Language Runtime:**

CLR is the basic and Virtual Machine component of the .NET Framework. It is the run-time environment in the .NET Framework that runs the codes and helps in making the development process easier by providing the various services such as remoting, thread management, type-safety, memory management, robustness, etc.. Basically, it is responsible for managing the execution of .NET programs regardless of any .NET programming language. It also helps in the management of code, as code that targets the runtime is known as the Managed Code and code doesn't target to runtime is known as Unmanaged code.

#### **NET Framework Class Library:**

Framework class library is the collection of reusable, object-oriented class libraries and methods, etc. that can be integrated with CLR. Also called the Assemblies. It is just like the header files in C/C++ and packages in the java. Installing .NET framework basically is the installation of CLR and FCL into the system.

#### **ASP.NET:**

ASP.NET is a web development platform, which provides a programming model, a comprehensive software infrastructure and various services required to build up robust web applications for PC, as well as mobile devices. ASP.NET works on top of the HTTP protocol, and uses the HTTP commands and policies to set a browser-to-server bilateral communication and cooperation.

ASP.NET is an open-source server-side web application framework designed for web development to produce dynamic web pages developed by Microsoft to allow programmers to build dynamic web sites, web applications and web services. It was first released in January 2002 with version 1.0 of the .NET Framework, and is the successor to Microsoft's Active Server Pages (ASP) technology. ASP.NET is built on the Common Language Runtime (CLR), allowing programmers to write ASP.NET code using any supported .NET language. The ASP.NET SOAP extension framework allows ASP.NET components to process SOAP messages.

ASP.NET is used to produce interactive, data-driven web applications over the internet. It consists of a large number of controls such as text boxes, buttons, and labels for assembling, configuring, and manipulating code to create HTML pages.ASP.NET works on top of the HTTP protocol, and uses the HTTP commands and policies to set a browser-to-server bilateral communication and cooperation. The ASP.NET application codes can be written in any of the following languages:

- C#
- Visual Basic.Net
- Jscript

#### **HTML**:

HTML is the standard mark-up language for creating Web pages.

- HTML stands for Hyper Text Mark-up Language
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements are represented by tags
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
- Browsers do not display the HTML tags, but use them to render the content of the page.
  - Hypertext Mark-up Language, commonly referred to as HTML, is the standard mark-up language used to create web pages. It is written in the form of HTML elements consisting of tags enclosed in angle brackets (like <html>).

Web browsers can read HTML files and compose them into visible or audible web pages. Browsers do not display the HTML tags and scripts, but use them to interpret the content of the page.

HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behaviour of HTML web pages.

#### CSS:

Cascading Style Sheets (CSS) is a style sheet language used for describing the look and formatting of a document written in a mark-up language. While most often used to change the style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colours, and fonts.

#### **Microsoft SQL Server:**

SQL is a standard language for accessing and manipulating databases.

- SQL stands for Structured Query Language
- SQL lets you access and manipulate databases
- SQL became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standardization (ISO) in 1987.

MS SQL Server is a relational database management system (RDBMS) developed by Microsoft. It is a software, developed by Microsoft, which is implemented from the specification of RDBMS. It is also an ORDBMS. It is platform dependent. It is both GUI and command-based software. It supports SQL (SEQUEL) language which is an IBM product, non-procedural, common database and case insensitive language.

SQL Server works in client-server architecture; hence it supports two types of components – (a) Workstation and (b) Server.

Workstation components are installed in every device/SQL Server operator's machine. These are just interfaces to interact with Server components. Example: SSMS, SSCM, Profiler, BIDS, SQLEM etc.

**Server components** are installed in centralized server. These are services.

Example: SQL Server, SQL Server Agent, SSIS, SSAS, SSRS, SQL browser, SQL Server full text search etc.

## CHAPTER 2 PROPOSED SYSTEM

## 2.1 Proposed System:

- To manage HR process through this system so that it reduces manual work.
- To avoid delay & errors in recording.
- To calculate salary by using different salary component and attendance of employee.
- To manage leave of employee and attendance of employee.
- To enhance speed of work.
- Man power supply management by providing man power to the specific client and maintain of every employee.

## **2.2 Objective of System:**

The main objective of this project is to computerised the manual system and reduce the time consumption.

- To provide paperless work environment.
- To make all the operation computerised.
- To avoid chance of mistake.
- Centralised database management.
- Easy to handle.

#### 2.3 User Requirement:

Requirements analysis is a software engineering task that bridges the gap between system level software allocation and software design. Requirement analysis enables the system engineer to specify software function and performance indicate software's interface with other system elements and establish design constraints that the software must meet.

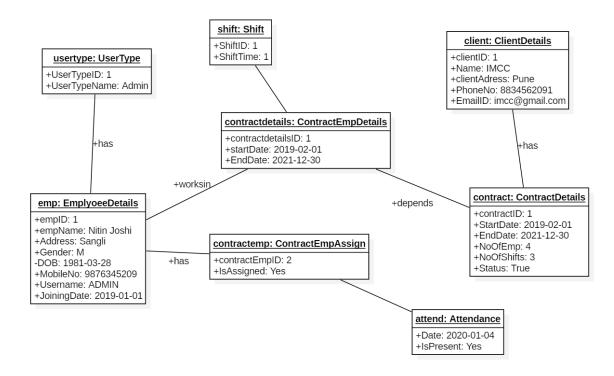
This project will have user-friendly screens. This screen designed will have very simple functionalities for adding/retrieving/updating information.

This project is a secured system, which will provide corporate level security.

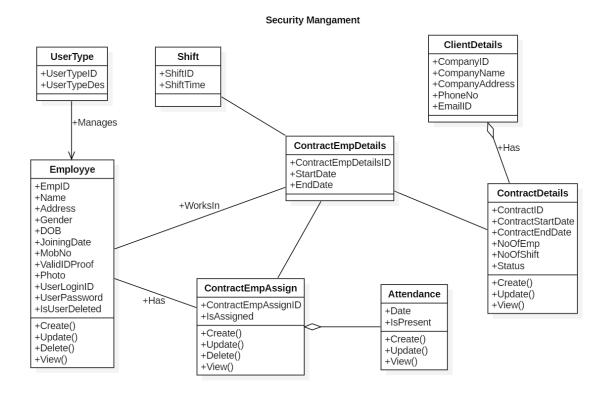
Only authorized people will be able to access critical information.

