PROJECT REPORT

ON

Kon Banega CrorePati

BY

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SAVITRIBAI PHULE PUNE UNIVERSITY

MASTER IN COMPUTER APPLICATION

MAHARASHTRA EDUCATION SOCIETY's

INSTITUTE OF MANAGEMENT AND CAREER COURSES

(IMCC), PUNE-411038

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Maharashtra Education Society's

Institute of Management & Career Courses (IMCC)

Approved by AICTE and Recognized by Savitribai Phule Pune University, Pune

NBA Accredited MCA Program (Valid up to 30.06.2022)

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Ref. No. MES IMCC / 399/ 2023 – 24/ **Date:13/04/2024**

CERTIFICATE

This is to certify that the Project Report entitled

"Kon Banega CrorePati"

is prepared by

Vivek Yeshvant More

M.C.A. Semester IV Course for the Academic Year 2023-24 at M.E. Society's Institute of Management & CareerCourses (IMCC), Pune - 411038.
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/herhave been duly acknowledged in this report.

The report is submitted in partial fulfillment of M.C.A Course for the Academic Year 2023-224 as per the rules andprescribed guidelines of Savitribai Phule Pune University.

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Director,MES IMCC

Internal Examiner

External Examiner

CERTIFICATE

This is to certify that Vivek Yesvant More has completed the project work entitled **"Kon Banega CrorePati"** under my guidance. The report is submitted in partial fulfilment of M.C.A. Course for the Academic Year 2023-2024 as per the rules & prescribed guidelines of Savitribai Phule Pune University.

His work is found to be satisfactory and complete in all respects.

Mrs. Darshana Yadav

(Internal Project Guide)

Acknowledgement

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Sincerely,

VIVEK MORE

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1.1 Institute Profile

Institute of Management and Career Courses (IMCC) is a premier Management Institute, established in 1983 by Maharashtra Education Society (MES) for providing quality education and technical expertise at the Post Graduation Level in the Fields of Computers and Management. The Institute is recognized by SPPU under Section 46 of Pune University Act, 1974 and Section 85 of Maharashtra University Act,1994 and Approved by AICTE New Delhi to conduct MCA and MBA programmes. The Institute is located at 131, Mayur Colony, Kothrud, Pune-411038 having 30,000 sq. ft-built area & totally independent campus. IMCC is recognised as a Ph.D. Research Centre under the Faculty of Management, SPPU. IMCC has 38

years standing & it is well- known for its conducive educational atmosphere. IMCC focuses on the all-round development of its students. Thus, apart from excellence in academics, students develop their inner potential by way of active participation in co-curricular & extra-curricular activities. IMCC has developed excellent rapport with Industry by way of Guest Lectures, Seminars, Workshops, Industrial Visits & Placements. The main motto of the Institute is to in still the concepts of total personality development in the students. The emphasis is laid on 'Teacher Disciple Relationship' in place of 'Boss Subordinate' relationship at their assignments. The preamble of IMCC ``FACTA-NON-VERBA" lucidly means that the

Institute produces the new breed of professionals, who's deeds will

speak and there could be no requirement of pomposity. The zooming enthusiastic, rational, and excellen external endeavours are being imbibed in the students to prove their mettle. The conducive milieu of the Institute melds the budding managers to reveal in managing flexibility, integration, change and transformation. These ‘would be’ professionals are channelised in such a way to ‘orchestrate’ and deploy business and technological management skills in a synergistic manner to grab the tangible success. The faculty members put their relentless efforts in educating the students to synthesize business management acumen and technology insights in a creative manner.

1.2 Abstract

The Kon Banega Crorepati (KBC) project aims to revolutionize the customer experience by integrating product sales with an engaging quiz game.

Customers are presented with the opportunity to purchase products at discounted rates by participating in a quiz tailored to each product.

This innovative approach not only incentivizes customers to explore and purchase products but also enhances their engagement and interaction with the brand.

By tying discounts to quiz performance, customers are encouraged to test their knowledge and compete for enticing offers, resulting in increased product sales and customer satisfaction.

Ultimately, KBC creates a win-win scenario where customers enjoy an entertaining experience while brands benefit from heightened sales and customer engagement.

1.3 Existing System

In the existing system, similar to the concept of the "Kon Banega Crorepati" (KBC) game show, customers are presented with the opportunity to win discounts on products through engaging in a quiz-based format. Much like in KBC, customers participate in a game where they answer a series of questions, with each correct answer earning them a discount on a specific product.

This existing system leverages the appeal of gamification to incentivize customer engagement and purchase behavior. By offering discounts as rewards for participation and correct answers, the system motivates customers to interact with the brand and its products in a fun and interactive manner.

Furthermore, the system incorporates elements of excitement and anticipation, akin to those experienced by participants in popular game shows. Customers are drawn into the experience, heightening their interest in the products and increasing the likelihood of making a purchase, thereby driving sales and fostering customer loyalty.

Overall, the existing system effectively utilizes the principles of gamification and incentivization to enhance

customer engagement and promote sales, making it a compelling model for your KBC project.

1.3 Need for System

Firstly, it serves as a platform for individuals to test their knowledge and intelligence across various subjects in an entertaining and engaging manner. This fulfills the human desire for mental stimulation and challenges.

Secondly, KBC provides an opportunity for contestants to win significant monetary prizes, which can be life-changing for many participants. This financial incentive motivates people to participate and engage actively in the game show.

Moreover, KBC serves as a source of entertainment for millions of viewers, offering them an exciting and suspenseful experience as they watch contestants answer questions and progress towards the jackpot prize. This entertainment value contributes to the show's popularity and longevity. Overall, KBC fulfills the needs for knowledge, excitement, and potential financial gain, making it a highly sought-after television program.

1.4 Scope of the System:

The KBC (Kon Banega Crorepati) project aims to revolutionize the way customers engage with products by integrating a game show format with product purchases. Through this innovative platform, customers will be incentivized to buy products by offering them the opportunity to play a trivia game related to the product they wish to purchase. Each product will be associated with a specific discount, and customers will earn discounts based on the number of questions they answer correctly during the game. This gamified approach not only enhances customer engagement but also increases the likelihood of product purchase, even among hesitant customers.

By gamifying the product purchasing process, the KBC project opens up new avenues for customer interaction and sales. Through this platform, customers not only get the chance to win discounts but also enjoy a fun and interactive experience while learning about the products they are interested in. Moreover, by offering discounts based on performance in the trivia game, the project incentivizes customers to actively participate and engage with the brand, leading to increased product sales and customer loyalty.

The scope of the KBC project extends beyond traditional marketing strategies by leveraging the power of gamification to

drive product sales. With its unique blend of entertainment and shopping, the project creates a dynamic and engaging shopping experience that appeals to a wide range of customers. Furthermore, by offering discounts tied to game performance, the project encourages repeated engagement and fosters a sense of excitement and anticipation among customers, ultimately leading to higher sales conversion rates and enhanced brand perception.

1.5 Operating Environment

HARDWARE

1. **Processor**: Android 7 applications can run on devices with various processor architectures, including ARM, ARM64, and x86. The device's processor should meet the minimum specifications required to run Android 7.

2. **Memory (RAM)**: Devices running Android 7 should ideally have at least 1GB of RAM for smooth operation. However, devices with higher RAM capacities, such as 2GB or more, provide better performance, especially for multitasking and running memory-intensive applications.

3. **Storage**: Android 7 applications require a certain amount of internal storage space on the device. While the minimum storage capacity varies, devices typically come with at least 8GB or 16GB of internal storage, with some offering expandable storage options via microSD cards.

SOFTWARE

1. **Android Version**: The device must be running Android 7 or a higher version to run applications developed for Android 7. Compatibility with specific Android versions ensures that the application functions correctly and utilises the features introduced in Android 7.

2. **phpMyAdmin**: phpMyAdmin is a web-based tool written in PHP used for managing MySQL databases. It provides an intuitive interface for tasks such as database creation, querying, and administration.

3. **Postman**: Postman is a popular API development tool used for testing, documenting, and debugging APIs. It simplifies the process of sending requests, validating responses, and collaborating on API development projects.

4.**Internet Connectivity**: Internet Connectivity is a critical requirement for application to deliver its full range of features and functionalities effectively. Either WiFi or mobile data is mandatory for application to work. Ensuring a stable and reliable internet

connection will enhance the user experience and enable users to fully utilise the capabilities of your app.

1.6 Brief Description of Technology Used

ANDROID STUDIO

Android Studio is the official integrated development environment (IDE) for Android app development, provided by Google. It offers a comprehensive set of tools and features specifically designed to streamline the process of creating, testing, and deploying Android applications.

1. **Integrated Development Environment (IDE):** Android Studio provides a powerful and intuitive IDE tailored for Android development. It includes all the necessary tools for writing, debugging, and testing Android applications in a single integrated environment.

2. **Code Editor:** Android Studio features a robust code editor with advanced capabilities, including syntax highlighting, code completion, and refactoring tools. It supports multiple programming languages, including Java, Kotlin, and C++ for developing Android apps.

3. **User Interface (UI) Designer:** Android Studio offers a visual UI designer that allows developers to create and modify app

layouts using drag-and-drop functionality. The UI designer provides a real-time preview of how the app will look on different screen sizes and resolutions.

4. **Emulator:** Android Studio includes an emulator that simulates Android devices, allowing developers to test their apps without the need for physical hardware. The emulator supports various device configurations, Android versions, and hardware features for comprehensive testing.

5. **Version Control Integration:** Android Studio supports version control systems like Git, allowing developers to manage and collaborate on their projects more efficiently. It offers built-in tools for committing, branching, merging, and reviewing code changes directly within the IDE.

6. **Build System:** Android Studio uses Gradle as its build system, allowing developers to customise build configurations, manage dependencies, and automate build tasks. Gradle simplifies the process of building and packaging Android apps for distribution.

1.6.1 Operating systems used Windows

The Windows operating system, developed by Microsoft Corporation, has been a cornerstone of personal computing since its inception in November 1985 with the release of Windows 1.0. Known for its graphical user interface (GUI), Windows features windows, icons, menus, and pointers, providing users with an intuitive computing experience. Over the years, Windows has seen numerous versions, including Windows 95, XP, 7, 8, and the latest major release, Windows 10, introduced in July 2015, each bringing new features and enhancements to the platform. With a significant market share in personal computing and enterprise environments, Windows enjoys widespread use globally. It offers compatibility with a diverse range of hardware devices, software applications, and peripherals, making it a versatile choice for various computing needs. Windows is available in different editions tailored for different use cases, such as Home, Pro, Enterprise, Education, and Server editions, each offering specific features and capabilities. Regular updates and patches are delivered through the Windows Update service, ensuring ongoing security and performance improvements. Windows seamlessly integrates with other Microsoft products and services.