# CHAPTER 3 ANALYSIS AND DESIGN

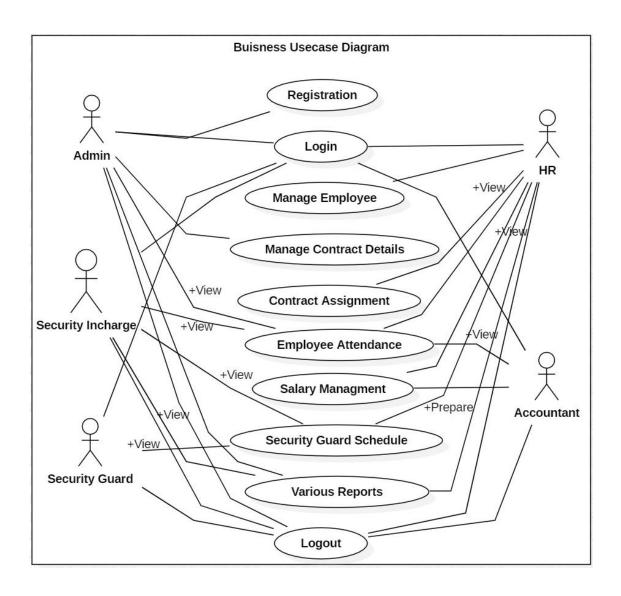
### 3.1 Object Diagram



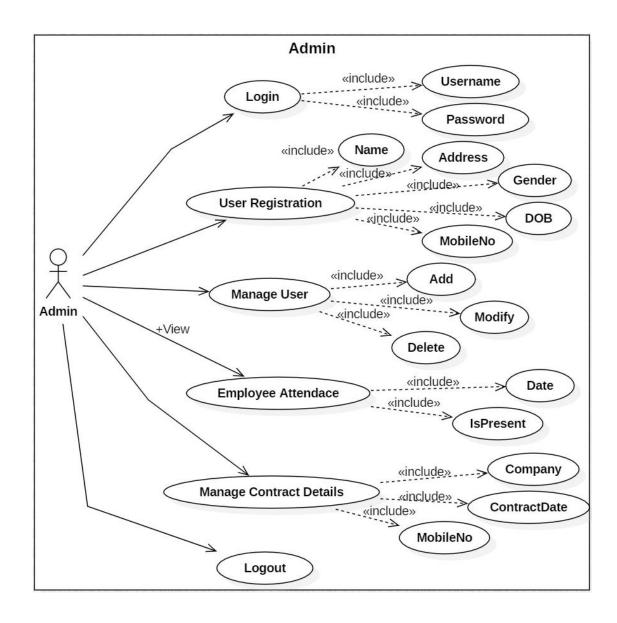
## 3.2 Class Diagram



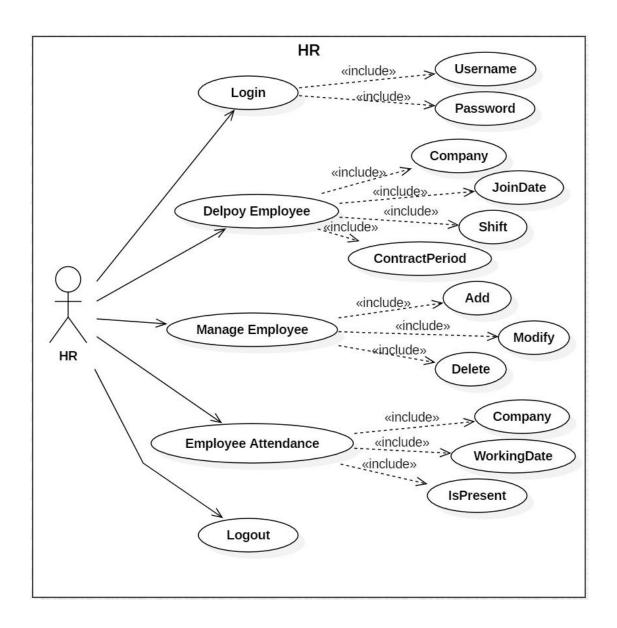
## 3.3 Use case Diagram



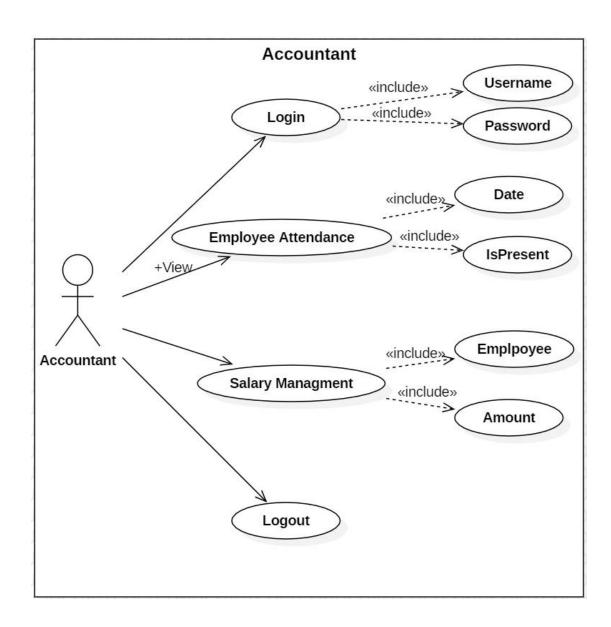
#### **3.3.1 Admin**



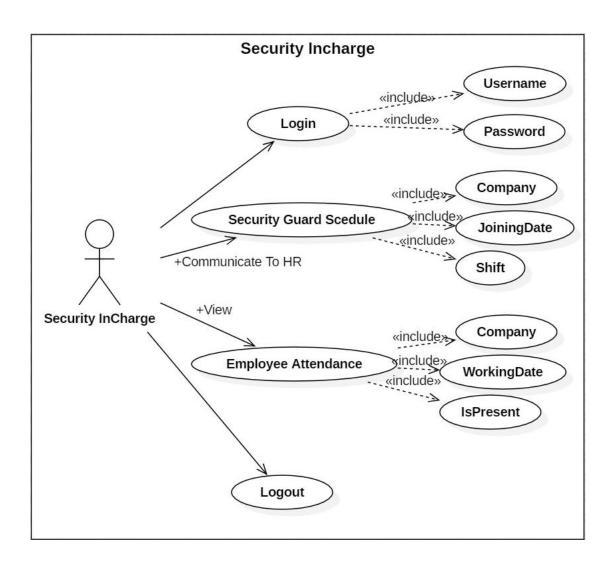
#### 3.3.2 HR



#### 3.3.3 Accountant

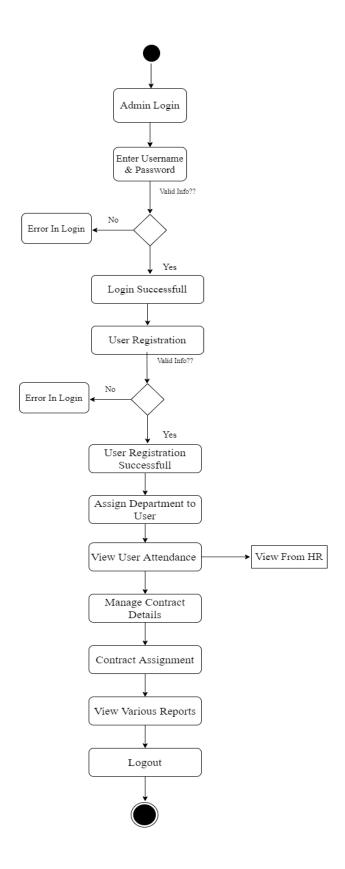


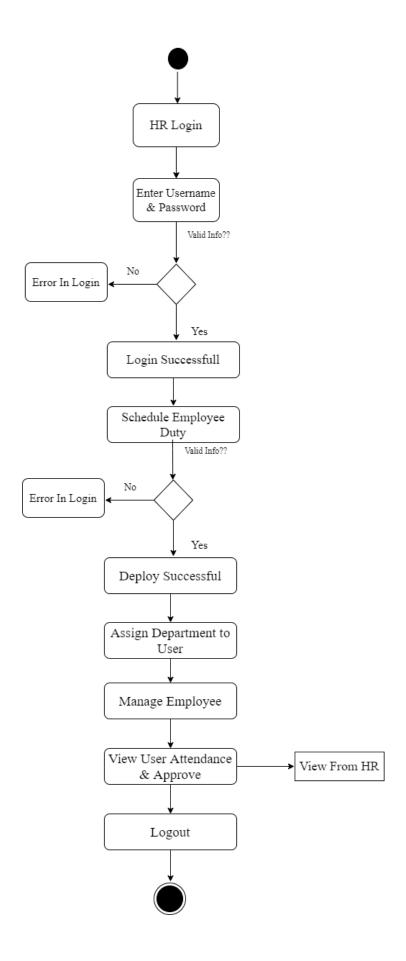
### 3.3.4 Security In-charge



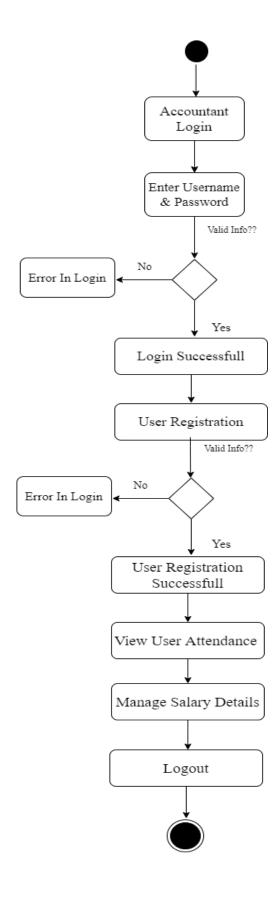
## 3.4 Activity Diagrams

#### **3.4.1 Admin**

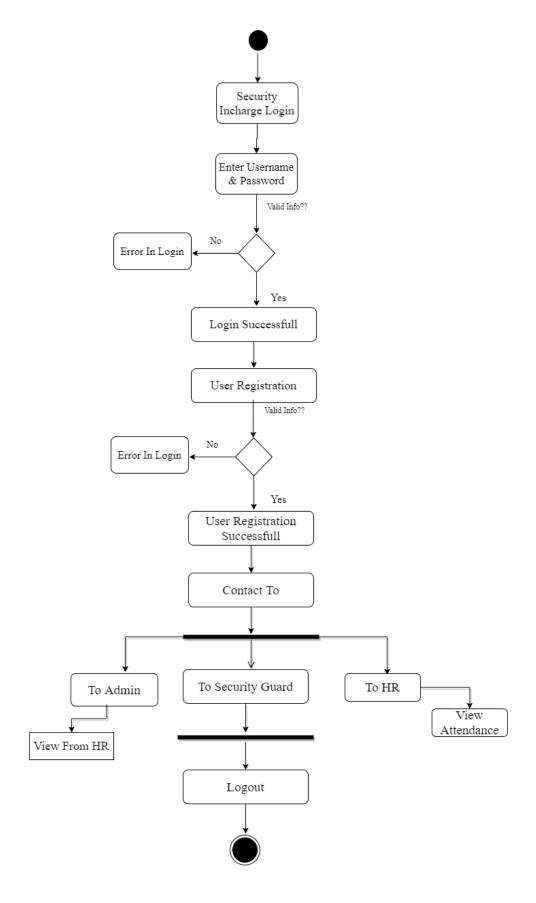




#### 3.4.3 Accountant

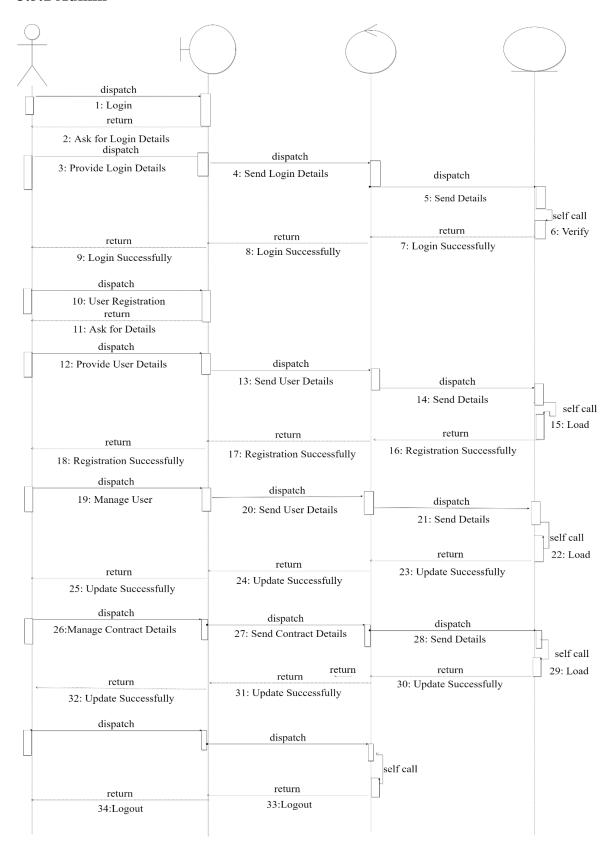


## 3.4.4 Security In charge

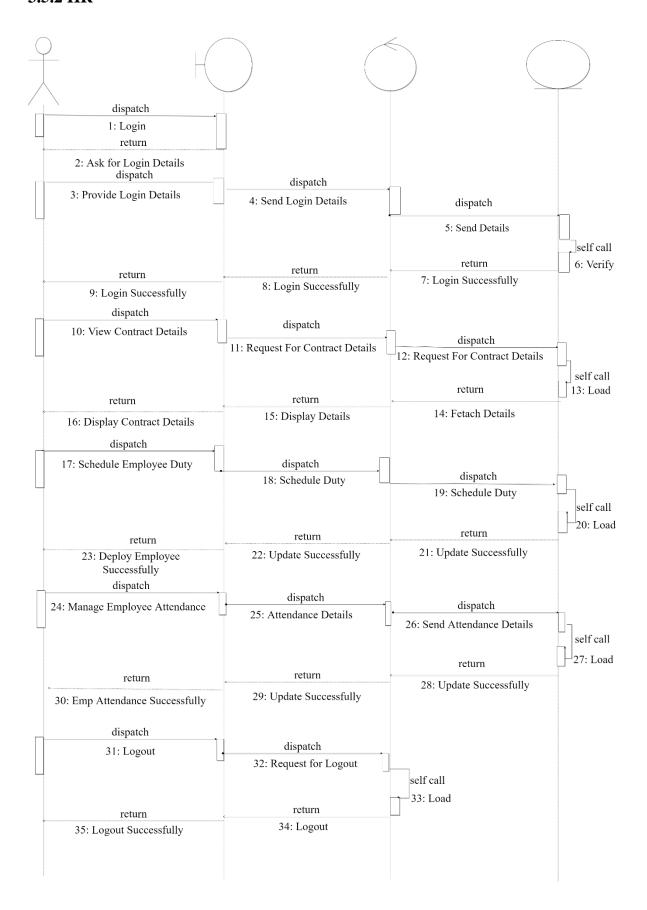


## 3.5 Sequence Diagram

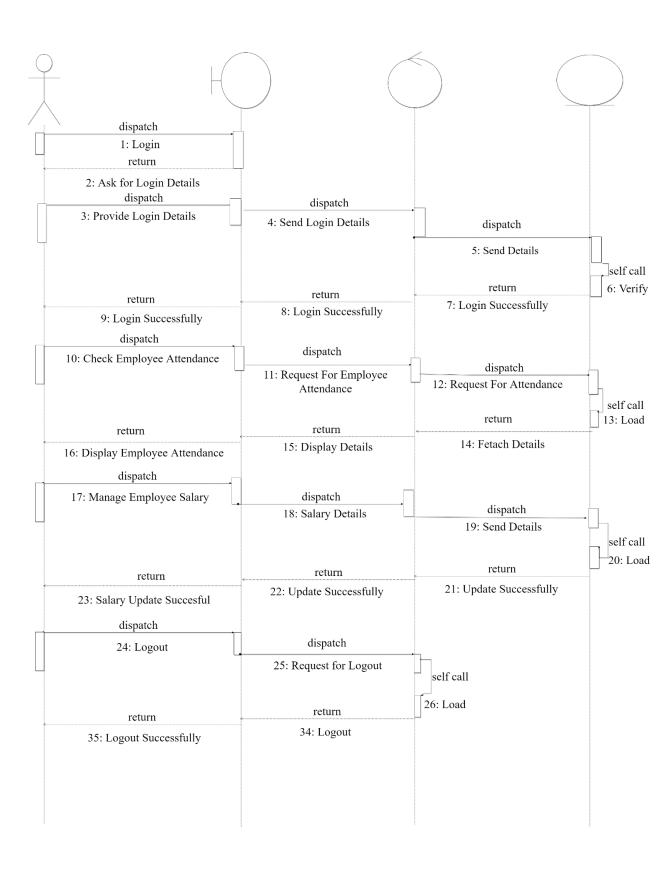
#### 3.5.1 Admin



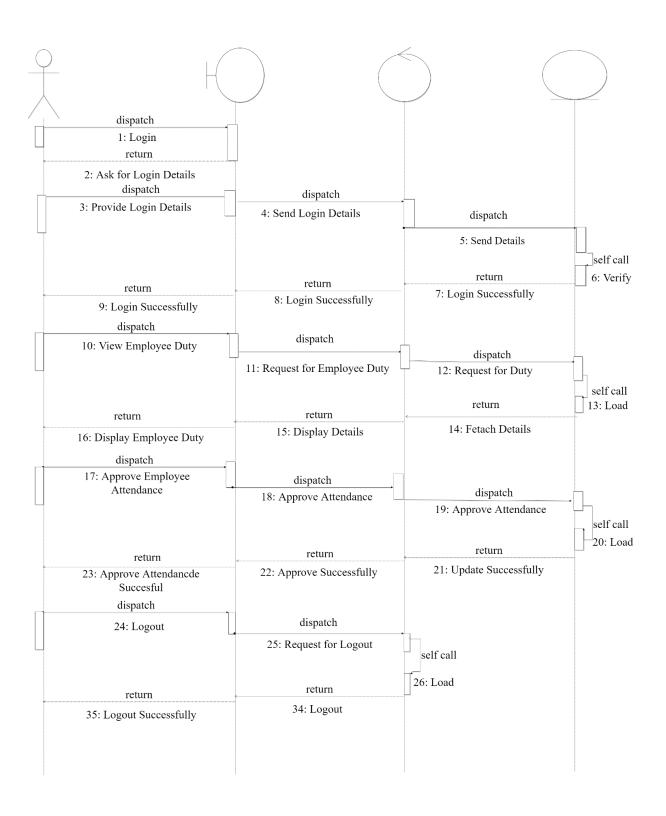
#### 3.5.2 HR



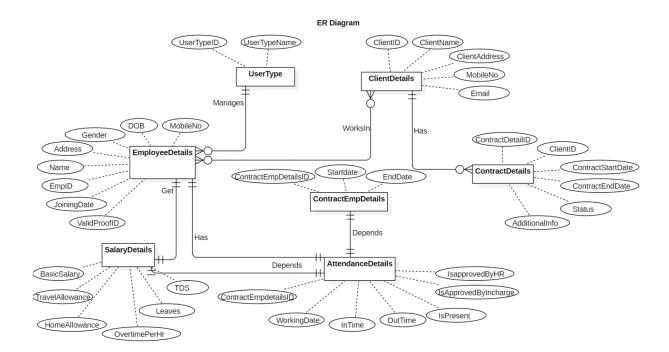
#### 3.5.3 Accountant



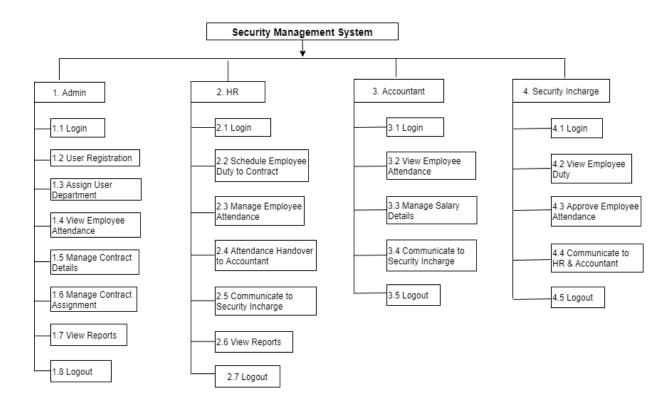
#### 3.5.4 Security In charge



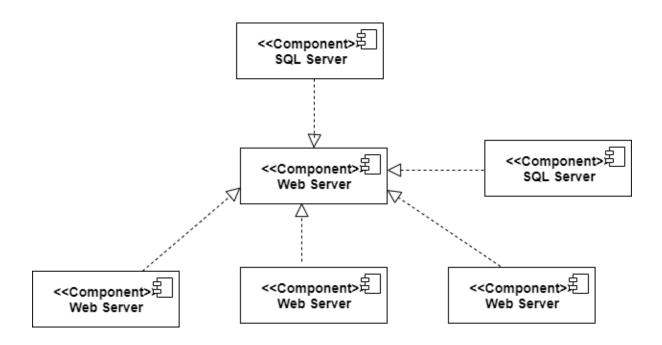
## 3.6 Entity Relationship Diagram



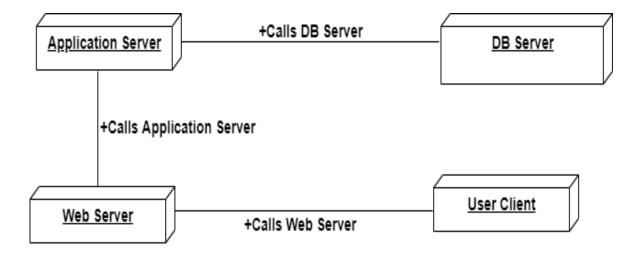