1.6.2 RDBMS used to build database

PHPMyAdmin

PHPMyAdmin is a web-based tool written in PHP used for managing MySQL databases. It provides an intuitive interface for tasks such as database creation, querying, and administration. With PHPMyAdmin, users can execute SQL queries, manage database tables, and perform maintenance tasks such as backups and imports.

SQL (Structured Query Language)

1.SQL is a standardised programming language used for managing and manipulating relational databases. It allows users to define, query, update, and administer databases. SQL is used to perform tasks such as creating and modifying database schemas, inserting and retrieving data, and managing user access control.

2.SQL is essential for interacting with databases in various applications, including web development, data analysis, and software systems. It provides a powerful and flexible means of working with structured data, enabling developers to efficiently store, retrieve, and manipulate information.

3.SQL statements are used to communicate with databases and perform operations such as creating, modifying, and retrieving data. Common SQL commands include SELECT (retrieve data), INSERT (add data), UPDATE (modify data), DELETE (remove data), CREATE (create database objects), ALTER (modify database objects), and DROP (delete database objects). Understanding SQL is fundamental for working with databases and developing applications that rely on data storage and retrieval.

2.1 Study of Similar Systems

1. Trivia Crack: This mobile game app offers users the opportunity to test their knowledge across various categories by answering multiple-choice questions. Players can compete against friends or random opponents, earning points for correct answers and challenging their opponents to do the same. Trivia Crack features a diverse range of questions, including history, science, entertainment, and more, making it suitable for players of all interests. Like KBC, Trivia Crack provides an interactive and engaging platform for users to showcase their knowledge and compete for virtual rewards.

2. QuizUp:This app offers a vast array of trivia questions across numerous categories, allowing users to challenge friends or strangers in real-time quiz battles. With its sleek interface and diverse topics ranging from pop culture to literature to sports, QuizUp provides an immersive and competitive gaming experience. Players can earn experience points, level up, and unlock achievements as they progress through the game. Much like KBC, QuizUp fosters a sense of competition and intellectual stimulation, making it a popular choice for trivia enthusiasts worldwide.

2.2 Feasibility Study

1. Technical Feasibility: Evaluate the technical requirements for developing the KBC application, including the necessary programming languages, frameworks, and tools. Assess whether the technology stack can support the desired features, such as quiz functionality, user authentication, and real-time interactions.

2.Financial Feasibility: Estimate the project's budget, including development costs, hosting expenses, marketing expenses, and any other associated costs. Determine whether the expected revenue from increased product sales, sponsorships, or advertisements can justify the investment.

3. Market Feasibility : Analyze the target market for the KBC application, considering factors such as demographics, interests, and purchasing behavior. Research similar applications or gamified marketing campaigns to understand customer preferences and market demand.

4. Operational Feasibility : Evaluate the practicality of implementing and managing the KBC project within the organization's existing infrastructure and resources. Consider

factors such as staffing requirements, technical support, and scalability to accommodate potential growth.

2.3 Objectives of Proposed System

1. Increasing Product Sales: By integrating a quiz-style game format with product purchases, the system aims to stimulate interest and encourage customers to explore and buy products they might not have considered otherwise. Offering discounts based on quiz performance incentivizes purchases and boosts sales.

2. Enhancing Customer Engagement: The KBC system aims to captivate customers' attention and immerse them in an interactive and entertaining experience. By participating in the quiz, customers engage with the brand and its products on a deeper level, fostering brand loyalty and repeat purchases.

3. Educating Customers: Through the quiz questions, the system educates customers about the features, benefits, and unique selling points of different products. This educational aspect helps customers make informed purchasing decisions and builds trust in the brand's offerings.

4. Differentiating from Competitors: Implementing a gamified shopping experience sets the brand apart from competitors and creates a unique selling proposition. The KBC system adds value

to the customer journey by providing entertainment alongside shopping, making it a memorable and enjoyable experience.

5. Gathering Customer Insights: By tracking quiz performance and purchase behavior, the system collects valuable data on customer preferences, interests, and buying patterns. These insights can inform marketing strategies, product development initiatives, and personalized promotions, driving future business growth.

2.4 User of system

1. Customers: These are the primary users of the system, consisting of individuals interested in purchasing products from the brand. Customers participate in the KBC quiz to win discounts on products. They engage with the system by answering quiz questions, exploring product offerings, and making purchases based on their quiz performance.

2. Admin/Users: The system administrators and authorized users are responsible for managing and overseeing the KBC platform. They have access to the backend dashboard, where they can create and edit quiz questions, manage product discounts, track customer activity, analyze performance metrics, and generate reports. Admins ensure the smooth operation of the system and address any technical issues or user concerns.

3. Developers: The development team comprises individuals responsible for designing, developing, and maintaining the KBC system. They work on frontend and backend development, database management, system integration, and quality assurance to ensure that the platform functions optimally and delivers a seamless user experience.

4. Marketing Team: The marketing team collaborates with the system administrators to devise promotional strategies, campaigns, and incentives to attract customers to participate in the KBC quiz. They leverage various channels, such as social media, email marketing, and advertising, to drive user engagement and promote product sales through the platform.

5. Customer Support: Customer support representatives assist users with inquiries, technical support, and issue resolution related to the KBC system. They provide guidance, troubleshooting assistance, and timely responses to customer queries to ensure a positive user experience and foster customer satisfaction.

3.1 System Requirements

Functional Requirements:

1. User Management:

- Allow users to register, login, and manage their profiles.
- Provide functionality for user authentication, password recovery, and role-based access control.

2. Organization Management:

- Enable the creation, editing, and deletion of organizational entities.

- Support features for managing organizational hierarchies, departments, and teams.

3. Unit Management:

- Facilitate the management of units within the organization, such as branches, divisions, or units.

- Allow for the assignment of units to users and the allocation of resources to units.

4. Plan Management:

- Provide functionality for creating, editing, and managing plans or projects.

- Allow for the definition of project objectives, milestones, and timelines.

5. Addon Management:

- Enable the management of additional features or modules that can be added to the system.

- Allow for the activation, deactivation, and configuration of addons.

6. Module Management:

- Facilitate the management of software modules or components within the system.

- Allow for the installation, configuration, and removal of modules.

7. System Privileges:

- Define and manage system privileges and permissions for users.

- Allow administrators to grant or revoke access rights based on user roles and responsibilities.

8. Subscription Management:

- Enable the management of user subscriptions or service plans.

- Allow for the creation, renewal, and cancellation of subscriptions.

Non-functional Requirements:

1. Security:

- Implement secure authentication mechanisms and data encryption to protect user information.

- Ensure compliance with industry standards and regulations for data security.

2. Performance:

- Optimize system performance to ensure fast response times and minimal latency.

- Conduct load testing and performance tuning to handle high volumes of user traffic.

3. Reliability:

- Ensure system reliability by minimizing downtime and preventing data loss or corruption.

- Implement backup and recovery mechanisms to recover from system failures.

4. Scalability:

- Design the system to scale horizontally or vertically to accommodate growing user bases and increasing data volumes.

- Use scalable architecture patterns and technologies to support system growth.

5. Usability:

- Design an intuitive user interface that is easy to navigate and understand.

- Provide clear instructions and helpful feedback to guide users through system tasks.

6. Compatibility:

- Ensure compatibility with different devices, browsers, and operating systems.

- Test the system across various platforms to ensure consistent performance and functionality.

7. Maintainability:

- Design the system with modular and well-documented code to facilitate maintenance and updates.

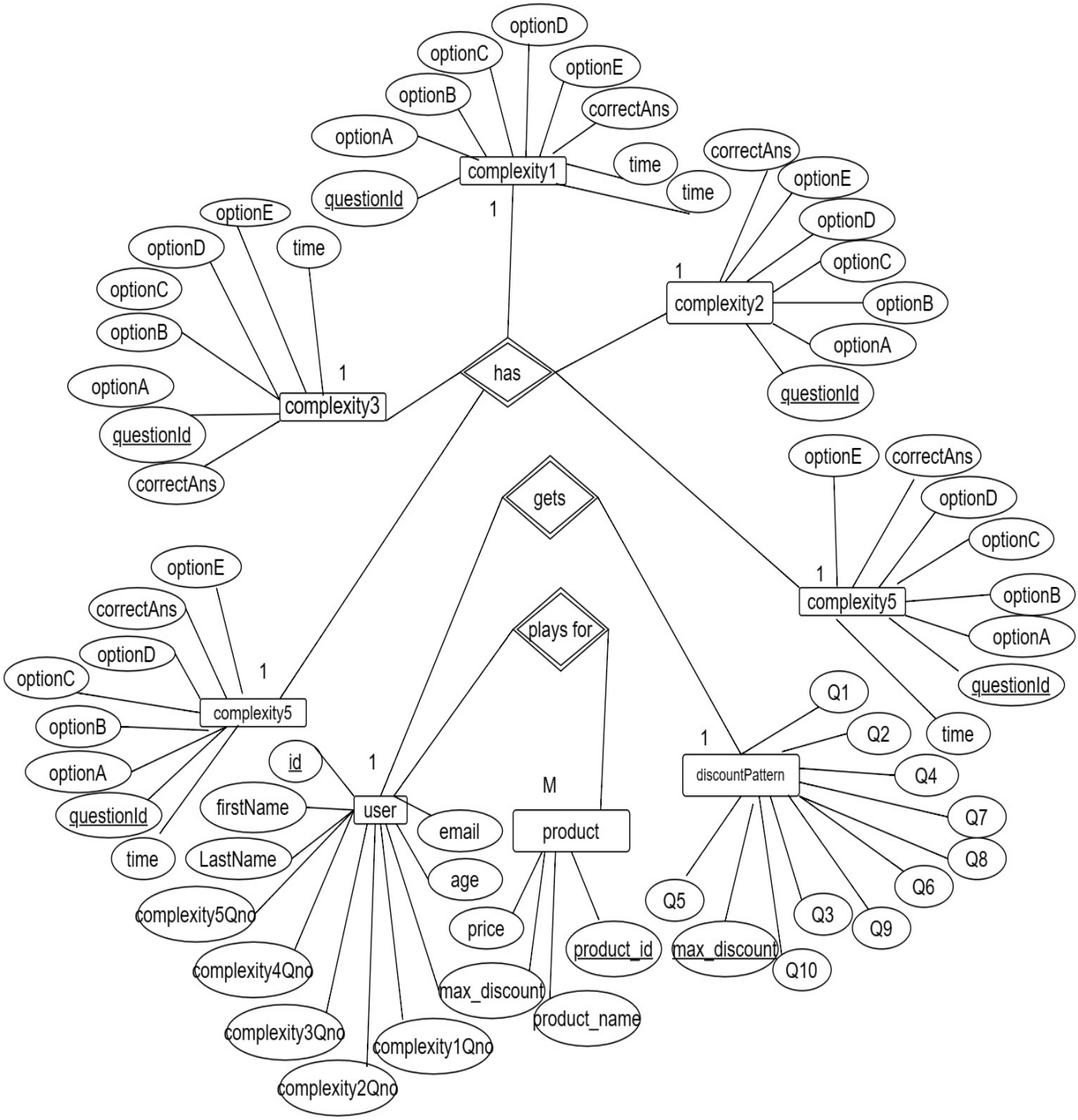
- Provide tools and utilities for monitoring system health and diagnosing issues.

8. Compliance:

- Ensure compliance with legal and regulatory requirements relevant to the system's domain.

- Implement features for auditing, logging, and reporting to demonstrate compliance.

3.2 ERD


optionD
optionC
optionE
optionB
correctAns
optionA
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time
questionId
time
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correctAns
optionE
optionD
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optionB
optionA
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complexity2
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time
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optionC
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discountPattern
Q1
Q2
Q4
Q7
Q8
Q6
Q3
Q9
Q10
max_discount
Q5
complexity5Qno
complexity4Qno
complexity3Qno
complexity1Qno
complexity2Qno

3.3 Table Structure

Complexity1

Name	Type(Size)	Constraint
questionId	int(11)	Primary key Not NULL
question	varchar(100)	NULL
optionA	varchar(100)	NULL
optionB	varchar(100)	NULL
optionC	varchar(100)	NULL
optionD	varchar(100)	NULL
optionE	varchar(100)	NULL
correctAns	varchar(100)	NULL
time	varchar(2)	NULL

Complexity2

Name	Type	Constraint
questionId	int(11)	Primary key Not NULL
question	varchar(100)	NULL
optionA	varchar(100)	NULL
optionB	varchar(100)	NULL
optionC	varchar(100)	NULL
optionD	varchar(100)	NULL

optionE	varchar(100)	NULL
correctAns	varchar(100)	NULL
time	varchar(2)	NULL

Complexity3

Name	Type	Constraint
questionId	int(11)	Primary key Not NULL
question	varchar(100)	NULL
optionA	varchar(100)	NULL
optionB	varchar(100)	NULL
optionC	varchar(100)	NULL
optionD	varchar(100)	NULL
optionE	varchar(100)	NULL
correctAns	varchar(100)	NULL
time	varchar(2)	NULL

Complexity4

Name	Type	Constraint
questionId	int(11)	Primary key Not NULL
question	varchar(100)	NULL
optionA	varchar(100)	NULL

optionB	varchar(100)	NULL
optionC	varchar(100)	NULL
optionD	varchar(100)	NULL
optionE	varchar(100)	NULL
correctAns	varchar(100)	NULL
time	varchar(2)	NULL

Complexity5

Name	**Type**	**Constraint**
questionId	int(11)	Primary key Not NULL
question	varchar(100)	NULL
optionA	varchar(100)	NULL
optionB	varchar(100)	NULL
optionC	varchar(100)	NULL
optionD	varchar(100)	NULL
optionE	varchar(100)	NULL
correctAns	varchar(100)	NULL
time	varchar(2)	NULL

discountpattern

Name	Type	Constraint
max_discount	int(3)	None
Q1	int(2)	NULL
Q2	int(2)	NULL
Q3	int(2)	NULL
Q4	int(2)	NULL
Q5	int(2)	NULL
Q6	int(2)	NULL
Q7	int(2)	NULL
Q8	int(2)	NULL
Q9	int(2)	NULL
Q10	int(2)	NULL

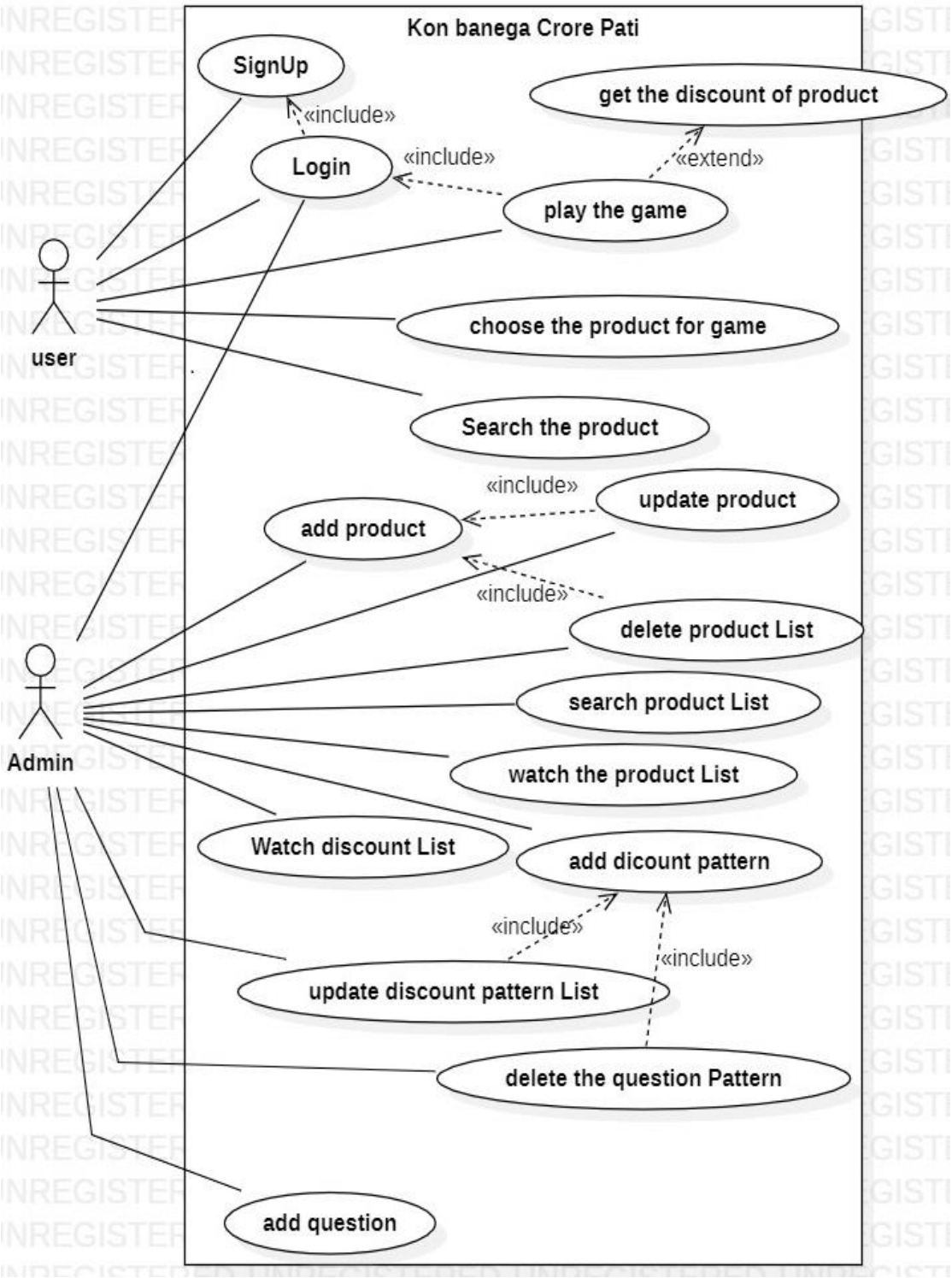
Product

Name	Type	Constraint
product_id	varchar(4)	None
product_name	varchar(20)	Null
price	int(16)	Null
max_discount	int(3)	Null