## 3.7 Module Hierarchy Diagram



## 3.8 Component Diagram



## 3.9 Deployment Diagram



## 3.10 Module Specification

#### a) Leave & Attendance Management:

Leave management include all leaves types and employee leaves are managed according to that leave type. Attendance of employee will be managed in system.

Leave & Attendance management will be only for security guard.

#### b) Payroll Management:

Payroll system is depending on attendance of attendance of employee. Salary component will be considered for salary calculation such as Basic Pay, House rent allowance, TDS, Incentives etc.

#### c) Man Power supply Management:

Employee (Security Guard) will be assigned to client according to his order or requirement and employee status will be updated.

## d) Registration Management:

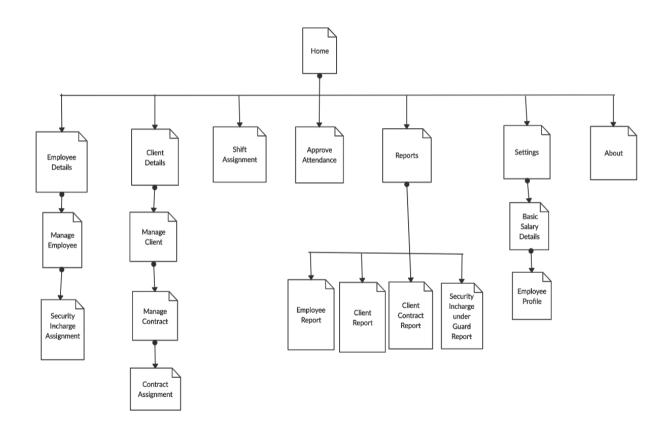
Employee and client's registration is done under Registration Management.

Employee registration includes all the types of User registration For E.g. -Admin,

HR, Accountant, Security in charge, Security Guard etc.

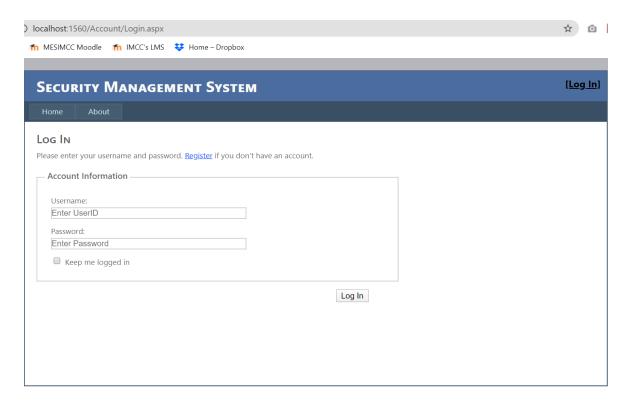
However, the Company registration and contract assigning is to be done under Client registrations.

## 3.11 Web Site Map Diagram

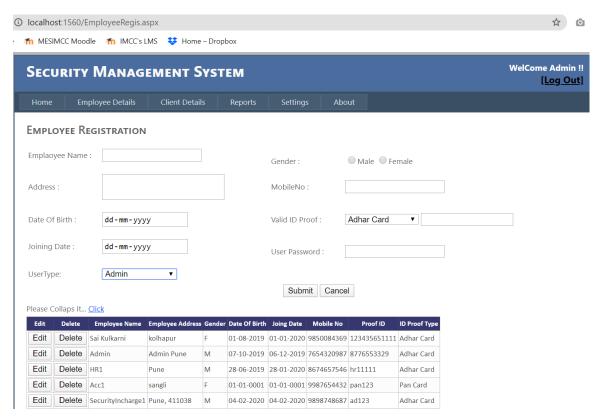


#### 3.12 User Interface

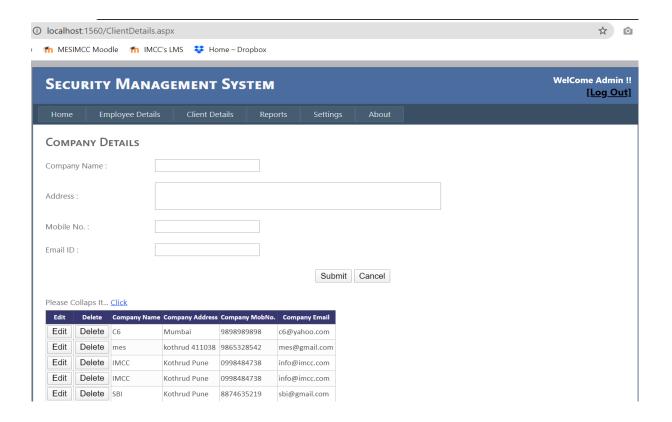
## Login Screen



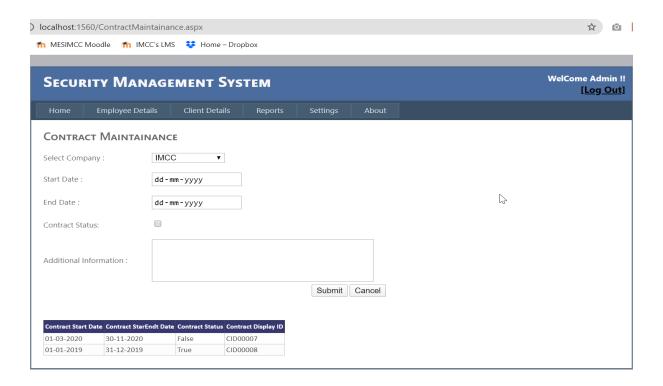
## **Employee Registration**



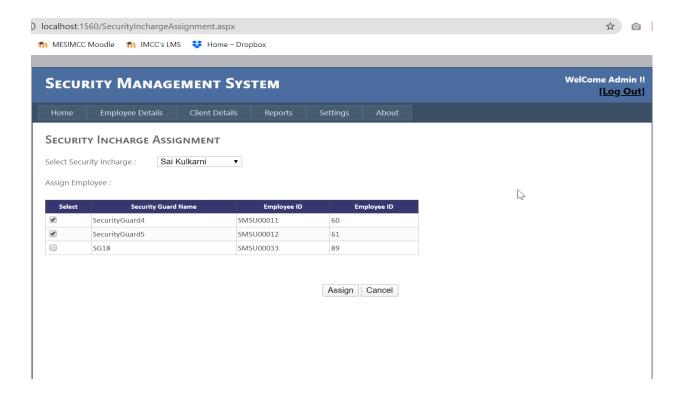
## Company Details



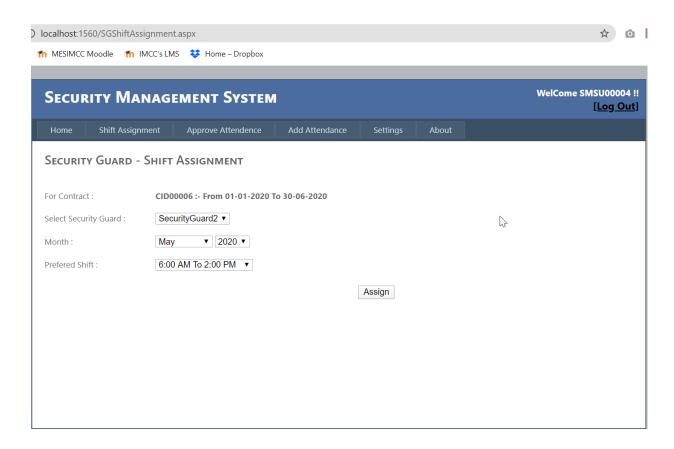
#### **Client Contract Details**



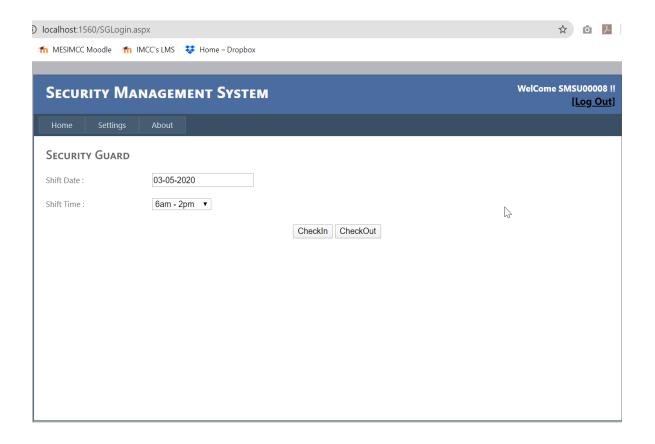
## Security Guard Assignment



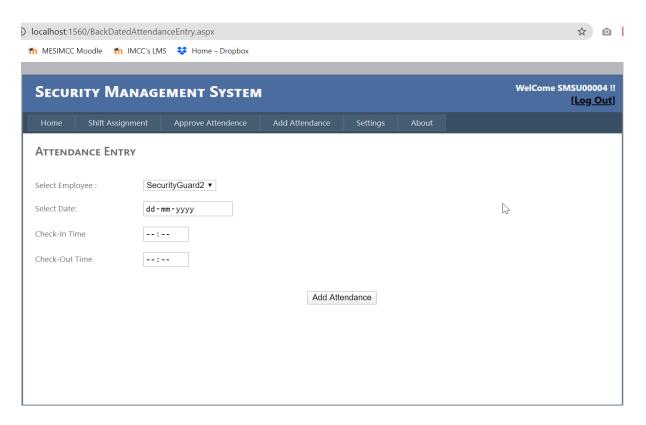
#### Security Guard Shift Assignment



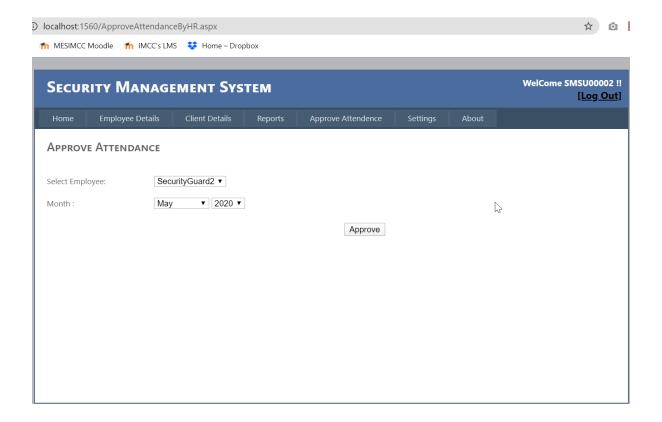
## Security Guard Check-in Check-out



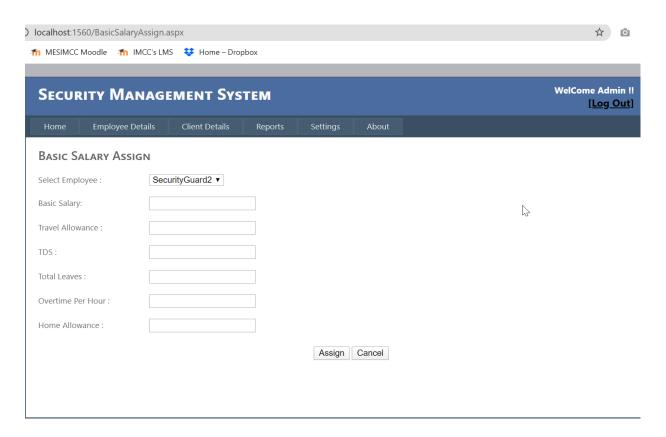
## **Back Dated Attendance Entry**



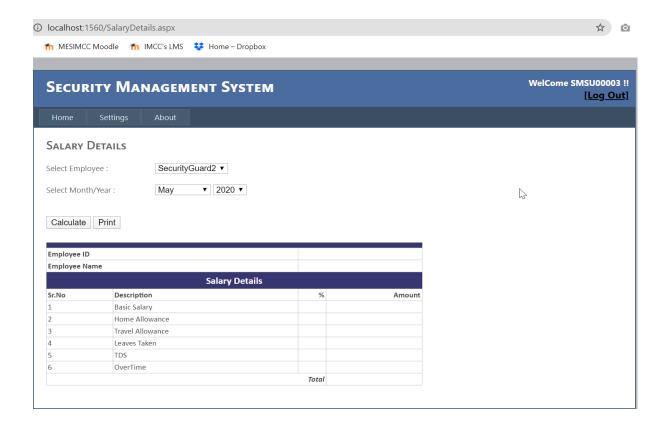
## Approve Attendance by HR (Month wise)



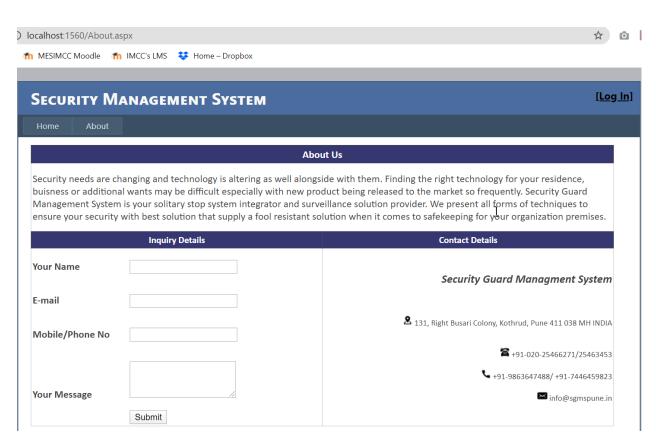
#### **Basic Salary Details**



#### Salary Details/Salary Slip



#### **Inquiry Form**



## 3.13 Data Dictionary

SrNo.	Field Name	Data	Size	Occurrence In Table
		Type		
1	AdditionalInfo	Varchar	100	
2	Address	Varchar	50	
3	BasicSalary	Int	10	
4	ClientAddress	Varchar	100	
5	ClientID	Int	10	ClientTable , ContractTable
6	ClientName	Varchar	40	
7	ContractDisplayID	Varchar	20	
8	ContractEmpDetailID	Int	10	ContractEmpDetailsTable , AttendanceTable
9	ContractEndDate	Date		
10	ContractID	Int	10	ContractTable , ContractEmpAssignTable , ContractEmpDetailTable
11	ContractStartDate	Date		_
12	DateOfBirth	Date		
13	Email	Varchar	20	
14	EmpID	Int	10	EmployeeTable , ContractEmpAssignTable , ContractEmpDetailTable , SalaryDetails
15	EndDate	Date		2 50550 j = 2 50552
16	Gender	Varchar	10	
17	HomeAllowanace	Float		
18	IdProofType	Varchar	20	
19	InchargeEmpId	Int	10	InchargeEmpDetail
20	InquiryDate	Datetime		
21	InquiryEmail	Varchar	30	
22	InquiryID	Int		
23	InquiryMessage	Varchar	50	
	mquii yiviessage	v ai ciiai		
24	InquiryMobileNo	Varchar	15	
24 25				
	InquiryMobileNo	Varchar	15	
25	InquiryMobileNo InquiryName	Varchar Varchar	15	
25 26	InquiryMobileNo InquiryName InTime	Varchar Varchar Datetime	15	
25 26 27	InquiryMobileNo InquiryName InTime IsApprovedByHR	Varchar Varchar Datetime Bit	15	
25 26 27 28	InquiryMobileNo InquiryName InTime IsApprovedByHR IsApprovedByIncharge	Varchar Varchar Datetime Bit Bit	15	
25 26 27 28 29	InquiryMobileNo InquiryName InTime IsApprovedByHR IsApprovedByIncharge IsAssigned	Varchar Varchar Datetime Bit Bit Bit	15	
25 26 27 28 29 30	InquiryMobileNo InquiryName InTime IsApprovedByHR IsApprovedByIncharge IsAssigned IsPresent	Varchar Varchar Datetime Bit Bit Bit Bit	15	
25 26 27 28 29 30 31	InquiryMobileNo InquiryName InTime IsApprovedByHR IsApprovedByIncharge IsAssigned IsPresent IsUserDeleted	Varchar Varchar Datetime Bit Bit Bit Bit Bit Bit Bit	15	

35	Name	Varchar	20	
36	OutTime	Datetime		
37	Overtime	Int		
38	OverTimePerHour	Float		
39	PhoneNo	Varchar	10	
40	ReporteeEmpId	Int	10	InchargeEmpDetail
41	ShiftID	Int	10	ShiftTable,
				ConttractEmpDetailTable
42	ShiftTime	Varchar	10	
43	StartDate	Date		
44	Status	Bit		
45	TDS	Float		
46	TravelAllowance	Float		
47	UserLoginId	Varchar	20	
48	UserPassword	Varchar	20	
49	UserTypeDescription	Varchar	20	
50	UserTypeID	Int	10	UserType , EmployeeTable
51	ValidIDProof	Varchar	20	
52	WorkingDate	Date		

## 3.14 Table Specifications

## <u>UserType</u>:

Field Name	Data Type	Size	Constraint
UserTypeID	Int	10	Primary Key
UserTypeDescription	Varchar	20	

## $\underline{ShiftTable}:$

Field Name	Data Type	Size	Constraint
ShiftID	Int	10	Primary Key
ShiftTime	Varchar	20	

## EmployeeTable:

Field Name	Data Type	Size	Constraint
<u>EmpID</u>	<u>Int</u>	<u>10</u>	Primary key
<u>Name</u>	<u>Varchar</u>	<u>20</u>	
Address	<u>Varchar</u>	<u>50</u>	
<u>Gender</u>	<u>Varchar</u>	<u>10</u>	
<u>DateOfBirth</u>	<u>Date</u>		
<u>JoiningDate</u>	<u>Date</u>		
<u>MobileNo</u>	<u>Varchar</u>	<u>10</u>	
<u>ValidIDProof</u>	<u>Varchar</u>	<u>20</u>	
<u>UserTypeId</u>	<u>Int</u>	<u>10</u>	Foreign key
<u>UserLoginID</u>	<u>Varchar</u>	<u>20</u>	
<u>UserPassword</u>	<u>Varchar</u>	<u>20</u>	
<u>IsUserDeleted</u>	<u>Bit</u>		
<u>IdProofType</u>	<u>Varchar</u>	<u>20</u>	

## EmpInchargeDetails:

Field Name	Data Type	Size	Constraint
<u>InchargeEmpID</u>	<u>Int</u>	10	Primary Key
ReporteeEmpID	<u>Int</u>	<u>10</u>	Primary Key

## ContractTable:

Field Name	Data Type	Size	Constraint
ContractID	<u>Int</u>	<u>10</u>	Primary Key
ClientID	<u>Int</u>	<u>10</u>	Foreign key
ContractStartDate	Date		
ContractEndDate	<u>Date</u>		
Status	<u>Bit</u>		
ContractDisplayId	<u>Varchar</u>	<u>10</u>	
AdditrionalInfo	<u>Varchar</u>	<u>100</u>	

## $\underline{ContractEmpDetailTable:}$

Field Name	Data Type	Size	Constraint
<u>ContractEmpDetailID</u>	Int	<u>10</u>	Primary Key
ContractID	<u>Int</u>	<u>10</u>	Foreign key
<u>EmpID</u>	<u>Int</u>	<u>10</u>	Foreign key
ShiftID	<u>Int</u>	<u>10</u>	Foreign key
<u>StartDate</u>	<u>Date</u>		
<u>EndDate</u>	Date		

## <u>ContractEmpAssignTable</u>:

Field Name	Data Type	Size	Constraint
ContractID	<u>Int</u>	<u>10</u>	Foreign key
<u>EmpID</u>	<u>Int</u>	<u>10</u>	Foreign key
IsAssigned	Bit		

## ClientTable:

Field Name	Data Type	Size	Constraint
ClientID	Int	10	Primary Key
ClientName	Varchar	20	
ClientAddress	Varchar	50	
PhoneNo	Varchar	10	
EmailID	Varchar	20	

## $\underline{Attendance Table}:$

Field Name	Data Type	Size	Constraint
<u>ContractEmpDetailID</u>	Int	10	Foreign key
WorkingDate	Date		
InTime	Datetime		
OutTime	Datetime		
IsPresent	Bit		
IsApprovedByIncharge	Bit		
IsApprovedByHR	Bit		
Overtime	Int		

## SalaryDetails:

Field Name	Data Type	Size	Contraint
EmpID	Int	10	Foreign key
BasicSalary	Int	20	
Travelallowance	Int	20	
TDS	Int	20	
Leaves	Int	10	
OvertimePerHour	Float		
HomeAllowance	Int	10	

## InquiryDetails:

Field Name	Data Type	Size	Contraint
InquiryID	Int	10	Primary key
InquiryName	Varchar	30	
InquiryEmail	Varchar	30	
InquiryMobileNo	Varchar	15	
InquiryMessage	varchar	50	
InquiryDate	datetime		

## 3.15 Test Procedures and Implementation

#### **Introduction: -**

Testing is the method of checking whether the software is performing the given task successfully as expected or not. The expected speed, performance, accuracy and expected time should be taken into consideration while testing.