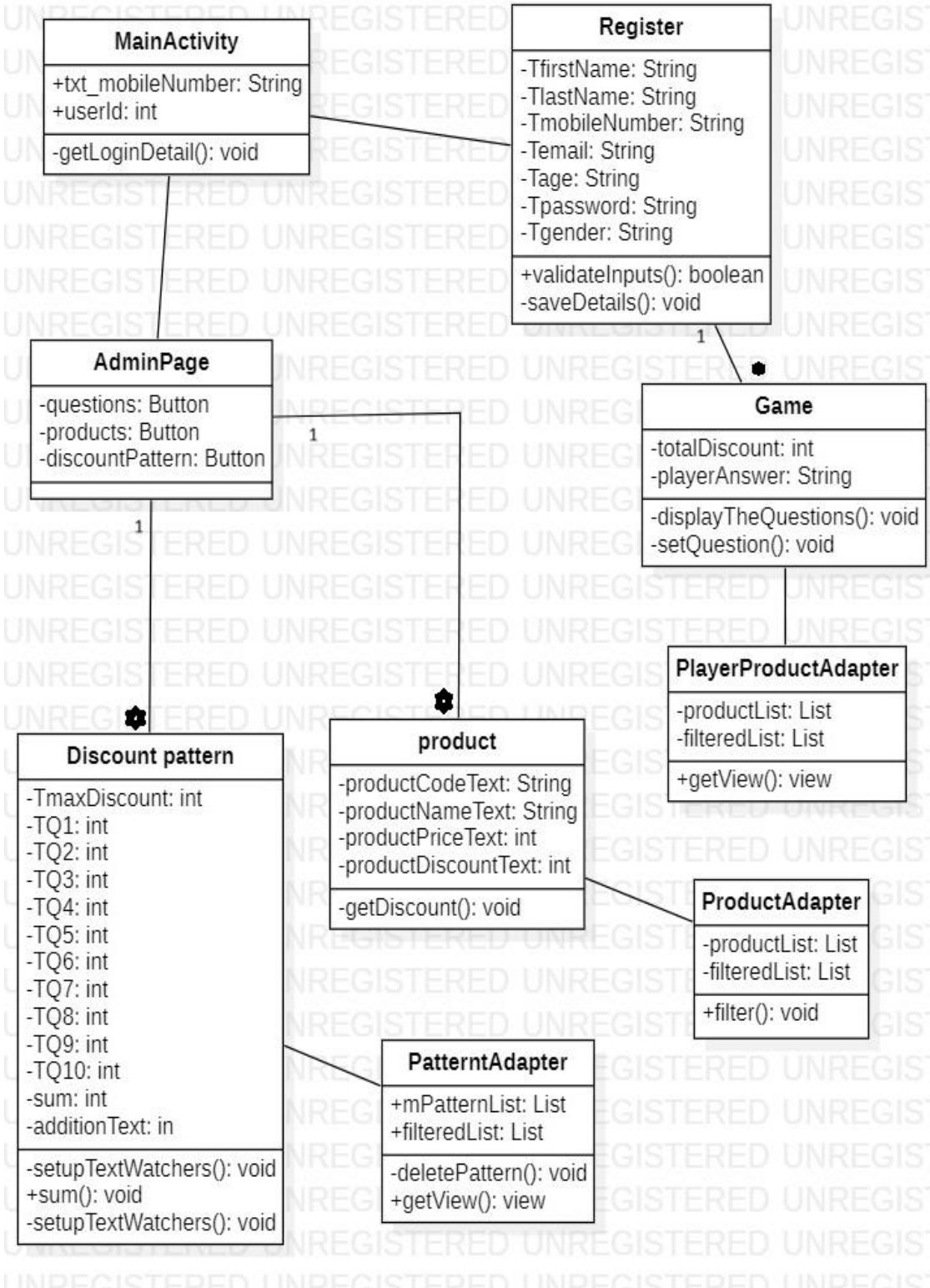
Users

Name	Type	Default
id	int(11)	None
firstName	varchar(50)	NULL
lastName	varchar(50)	NULL
mobileNumber	varchar(15)	NULL
email	varchar(100)	NULL
age	int(11)	NULL
password	varchar(100)	NULL
complexity1Qno	int(11)	NULL
complexity2Qno	int(11)	NULL
complexity3Qno	int(11)	NULL
complexity4Qno	int(11)	NULL
complexity5Qno	int(11)	NULL

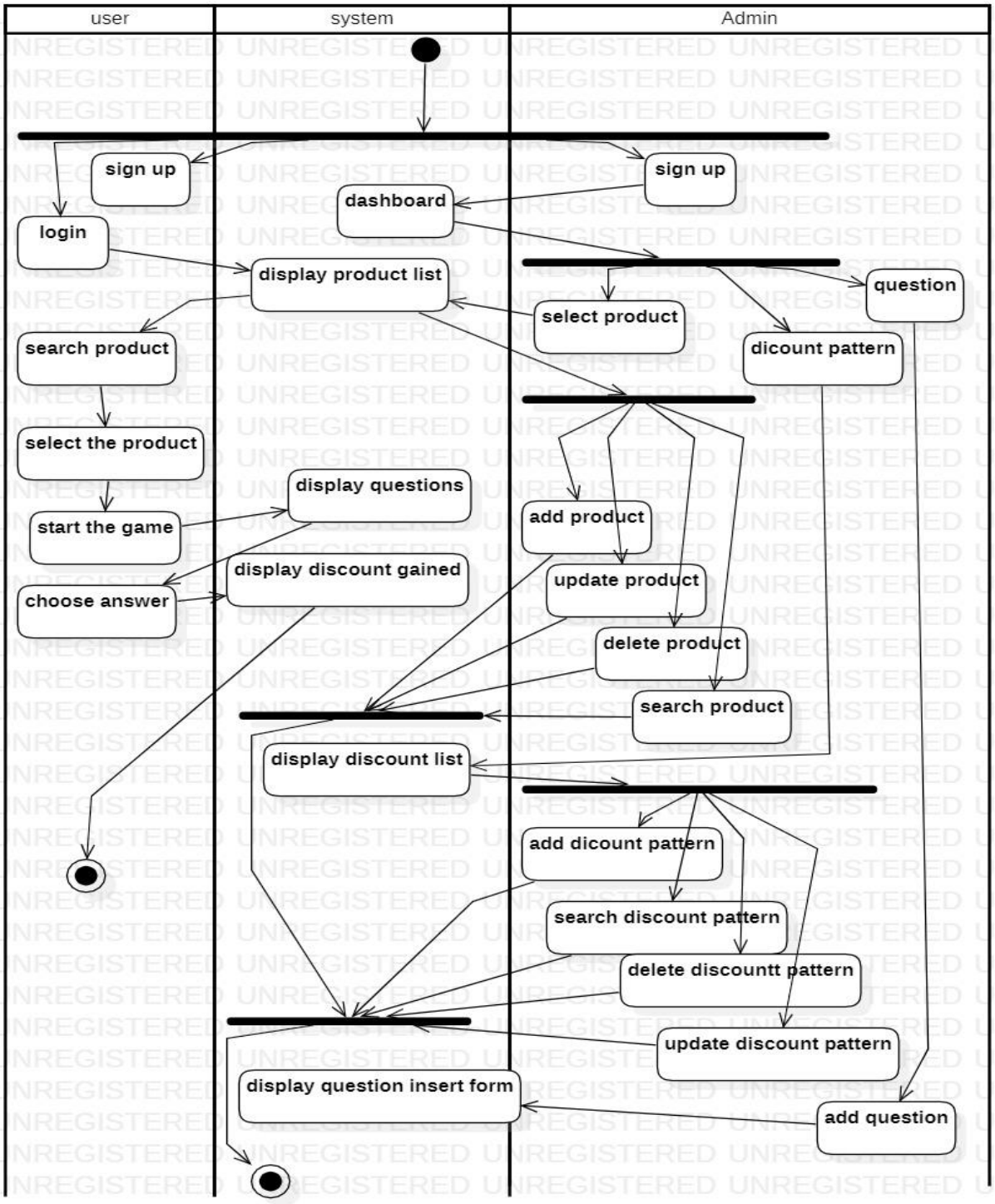
3.4 Use Case Diagram



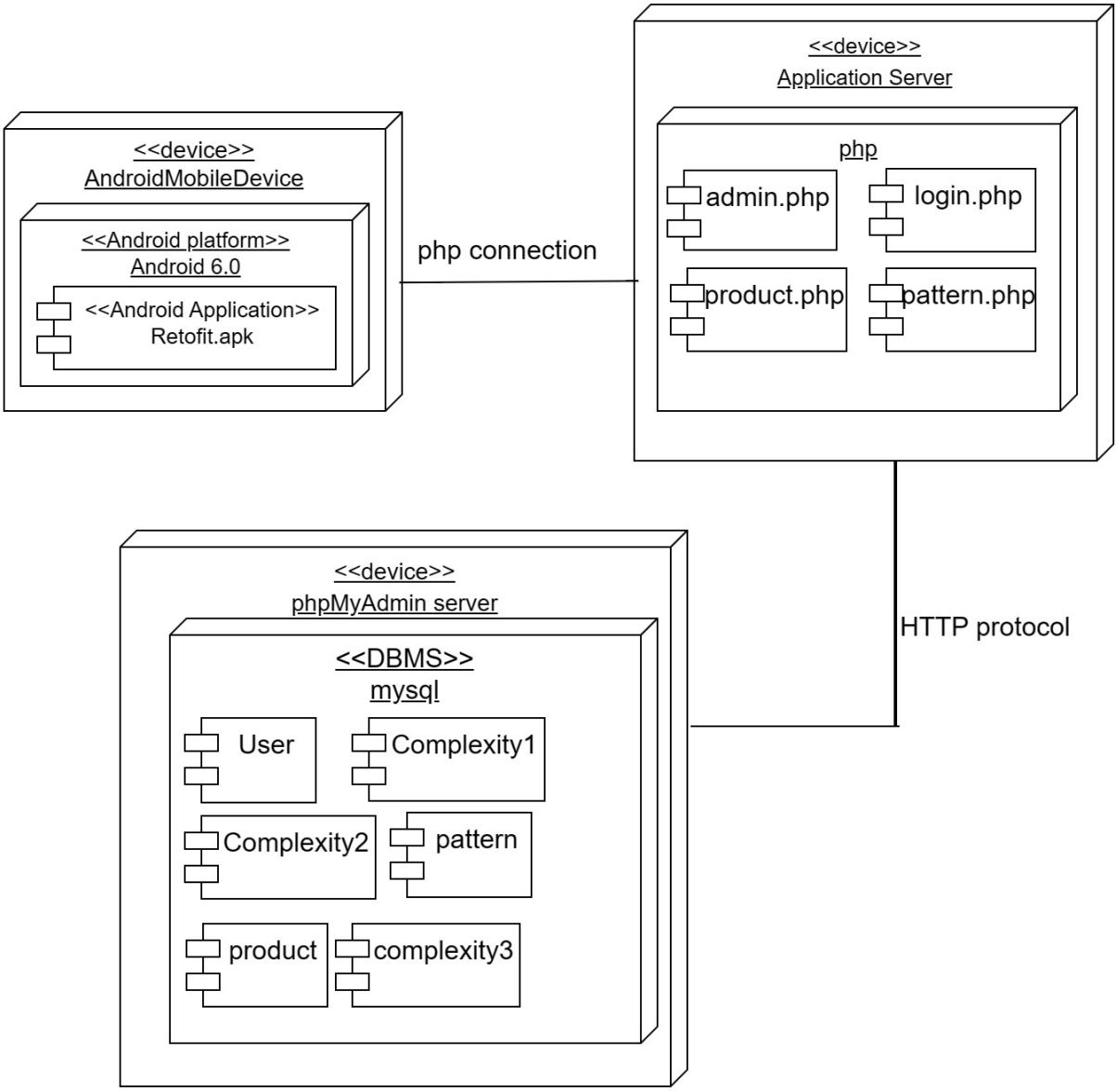
3.5 Class Diagram



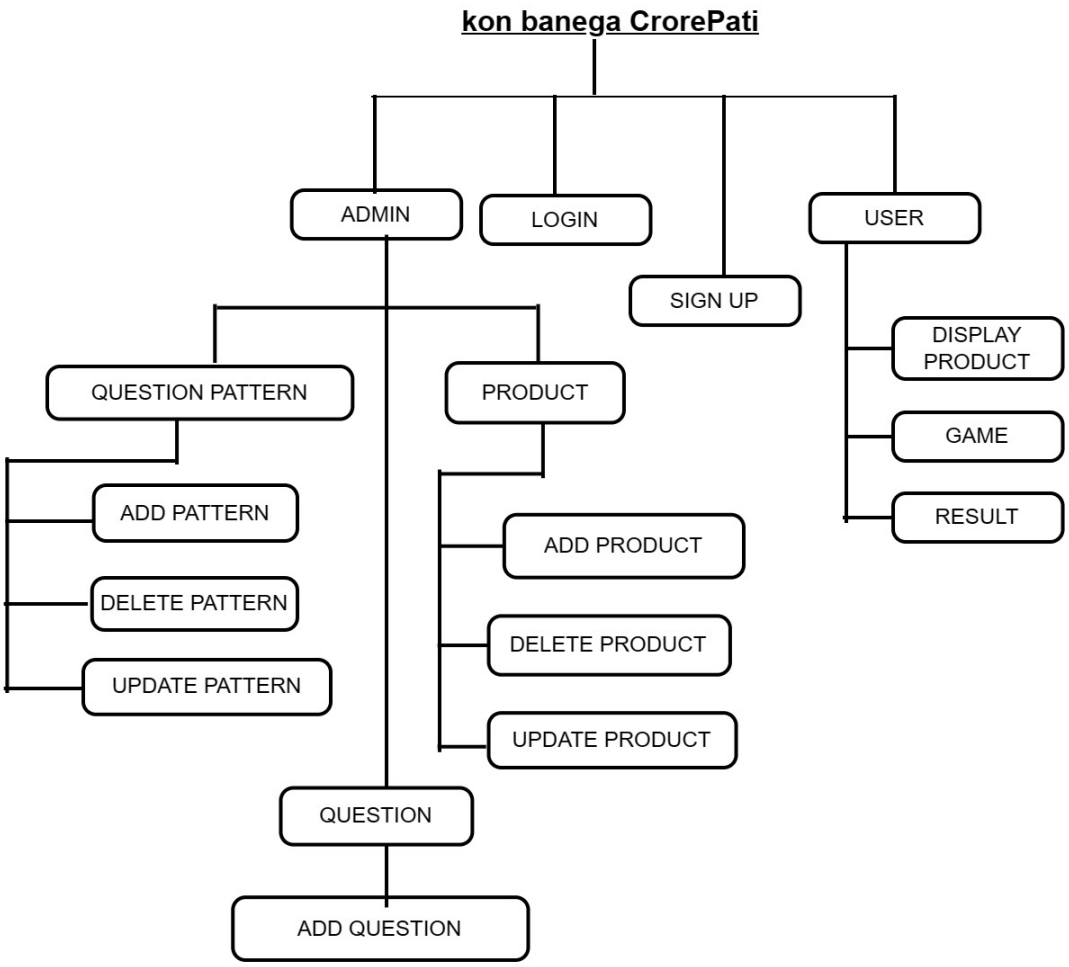
3.6 Activity Diagram



3.7 Deployment Diagram



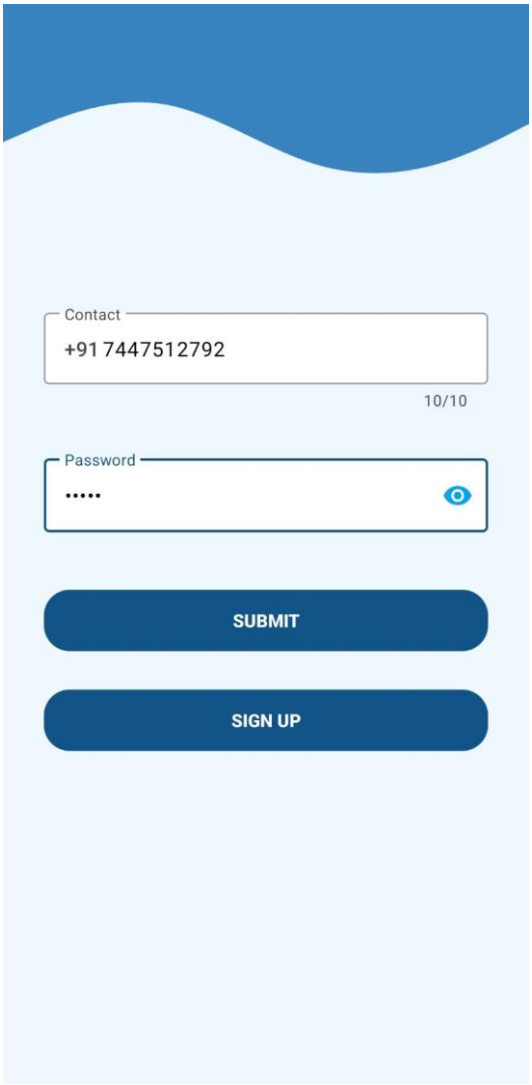
3.8 Module Hierarchy Diagram

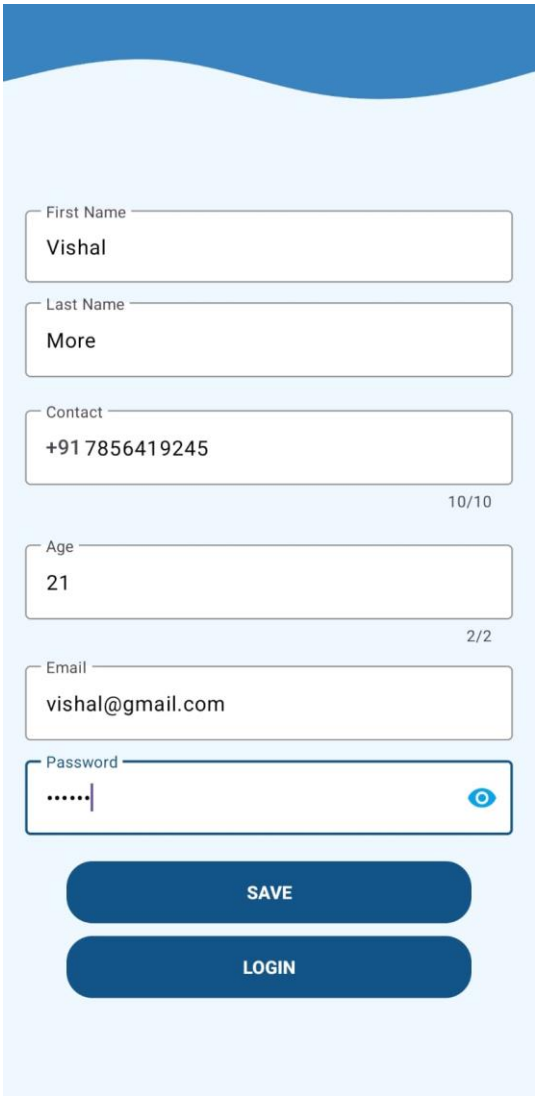


3.9 Input/Output Design

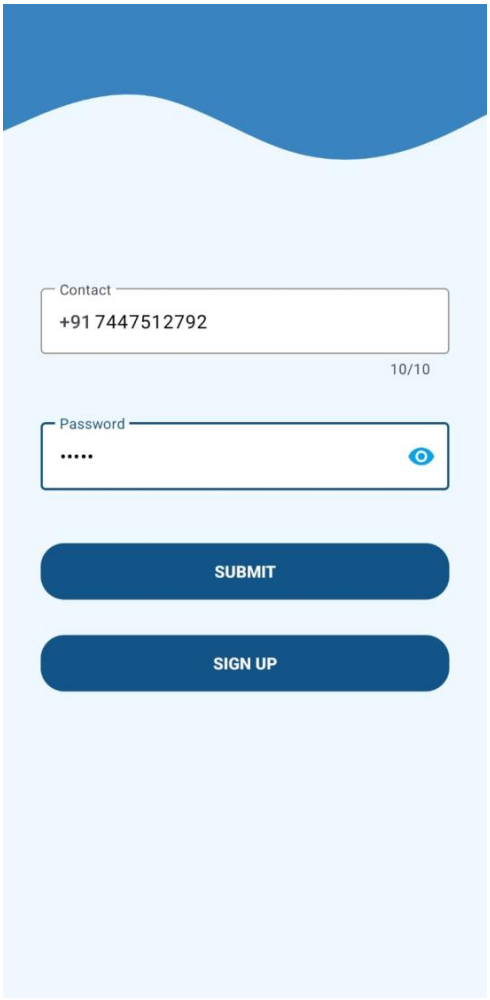