A system should always be tested thoroughly before implementing it, as regards its individual programs, the system as a whole user acceptance etc. This is because implementing a new system is a major job which requires a lot of man hour and a lot of other resources, so an error not detected before implementation may cost a lot. Effective testing early in the process translate directly into long term cost savings from reduced number of errors. This is also necessary because in some cases, a small error is not detected and corrected before installation, which may explode into much larger problem.

Programming and testing is followed by the stage of installing the new system.

Actual implementation of the system can begin at this point either using a parallel or a direct change over plan or some blend of two.

Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding. The purpose of product testing is to verify and validate the various work products viz. units, integrate units, final product to ensure that they meet their respective requirements.

#### **Testing Objectives:**

The testing objectives are summarized in the following three steps:

- 1. Testing is a process of executing a program with the intent of finding an error.
- 2. A good test ease is one that has a high probability of finding an as vet undiscovered error.
- 3. A successful test is the one that uncover an as yet undiscovered error.

Our objective is to design tests that systematically uncover different classes of errors and do so with a minimum amount of time and effort.

#### **Testing Methods:**

#### 1) Unit Testing:

A unit testing focuses reverification efforts on the smallest unit of software designs the module, the unit test is normally white box oriented and the step can he conducted in parallel for multiple modules. In unit testing the module interface was tested to ensure that information properly flows into and out of a program unit under test.

#### 2) Integration Testing:

Although each module is verified individually, during modules testing it is important to determine if the modules are working properly when linked together. This is also referred to as integration testing or also as interfacing. In this step output is compared with the manually calculated output; This comparison gives the result of system testing. This finally ensures that the system is functioning properly.

#### 3) System Testing:

It is the testing of the whole system prior to delivery. The purpose of system testing is to identify defects that will only surface when a complete system, is assembled. i.e. defects that cannot be attributed to individual components or the interaction between two components. System testing includes testing of performance, security. configuration sensitivity, start-up and recovery from failure modes. The results were satisfactory and thus the accuracy and reliability of the system is tested.

#### 4) GUI Testing:

The GUI testing (Graphical User Interface) testing are important testing guidelines for specialized environments, architectures and all application that are commonly encountered by all the software engineer. As modern GUIs have same look, and feel series of standard test can be derived.

Some of the GUI standard which was verified are:

- Forms enterable and display only formats.
- Wording of alerts, error messages and help features.

Thus, through the testing, a wide range of errors were encountered which enables us to understands the system as well broadened our knowledge of <u>ASP.Net</u> language.

## 5) Platform testing:

For web-application, platform testing means four main points, viz.

- Web forms display correctly on all supported browsers and supported versions of those browser.
- The web application has acceptable performance over slower forms of network connections such as Moderns.

PREPARATION OF TEST DATA

**Test Case:** A "Test Case" is a unit of testing activity.

**Using Artificial Test Data:** 

Artificial test data was used to test all the combination of formats and values. It

was designed keeping in mind the intention that it should make possible the testing of

all logic and control path through the program.

The artificial test data was prepared based on the following check:

Range checks: data was chosen in such a way that there were value exceeding range. outside

the range and values at the boundaries.

Field Size checks: Data was chosen in such a way that there were value exceeding

the maximum width of the field.

**Key Fields:** data was chosen so that primary key and foreign Constraints would be

violated.

Data type checks: data was chosen in such a way that it would not match with the data

types.

50

## 1. Test cases for User [Admin/HR/Accountant/Security In charge/Security Guard] Login:

Test Case ID	Scenario to tests	Steps to Perform	<b>Expected Result</b>	Actual result	Pass/ Fail
1.1	Login into application as a member.	<ol> <li>Open the login page of the application.</li> <li>Enter the valid Username.</li> <li>Enter the valid Password.</li> <li>Click on sign in button.</li> </ol>	Application should accept the valid username and valid password entered by the user and should direct user to home page of the application.	Login into application is successful.	Pass.
1.2	Login into application as a member.	<ol> <li>Open the login page of the application.</li> <li>Enter the invalid Username.</li> <li>Enter the valid Password.</li> <li>Click on sign in button.</li> </ol>	Application should not accept the invalid username. Application should throw message "Invalid username or password." Please enter correct username or password.	Login denied with appropriate message.	Pass.
1.3	Login into application as a member.	<ol> <li>Open the login page of the application.</li> <li>Enter the valid Username.</li> <li>Enter the invalid Password.</li> <li>Click on sign in button.</li> </ol>	Application should not accept the invalid password. Application should throw message "Invalid username or password." Please enter correct username or password.	Login denied with appropriate message.	Pass.
1.4	Login into application as a member.	<ol> <li>Open the login page of the application.</li> <li>Enter the invalid Username.</li> <li>Enter the invalid Password.</li> <li>Click on sign in button.</li> </ol>	Application should not accept the invalid username & invalid password. Application should throw message "Invalid username or password." Please enter correct username or password.	Login denied with appropriate message.	Pass.

	Login into	1. Open the login	After clicking the	Login	Pass.
	application as	page of the	cancel button,	denied with	
	a member.	application.	previously entered	appropriate	
		2. Enter the invalid	values for username	message.	
1.5		Username.	& password should be		
		3. Enter the invalid	deleted from the field		
		Password.	and the cursor should		
		4. Click on Cancel	be automatically		
		button.	placed in the		
			username field.		

## 2. Test case Name: Employee Registration

Test Case ID	Scenario to tests	Steps to Perform	<b>Expected Result</b>	Actual result	Pass/ Fail
2.1	Registration for User Membership	<ol> <li>Click the employee or client menu of the application.</li> <li>Click the register employee or client tab.</li> <li>Enter all valid details.</li> <li>Click on the submit button.</li> </ol>	Member must be created in the system. System should send acknowledgement to the user.	Member gets created in the system. System send acknowledgement to the user.	Pass.
2.2	Registration for Membership	<ol> <li>Click the employee or client menu of the application.</li> <li>Click the register employee or client tab.</li> <li>Enter invalid details.</li> <li>Click on the submit button.</li> </ol>	Validation error should be displayed. And registration page should be reloaded.	System throws error message.	Pass.
2.3	Keep all fields blank and try to register.	<ol> <li>Click the employee or client menu of the application.</li> <li>Click the register employee tab.</li> </ol>	System throws error message.	System throws error message.	Pass.

		<ul><li>3. Keep all fields blank.</li><li>4. Click on the submit button.</li></ul>			
2.4	Kept name textbox blank in employee or client menu.	<ol> <li>Click the employee menu of the application.</li> <li>Click the register employee tab.</li> <li>Keep employee name textbox field blank.</li> <li>Click on the submit button.</li> </ol>	System throws error message.	System throws error message.	Pass.
2.5	Mobile field Blank in employee or client menu or mobile no start other than digits.	<ol> <li>Click the employee menu of the application.</li> <li>Click the register employee tab.</li> <li>Keep mobile no field blank and mobile no start other than digits.</li> <li>Click on the submit button.</li> </ol>	System throws error message.	System throws error message.	Pass.
2.6	Radio button not checked and try to register in employee menu	<ol> <li>Click the employee menu of the application.</li> <li>Click the register employee tab.</li> <li>Radio button not checked.</li> <li>Click on the submit button.</li> </ol>	System throws error message.	System throws error message.	Pass.
2.7	DOB kept blank or entered invalid date.	<ol> <li>Click the employee menu of the application.</li> <li>Click the register employee tab.</li> <li>DOB field blank or entered invalid date.</li> <li>Click on the submit button.</li> </ol>	System display the message invalid date.	System display the message invalid date.	Pass.

## 3. Test case for Save, Edit & Delete Button:

Test Case ID	Scenario to tests	Steps to Perform	<b>Expected Result</b>	Actual result	Pass/ Fail
3.1	Click on Save button	<ol> <li>Click the employee or client menu of the application.</li> <li>Click the register employee or client tab.</li> <li>Enter all valid details.</li> <li>Click on the submit button.</li> </ol>	Will Show message success.	Will Show message success.	Pass.
3.2	If click on Edit.	<ol> <li>Click the employee or client menu of the application.</li> <li>Click the manage employee or client tab.</li> <li>Update any information.</li> <li>Click on the Edit button.</li> </ol>	Will edit all the fields or selected field.	Edit all the fields or selected fields.	Pass.
3.3	If click on Delete	<ol> <li>Click the employee or client menu of the application.</li> <li>Click the manage employee or client tab.</li> <li>Delete any information.</li> <li>Click on the Delete button.</li> </ol>	Will delete all the fields or selected field.	Delete all the fields or selected fields.	Pass.

## 4. Test case for User Module:

Test Case ID	Scenario to tests	Steps to Perform	<b>Expected Result</b>	Actual result	Pass/ Fail
4.1	User Module – Admin	1. Admin will handle all the registration of HR, Accountant, Security in charge, Security guard. 2. Admin will also handle Client registration. 3. Admin will handle all system.	Should be valid.	As expected.	Pass.
4.2	User Module – HR	1. HR will handle all the registration of Security in charge, Security guard. 2. HR will handle client contract. 3. HR will also approve security guard attendance.	Should be valid.	As expected.	Pass.
4.3	User Module - Accountant	1. Accountant will handle salary slip for employee (only security guard)	Should be valid.	As expected.	Pass.

# CHAPTER 4 USER MANUAL

## 4.1 User Manual

The main objective of this project for Administrator is to set various master data (e.g. Department, Designation, Employee Details, Client Details etc.). For the system which

will be the prerequisite data to run system appropriately. For HR the main objective is to

approve the leave by viewing employee leave application. HR & Accountant do the employee

Deployment and salary management.

There are mainly 3 users for the system:

- 1) Admin
- 2) HR
- 3) Accountant

#### For Admin

The various functions are as follows:

- Login
- Manage User Registration

Add, Edit, Delete User

Manage User Department
 Add, Delete Department

- Manage Designation
- Manage Salary component and Setting
- Manage Client Details

Add, Edit, Delete Client

• Logout

#### For HR

The various functions are as follows:

- Login
- Manage Employee

Edit, Delete Employee

• Manage Employee Deployment

Add, Edit, Delete Deployment

• Leave approval of Employee

•	Manage	Attendance	Details
---	--------	------------	---------

• Logout

## **For Accountant**

The various functions are as follows:

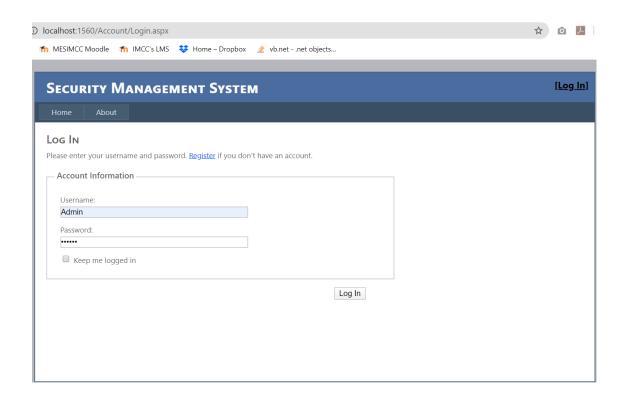
- Login
- Do Salary processing and pay slip is generated
- Logout

## **4.2** Operations Manual / Menu Explanation

❖ User Manual for Admin:

Login by Admin:

- 1. Enter the Username
- 2. Enter Password
- 3. By clicking Login button, it will check user is valid or not and valid user redirect to the Admin Homepage.