INPUT

User Input



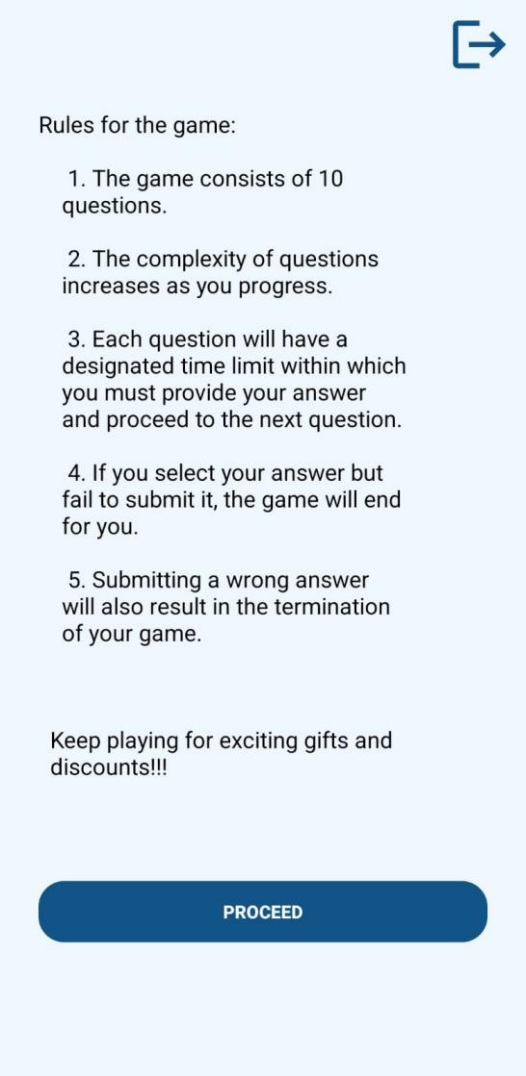


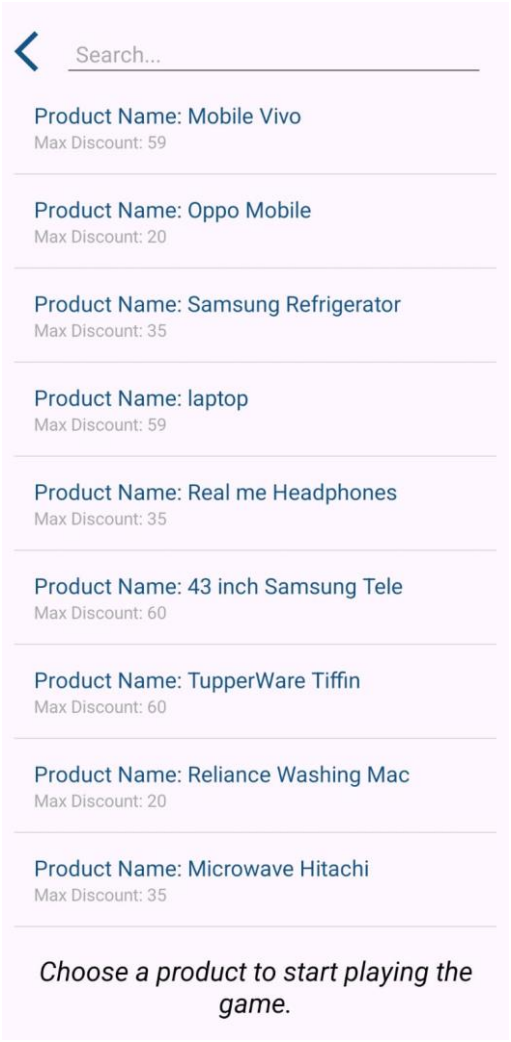
Admin input

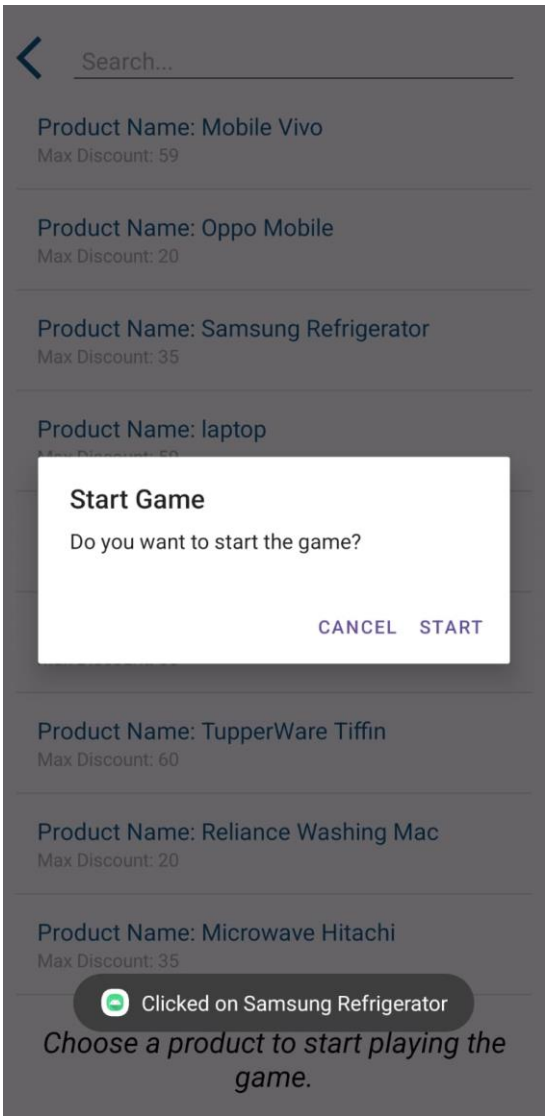


Output

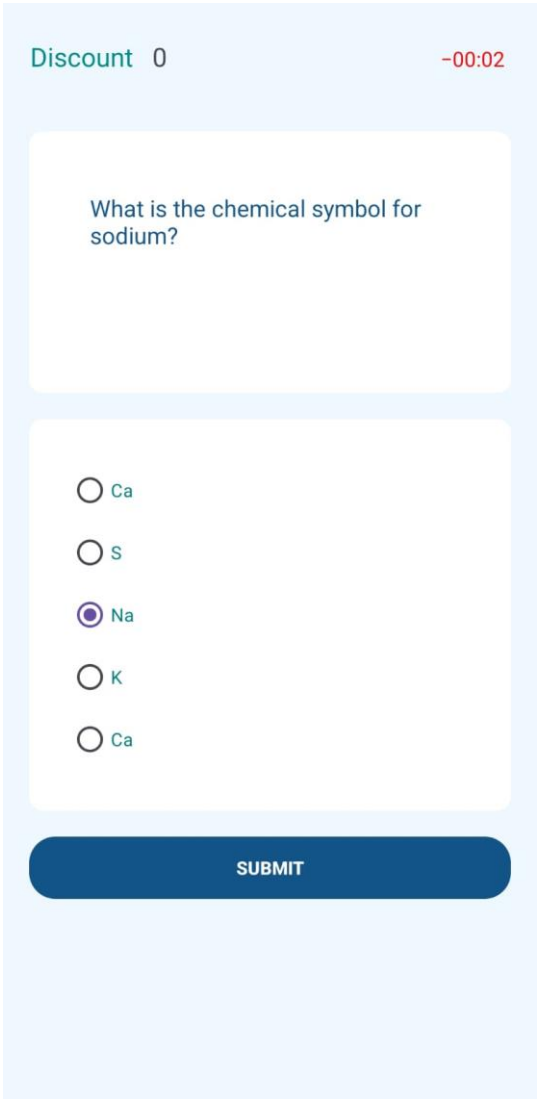
User output

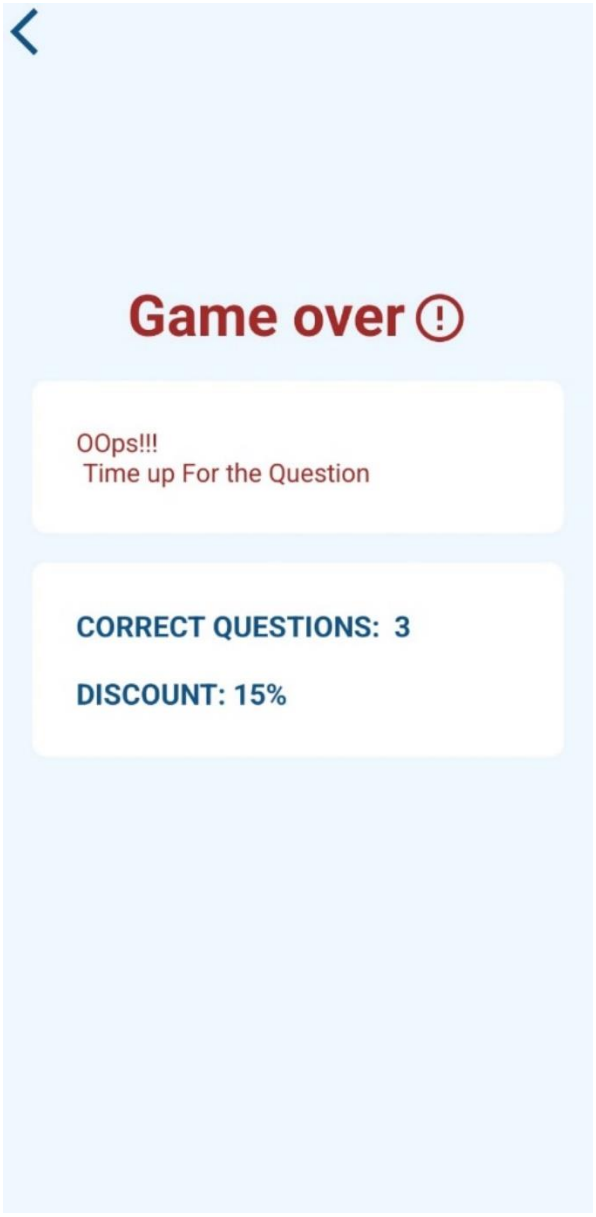




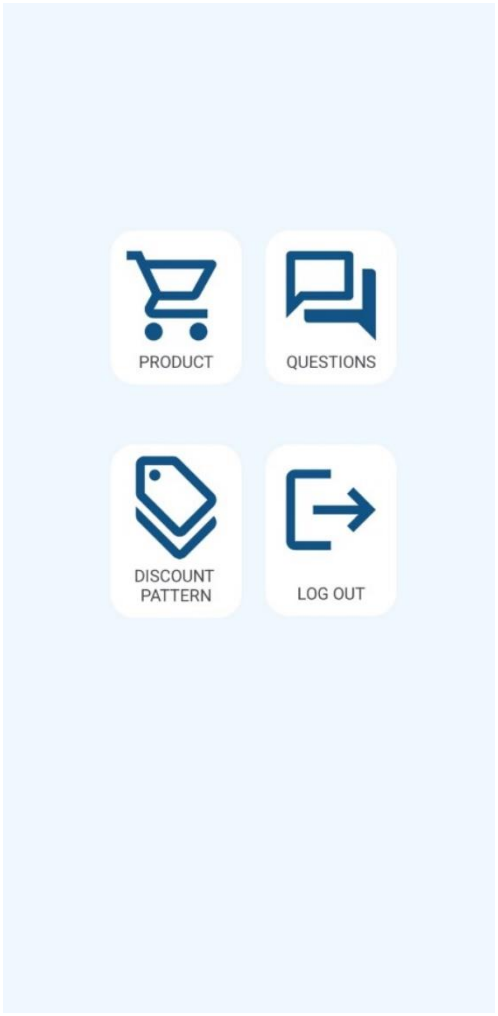


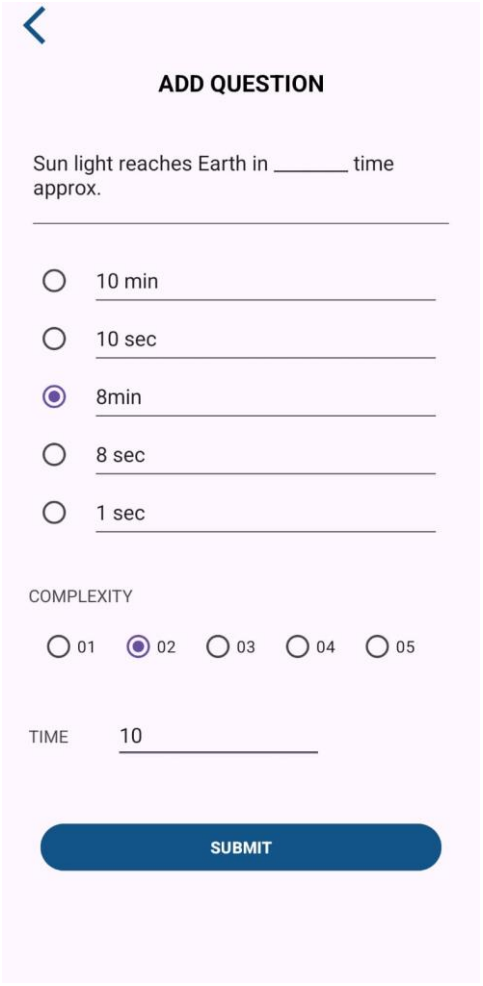
Choose a product to start playing the game.

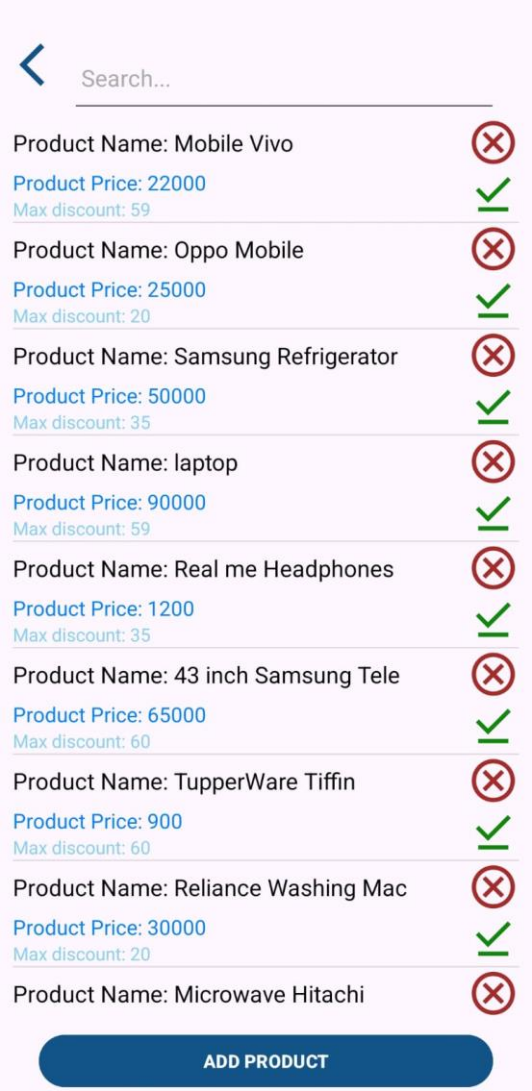


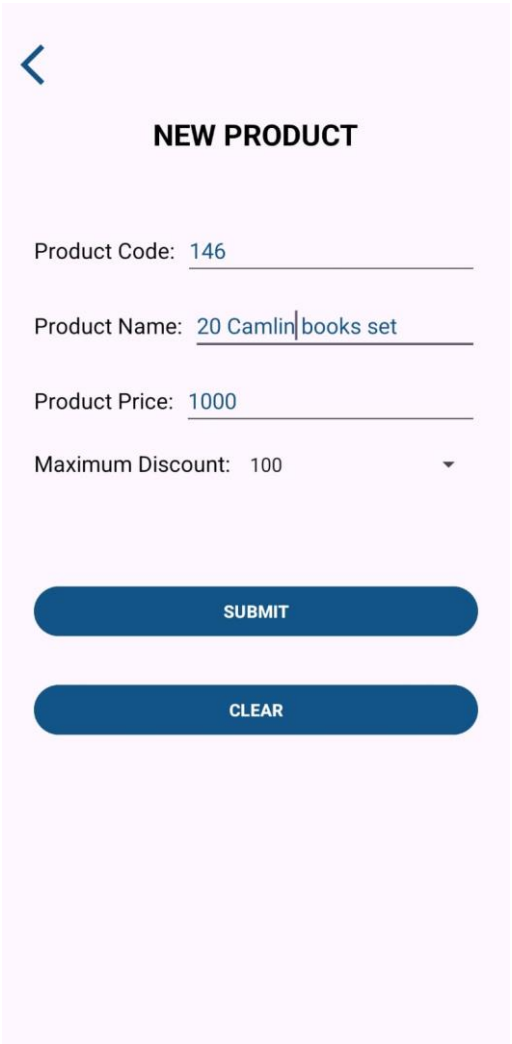

Game over
OOps!!!
Time up For the Question
CORRECT QUESTIONS: 3
DISCOUNT: 15%

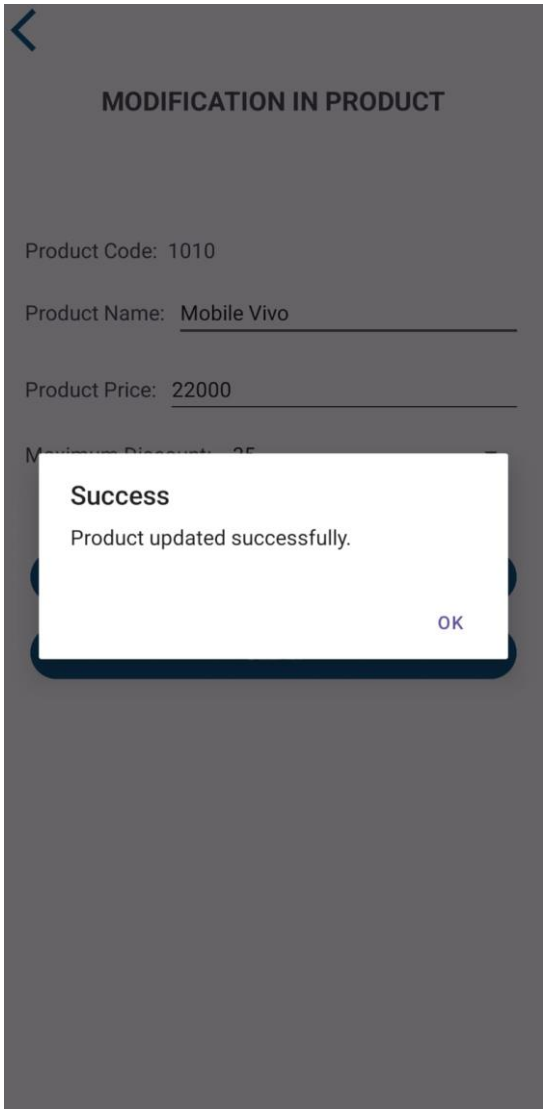
Admin output



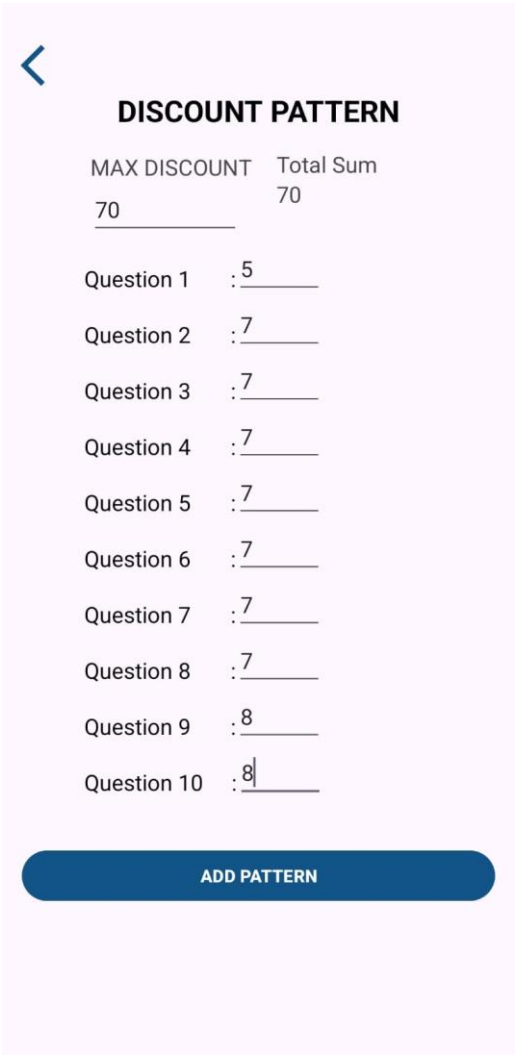


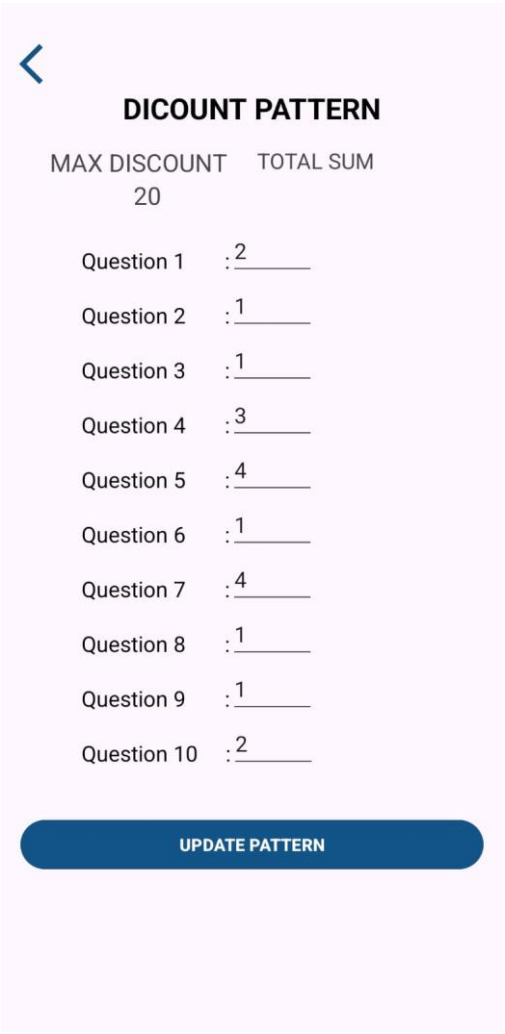

Search...
Product Name: Mobile Vivo
Product Price: 22000
Max discount: 59
Product Name: Oppo Mobile
Product Price: 25000
Max discount: 20
Product Name: Samsung Refrigerator
Product Price: 50000
Max discount: 35
Product Name: laptop
Product Price: 90000
Max discount: 59
Product Name: Real me Headphones
Product Price: 1200
Max discount: 35
Product Name: 43 inch Samsung Tele
Product Price: 65000
Max discount: 60
Product Name: TupperWare Tiffin
Product Price: 900
Max discount: 60
Product Name: Reliance Washing Mac
Product Price: 30000
Max discount: 20
Product Name: Microwave Hitachi
ADD PRODUCT


NEW PRODUCT
Product Code: 146
Product Name: 20 Camlin books set
Product Price: 1000
Maximum Discount: 100
SUBMIT
CLEAR


MODIFICATION IN PRODUCT
Product Code: 1010
Product Name: Mobile Vivo
Product Price: 22000
Success
Product updated successfully.
OK

DISCOUNT PATTERN
20
35
40
56
59
60
63
100
ADD PATTERN


DISCOUNT PATTERN
MAX DISCOUNT
70
Total Sum
70
Question 1 : 5
Question 2 : 7
Question 3 : 7
Question 4 : 7
Question 5 : 7
Question 6 : 7
Question 7 : 7
Question 8 : 7
Question 9 : 8
Question 10 : 8
ADD PATTERN


DICOUNT PATTERN
MAX DISCOUNT
20
TOTAL SUM
Question 1 : 2
Question 2 : 1
Question 3 : 1
Question 4 : 3
Question 5 : 4
Question 6 : 1
Question 7 : 4
Question 8 : 1
Question 9 : 1
Question 10 : 2
UPDATE PATTERN

4.1 Algorithms

- **Login**

  Step 1: Start

  Step 2: Input user and password.