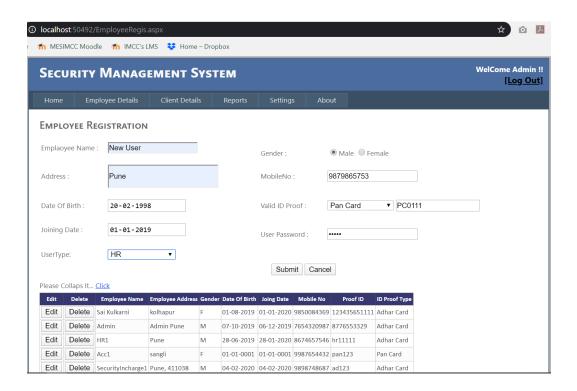


Admin will see following menu when successfully logged in as Admin:

- Employee Details
- Client Details
- Settings
- Reports

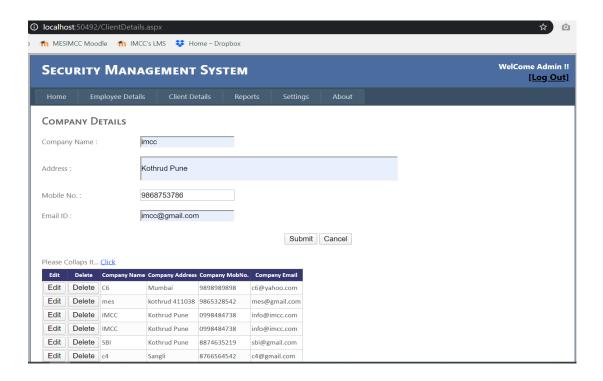


Select the Manage Employee menu item in Employee Details tab for all employee registration:



- In this Employee form admin will register all types of user like HR, Accountant, Security In charge, Security Guard. Admin will also provide the Password for each new user.
- 2. Fill the details and click on Submit button. For view the data click on Please Expand Click button. All fields are mandatory.

Select the Manage Client menu item in Company Details tab for all employee Registration:

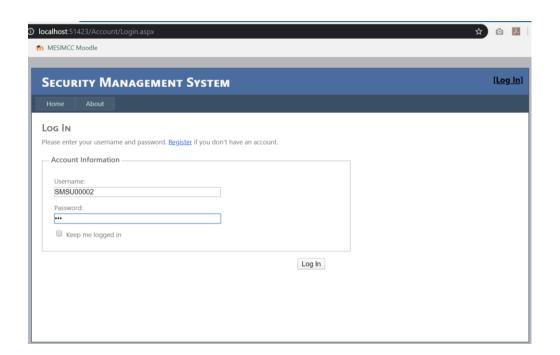


Fill the details and click on Submit button. For view the data click on Please
 Expand Click button. All fields are mandatory.

User Manual for HR:

## Login by HR:

- 1. Enter the Username
- 2. Enter Password
- 3. By clicking Login button, it will check user is valid or not and valid user redirect to the HR Homepage.

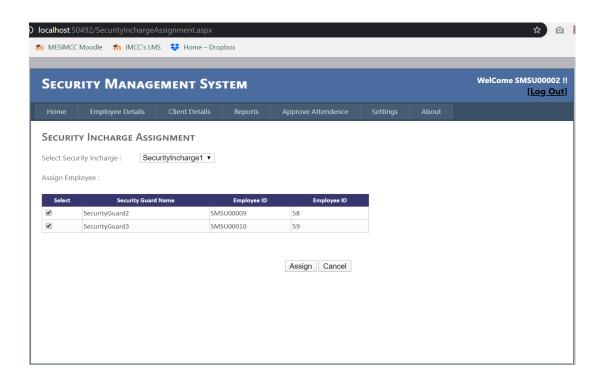


HR will see following menu when successfully logged in as Admin:

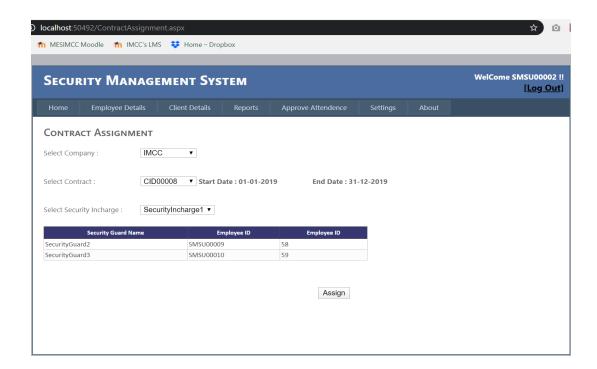
- Employee Details
- Client Details
- Reports
- Approve Attendance
- Setting



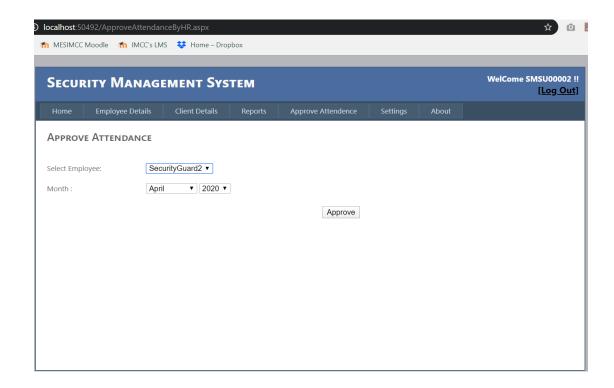
After login, HR assigns a security guard under the security in charge:



HR will deploy the employee to the specific contract:



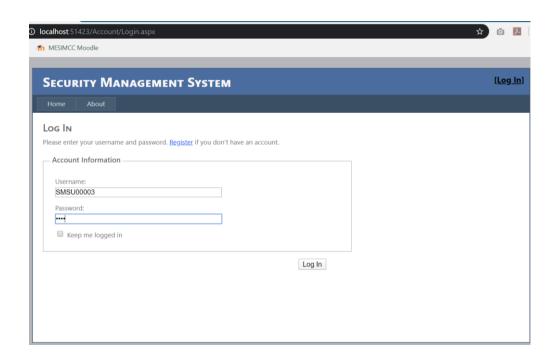
HR will approve the attendance only for security guard who's already approved by Security In charge.



User Manual for Accountant:

Login by Accountant:

- 1. Enter the Username
- 2. Enter Password
- 3. By clicking Login button, it will check user is valid or not and valid user redirect to the Accountant Homepage.

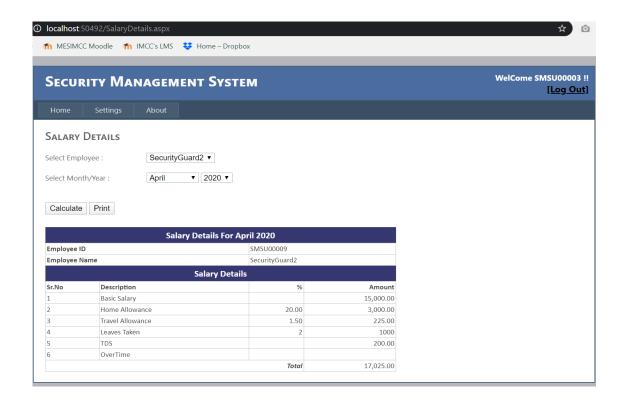


Accountant will see following menu when successfully logged in as Admin:

- Salary Details
- Settings

Accountant calculates the salary according to the attendance of security

Guards and display salary slip:



## **4.3** Program Specifications / Flow Charts

Module	Program Name	Constraint	Description
Authentication	Login	The required fields must not be NULL.	To access the system user is given a login details i.e., user id and password.
	Change Password	Must enter correct password and also new password twice for verification.	User can change the password his or her current password to new password.

Module	Program Name	Constraint	Description
	Add New Admin	The required fields must not be NULL.	Existing admin can create a new admin for managing the system.
	Member / Employee Registration.	Member / Employee information should be provided.	Any user (Member / Employee) can register to become a member.
Admin	Add Company, Add Security Guard Schedule	The required fields must not be NULL and no same information must be added twice.	Admin can add new record by selecting of the programs and entering required information of that program.
	Update/Delete user (Member/Employee), Update /Delete Company	The required fields must not be NULL	Admin can update or delete his/her details.
HR	Add Shift, Add Security guard Schedule, Manage Security guard Attendance	The required fields must not be NULL.	HR can add new record by selecting of the programs and entering required information of that program.

	Salary Slip	Attendance is must.	Generates Salary Slip
Accountant			after calculating
			his/her attendance.

Module	Program Name	Constraint	Description
Reports	Create Report	Choice of various reports are displayed.	Report gets generated According to the choice.

## CHAPTER 5 DRAWBACK AND LIMITATIONS

## 5. Drawback & Limitation

- The user should be an authorized user so that the no violation should be done.
- The database will extend by entering more records therefor system performance will decrease.
- In this system security guard has shifts in three parts and an every shift is compulsory of 8 hours.
- The shift timing of per guard is same for the month.
- Salary management will be only for security guard.

The data storage is centralized hence the performance of the system may degrade as the number of users are increase.

## CHAPTER 6 PROPOSED ENHANCEMENT

## 6. Proposed Enhancement

- Various shift timings.
- Salary and attendance management for all types of employees like Admin, HR,
   Accountant, Security In charge.
- Automatic contract renewal reminder through Mail or SMS.
- Tools or accessories management for security guard.
- Providing advance security tools such as biometric attendance for all types of employees.

## CHAPTER 7 CONCLUSION

#### 7. Conclusions

The Security Guard Management System which is a web-based application
developed for HR functions and Employee deployment to client. The Security
Guard Management System will provide an easy-to-use, user friendly Graphical
User Interface (GUI) as part of the Administrators working desktop environment.

The conclusions derived are as follows:

- 1) By using the current system, the total time required for doing various activities is very less as compared to the existing one.
- 2) The quality of process is improved and has become more transparent.
- 3) The required human efforts are reduced using the system.
- 4) The use of system eliminates paper work.
- 5) Removal of redundancy is achieved.

## CHAPTER 8 BIBLIOGRAPHY

## 8. Bibliography

## Website:

- https://stackoverflow.com/
- https://www.w3schools.com/
- https://www.codeproject.com/
- <a href="https://forums.asp.net/t">https://forums.asp.net/t</a>

## **CHAPTER 9**

## **ANNEXURE**

## ANNEXURE 1: USER INTERFACE SCREENS (All Screens with appropriate data)

## Home Screen

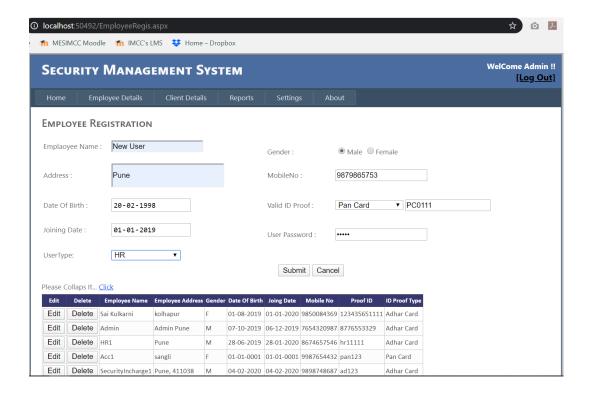


## Login

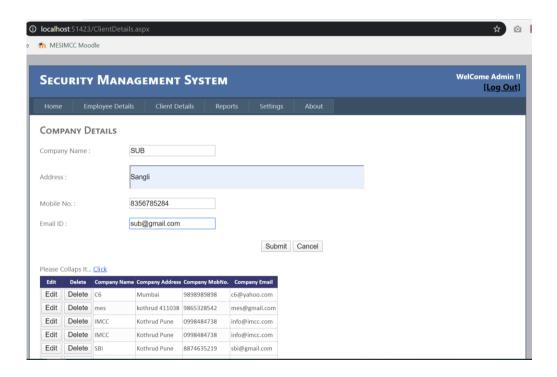
ocalhost 51423/Account/Login.aspx	☆ ② 🏴
1 MESIMCC Moodle	
Security Management System	<u>[Log lr</u>
Home About	
LOG IN  Please enter your username and password. Register if you don't have an account.  Account Information	
Username: Admin	
Password:	
Log In	

## Employee Registration:

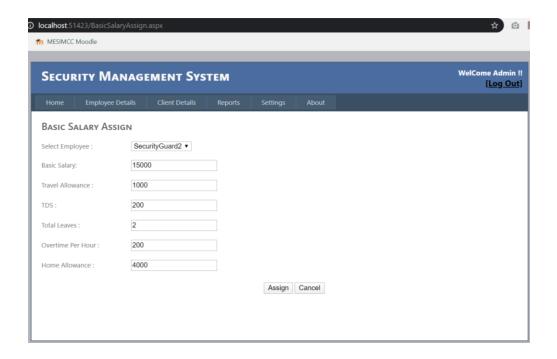
#### Personal Detail



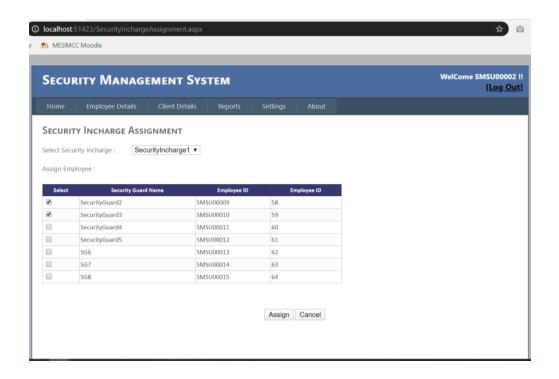
#### Client Detail



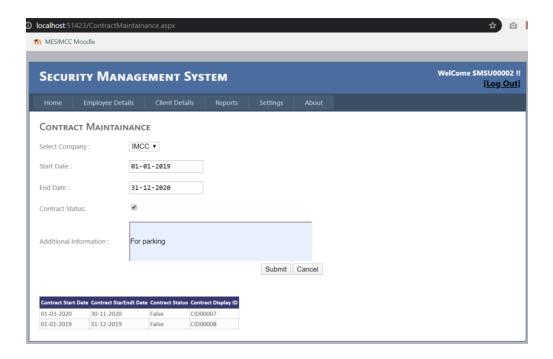
## **Basic Salary Assignment**



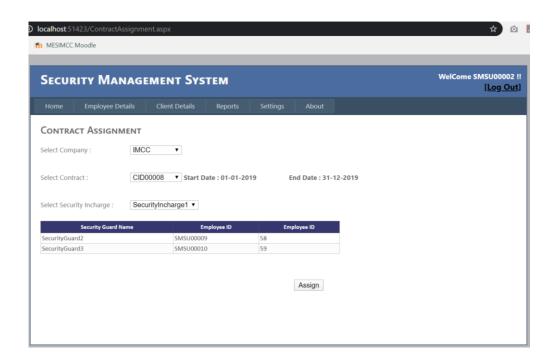
## Security Gaurd Assignment under Security Incharge



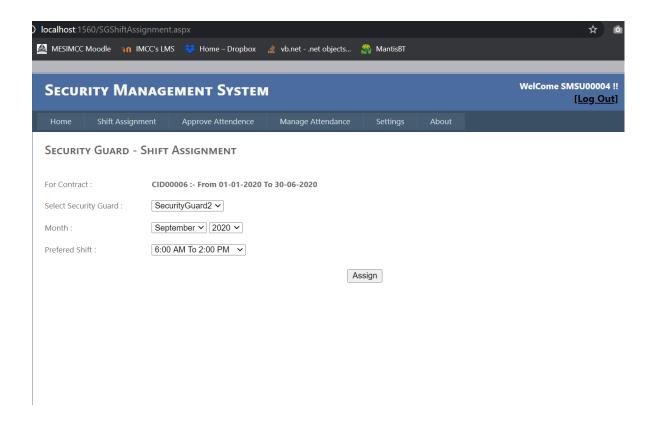
#### **Contract Details**



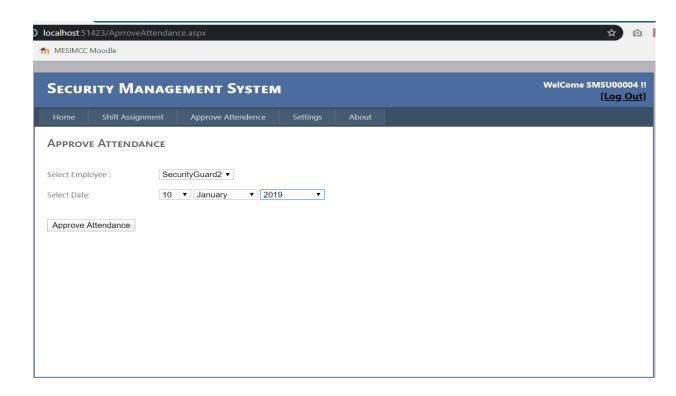
## **Contract Assignment**



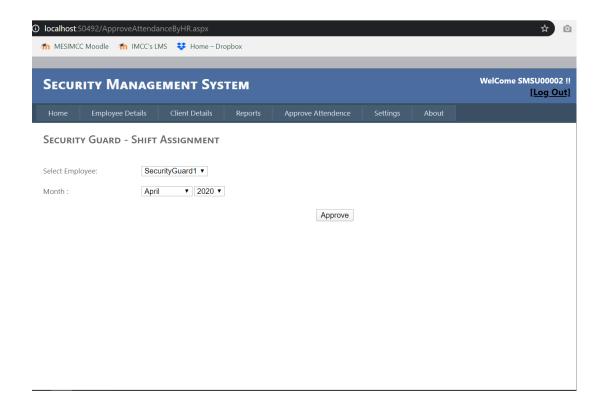
## Security Guard Shift Assignment



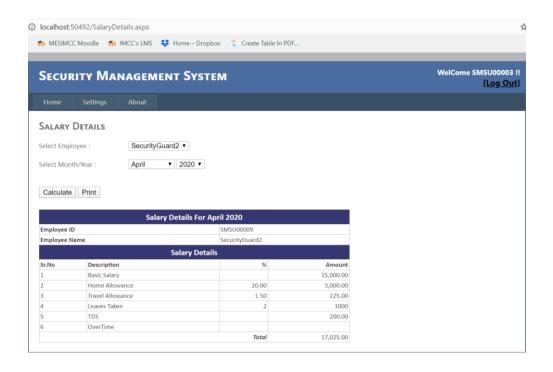
## Approve Security Guard Attendance By Security In charge



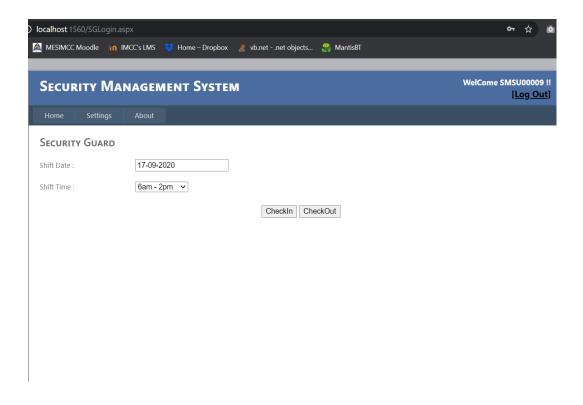
## Approve Security Guard Attendance By HR



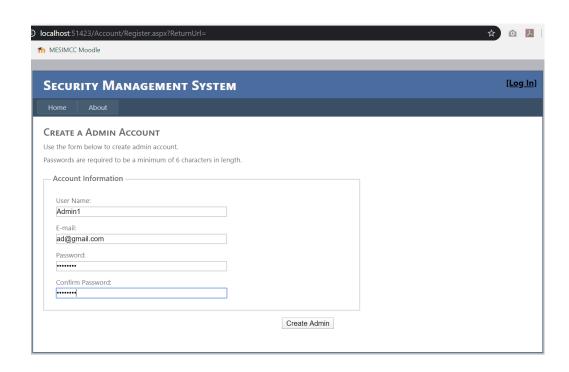
## Salary Calculation



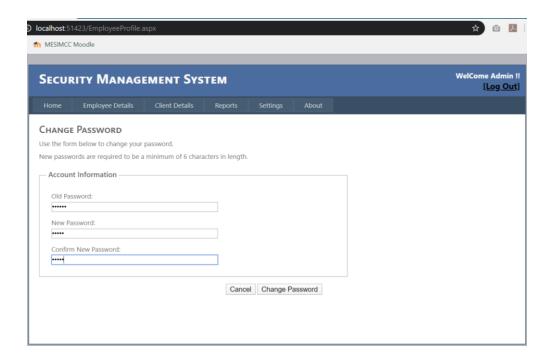
## Security Guard Check-in - Check-out



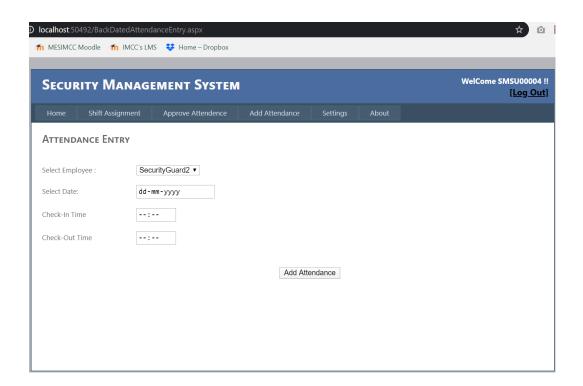
## Create New Admin Registration



## Edit Employee Profile (Change Password)



Back dated attendance of security guard by in charge:

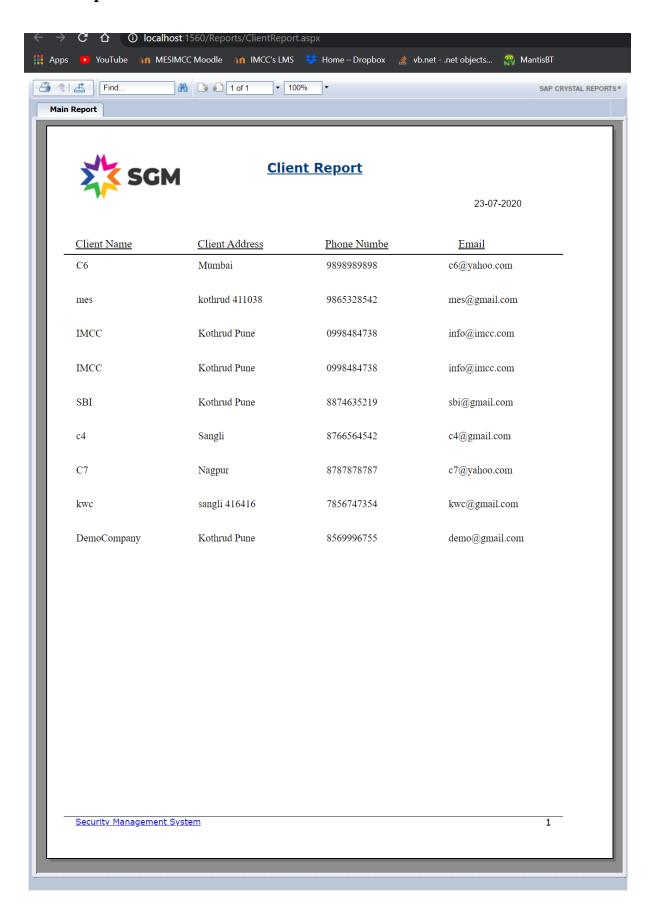


# ANNEXURE 2: OUTPUT REPORTS WITH DATA (Data in forms must be reflected in report) ( If Report or form contains any calculation field check the calculation)

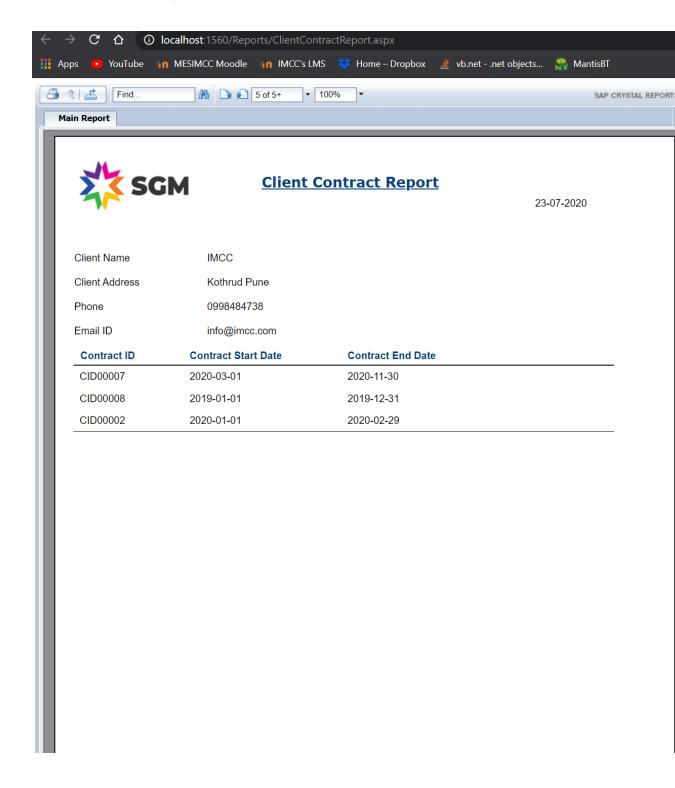
#### **Employee Report**



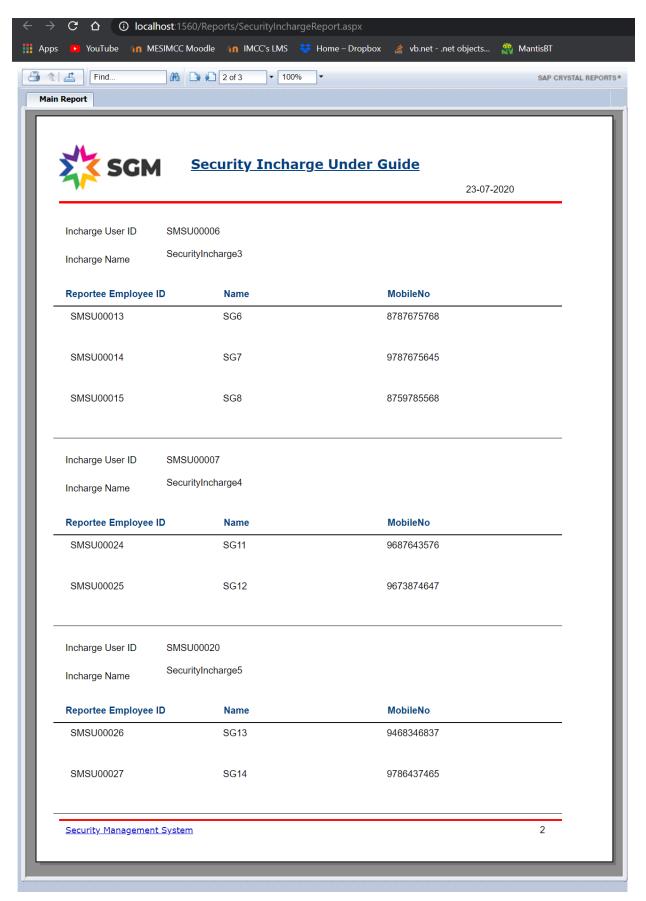
## **Client Report**



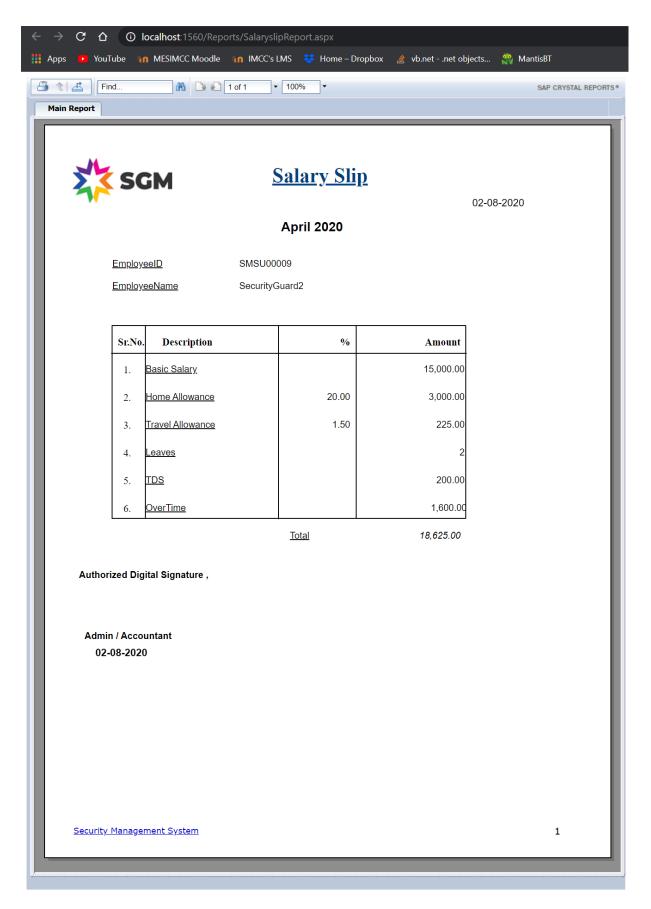
## **Client Contract Report**



## Security in charge under Security Guard Report



## **Salary Slip Report**



## **ANNEXURE 3: SAMPLE PROGRAM CODE (which will prove**

## sufficient development is done by the student)

#### // Code for Employee Registration:

```
using System;
using System.Collections.Generic;
using System.Ling;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data;
using System.Data.SqlClient;
namespace SecurityMangement
  public partial class EmployeeRegis: System.Web.UI.Page
    private DataTable moEmployeeTable;
    private Boolean mbNewUser;
    private Boolean mbPageChange;
    protected void Page_Load(object sender, EventArgs e)
       if (!IsPostBack)
         if (Global.IsLoggedInUserAdmin)
           ddlempusertype.Visible = true;
           Label10. Visible = true;
         }
         else
           ddlempusertype. Visible = false;
           Label 10. Visible = false;
         }
         clearData();
         ShowData();
       }
```

```
mbNewUser = true;
private void ShowData()
  EmployeeClass oEmployee = new EmployeeClass();
  DataTable oEmployeeDetails = new DataTable();
  if (oEmployee.GetEmployeeDetails())
    oEmployeeDetails = oEmployee.EmployeeDetails;
    GridView1.DataSource = oEmployeeDetails;
    GridView1.DataBind();
    moEmployeeTable = oEmployeeDetails;
    mbNewUser = true;
    mbPageChange = false;
private void clearData()
  txtempNm.Text = "";
  txtempAddress.Text = "";
  txtDOB.Text = "";
  txtjoindate.Text = "";
  txtmbno.Text = "";
  txtvalid.Text = "";
  txtUserLoginID.Text = "";
  txtPassword.Text = "";
  ddlempusertype.SelectedIndex = 0;
  ddlempvalididproof.SelectedIndex = 0;
  txtUserIDToGet.Text = "";
}
protected void btnSubmit_Click(object sender, EventArgs e)
  if (Page.IsValid)
    EmployeeClass oEmployee;
    oEmployee = new EmployeeClass();
    string sEmpIDToGet;
```

```
sEmpIDToGet = txtUserIDToGet.Text.ToString();
        oEmployee.EmployeeAddress = txtempAddress.Text;
         oEmployee.EmployeeName = txtempNm.Text;
         if (sEmpIDToGet == "")
           mbNewUser = true;
         }
         else
           mbNewUser = false;
           oEmployee.EmployeeIDToGet = int.Parse(sEmpIDToGet);
         }
         oEmployee.IsNewEmployee = mbNewUser;
         oEmployee.EmployeeValidIDProof = txtvalid.Text;
         oEmployee.EmployeeMobileNo = txtmbno.Text;
         oEmployee.EmployeePassword = txtPassword.Text;
         oEmployee.DateOfBirth = DateTime.Parse(txtDOB.Text.ToString());
         oEmployee.DateofJoining = DateTime.Parse(txtjoindate.Text.ToString());
         oEmployee.UserLoginID = txtUserLoginID.Text;
         oEmployee.ValidProofIDType =
ddlempvalididproof.SelectedValue.ToString();
         if (Global.IsLoggedInUserAdmin)
           string sValue = ddlempusertype.SelectedValue;
           oEmployee.UserIDType = int.Parse(sValue);
         }
         else
           //No code
         if (rbtnfemale.Checked)
           oEmployee.EmployeeGender = EmployeeClass.EmpGender.Female;
         }
         else
           oEmployee.EmployeeGender = EmployeeClass.EmpGender.Male;
         }
```

```
if (oEmployee.SaveEmployeeDetails())
           ShowData();
           clearData();
           mbNewUser = false;
         }
       }
       else
         RequiredFieldValidator1.Visible = true;
    }
    protected void btnCancel_Click(object sender, EventArgs e)
      clearData();
    protected void GridView1_PageIndexChanged(object sender, EventArgs e)
      mbPageChange = false;
    }
    protected void GridView1_PageIndexChanging(object sender,
GridViewPageEventArgs e)
      mbPageChange = true;
      GridView1.PageIndex = e.NewPageIndex;
       ShowData();
    }
    protected void btnEdit_Click(object sender, EventArgs e)
      string sEmployeeID ="";
      int iEmployeeID;
       Button oBtnEdit = (Button)sender as Button;
      sEmployeeID = oBtnEdit.CommandArgument;
      iEmployeeID = int.Parse(sEmployeeID);
       AssignDataToPage(sEmployeeID);
    protected void btnDelete_Click(object sender, EventArgs e)
```

```
string sEmployeeID= "";
  int iEmployeeID;
  Button oBtnEdit = (Button)sender as Button;
  sEmployeeID = oBtnEdit.CommandArgument;
  iEmployeeID = int.Parse(sEmployeeID);
  EmployeeClass oEmployee;
  oEmployee = new EmployeeClass();
  oEmployee.EmployeeIDToGet = iEmployeeID;
  if (oEmployee.GetEmployeeDetails())
    oEmployee.IsUserDeleted = true;
    oEmployee.SaveEmployeeDetails();
    ShowData();
  }
}
private void AssignDataToPage(string sEmpValue)
  String sEmployeeID = sEmpValue;
  int iEmployeeID = int.Parse(sEmployeeID);
  EmployeeClass oEmployee;
  oEmployee = new EmployeeClass();
  oEmployee.EmployeeIDToGet = iEmployeeID;
  if (oEmployee.GetEmployeeDetails())
  {
    //AssignDataToControls
    txtempNm.Text = oEmployee.EmployeeName;
    txtempAddress.Text = oEmployee.EmployeeAddress;
    if (oEmployee.EmployeeGender == EmployeeClass.EmpGender.Female)
      rbtnfemale.Checked = true;
    }
    else
      rbtnmale.Checked = true;
    txtDOB.Text = oEmployee.DateOfBirth.ToString("yyyy-MM-dd");
```

```
txtjoindate.Text = oEmployee.DateofJoining.ToString("yyyy-MM-dd");
         txtmbno.Text = oEmployee.EmployeeMobileNo;
         txtUserLoginID.Text = oEmployee.UserLoginID;
         txtvalid.Text = oEmployee.EmployeeValidIDProof;
         txtPassword.Text = oEmployee.EmployeePassword;
         string sValue = oEmployee.UserIDType.ToString();
         ddlempusertype.ClearSelection();
         ddlempusertype.Items.FindByValue(sValue).Selected = true;
         sValue = oEmployee.ValidProofIDType;
         ddlempvalididproof.ClearSelection();
         if (sValue == "")
         {
         }
         else
         {
           ddlempvalididproof.Items.FindByValue(sValue).Selected = true;
         }
         mbNewUser = false;
         txtUserIDToGet.Text = oEmployee.EmployeeID.ToString();
       }
    }
    protected void GridView1_RowEditing (object sender,
GridViewEditEventArgs e)
    {
    }
  }
```