  Step 3: If all the input fields are valid successfully login into the system .

  Step 4: Stop

- **Play Game**

  Step 1: Start

  Step 2: Read the Instructions.

  Step 3: Choose the Product.

  Step 4: Start the Game.

  Step 5: Answer the Question.

  Step 6: Get the Discounts.

  Step 7: Stop

- **Admin**

  Step 1: Start

  Step 2: Prompt the admin to enter their username and password.

  Step 3: Validate the username and password against the admin credentials stored in the system.

Step 4: If the credentials are valid, proceed to Step 5; otherwise, display an error message and allow the admin to retry from Step 2.

Step 5: Display the admin menu with three options:

1. Add/Edit Questions
2. Manage Products
3. Manage Discount Patterns

Step 6: Prompt the admin to choose an option.

Step 7: Based on the admin's choice, navigate to the corresponding functionality:

- If the admin chooses "Add/Edit Questions," proceed to Step 8.
- If the admin chooses "Manage Products," proceed to Step 9.
- If the admin chooses "Manage Discount Patterns," proceed to Step 10.

Step 8: Add/Edit Questions:

1. Display a list of existing questions.
2. Prompt the admin to choose between adding a new question, editing an existing question, or exiting.
3. If the admin chooses to add a new question:
    a. Prompt the admin to enter the details of the new question (e.g., question text, options, correct answer).
    b. Add the new question to the database.
4. If the admin chooses to edit an existing question:

a. Prompt the admin to select the question they want to edit.

b. Allow the admin to modify the details of the selected question.

c. Update the question in the database.

5. Repeat steps 3-4 until the admin chooses to exit.

Step 9: Manage Products:

1. Display a list of existing products.

2. Prompt the admin to choose between adding a new product, editing an existing product, deleting a product, or exiting.

3. If the admin chooses to add a new product:

a. Prompt the admin to enter the details of the new product (e.g., name, description, price).

b. Add the new product to the database.

4. If the admin chooses to edit an existing product:

a. Prompt the admin to select the product they want to edit.

b. Allow the admin to modify the details of the selected product.

c. Update the product in the database.

5. If the admin chooses to delete a product:

a. Prompt the admin to select the product they want to delete.

b. Remove the selected product from the database.

6. Repeat steps 3-5 until the admin chooses to exit.

Step 10: Manage Discount Patterns:

1. Display a list of existing discount patterns.

2. Prompt the admin to choose between adding a new discount pattern, editing an existing pattern, deleting a pattern, or exiting.

3. If the admin chooses to add a new discount pattern:

a. Prompt the admin to enter the details of the new pattern (e.g., discount percentage, applicable products).

b. Add the new pattern to the database.

4. If the admin chooses to edit an existing pattern:

a. Prompt the admin to select the pattern they want to edit.

b. Allow the admin to modify the details of the selected pattern.

c. Update the pattern in the database.

5. If the admin chooses to delete a pattern:

a. Prompt the admin to select the pattern they want to delete.

b. Remove the selected pattern from the database.

6. Repeat steps 3-5 until the admin chooses to exit.

Step 11: End of Algorithm

4.2 Code snippets

ComplexityWiseQuestion.php

```
<?php
require_once 'db_connect.php';

if ($_SERVER['REQUEST_METHOD'] == 'POST'){

   $complexity1QuestionId =
$_POST['complexity1QuestionId'];`
   $complexity2QuestionId = $_POST['complexity2QuestionId'];
   $complexity3QuestionId = $_POST['complexity3QuestionId'];
   $complexity4QuestionId = $_POST['complexity4QuestionId'];
   $complexity5QuestionId = $_POST['complexity5QuestionId'];

   $query = "(SELECT 'complexity1' AS table_name, questionId,
question, optionA, optionB, optionC, optionD, optionE,
correctAns, time
            FROM complexity1
            WHERE questionId >= $complexity1QuestionId
            ORDER BY questionId
            LIMIT 2)
           UNION ALL
           (SELECT 'complexity2' AS table_name, questionId,
question, optionA, optionB, optionC, optionD, optionE,
correctAns, time
            FROM complexity2
            WHERE questionId >= $complexity2QuestionId
            ORDER BY questionId
            LIMIT 2)
           UNION ALL
           (SELECT 'complexity3' AS table_name, questionId,
question, optionA, optionB, optionC, optionD, optionE,
correctAns, time
            FROM complexity3
            WHERE questionId >= $complexity3QuestionId
            ORDER BY questionId
            LIMIT 2)
```

```
            UNION ALL
            (SELECT 'complexity4' AS table_name, questionId,
question, optionA, optionB, optionC, optionD, optionE,
correctAns, time
             FROM complexity4
             WHERE questionId >= $complexity4QuestionId
             ORDER BY questionId
             LIMIT 2)
            UNION ALL
            (SELECT 'complexity5' AS table_name, questionId,
question, optionA, optionB, optionC, optionD, optionE,
correctAns, time
             FROM complexity5
             WHERE questionId >= $complexity5QuestionId
             ORDER BY questionId
             LIMIT 2)";

   $result = $conn->query($query);

   if ($result) {
      // Fetch data
      $data = array();
      while ($row = $result->fetch_assoc()) {
         $data[] = $row;
      }

      // Close connection
      $conn->close();

      // Return data as JSON
      echo json_encode($data);
   } else {
      echo "Error executing query: " . $conn->error;
   }

}

?>
```

db_config.php

```
<?php
define('DB_HOST', 'localhost');
define('DB_USER', 'root');
define('DB_PASSWORD', '');
define('DB_DATABASE', 'kbc');
?>
```

db_connect.php

```
<?php
require_once 'db_config.php';

$conn = new mysqli(DB_HOST, DB_USER, DB_PASSWORD,
DB_DATABASE);

if ($conn->connect_error) {
   die("Connection failed: " . $conn->connect_error);
}

?>
```

AdminPage.java

```
package com.vivek.konbanegacrorepati;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class AdminPage extends AppCompatActivity {
   Button products,questions,discountPattern,logOut;
```

```
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_admin_page);


        findid();
        logOut.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(AdminPage.this,
MainActivity.class);
                intent.addFlags(Intent.FLAG_ACTIVITY_CLEAR_TOP
| Intent.FLAG_ACTIVITY_NEW_TASK);
                startActivity(intent);
                finish(); // Finish the current activity if needed

            }
        });
        products.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startActivity(new Intent(AdminPage.this,
ProductList.class));
                finish();
            }
        });

        questions.setOnClickListener(new View.OnClickListener()
{
            @Override
            public void onClick(View v) {
                startActivity(new Intent(AdminPage.this,
QuestionAddingPage.class));
                finish();
            }
        });
        discountPattern.setOnClickListener(new
View.OnClickListener() {
```

```
        @Override
        public void onClick(View v) {
            startActivity(new
Intent(AdminPage.this,DiscountPatternList.class));
            finish();
        }
    });

  }

  private void findid() {
    logOut=findViewById(R.id.logOut);
    products=findViewById(R.id.product);
    questions=findViewById(R.id.question);
    discountPattern=findViewById(R.id.dis_pattern);
  }
}
```

5.1 Test Strategy

Software testing is a critical element of software quality assurance & represents the ultimate review of specification, design and code generation.

It is the process of executing a program with a primary objective of finding errors. Testing gives the guarantee that the software does not fail and runs according to its specification and in the way the end user expects.

This can be done by various software testing techniques which provide a systematic guidance for designing tests that exercise the internal logic of software components and exercise the input and output domains of the program to uncover errors in programming. functions, behaviour, and performance.

Testing is the exposure of system to trial input to see whether it produces correct output. Testing is the process of detecting presence of faults. Once the source code has been generated, software must be tested to uncover as many errors as possible before delivery to your customer. Our goal is to design a series of test cases that have likelihood of finding errors. That's where

Software testing Techniques enter the picture. A set of test cases designed to exercise both internal login and external requirements is designed and documented, expected results are defined and actual results are recorded**.**

Testing Objectives: -

The testing objectives are summarized in the following three steps

1. Testing is the process of executing a program with the intent of finding a bug.

2. A good case is one that has a high probability of finding a yet undiscovered error.

3. A successful test is the one that uncover yet an undiscovered error.

5.2 Unit Test Plan

1. **Introduction**:

The Unit Test Plan outlines the procedures and criteria for testing individual units or components of the KBC (Kaun Banega Crorepati) project. This document describes the approach, resources, and schedule for conducting unit testing, which focuses on validating the functionality of each isolated unit in the system.

2. Test Objectives:

The primary objectives of the unit testing are as follows:

- Validate the correctness of each unit's behavior and functionality according to its specifications.

- Identify and isolate defects or errors in individual units before integration testing.

- Ensure that each unit operates as expected and produces the correct output for a given input.

- Verify that the interactions between different units are handled correctly and do not result in unexpected behavior.

- Assess the completeness and accuracy of the unit test coverage to ensure thorough testing of all units.

3. **Scope**:

The unit testing will cover the following aspects of the KBC project:

- Testing of individual modules, classes, functions, and methods in isolation from the rest of the system.

- Validation of input validation, data processing, business logic, and error handling within each unit.

- Mocking or stubbing of external dependencies and interfaces to simulate interactions and isolate units for testing.

- Execution of unit tests using appropriate testing frameworks and tools to automate the testing process.

- Identification and correction of defects or discrepancies found during unit testing to improve the overall quality and reliability of the system.

5.3 Acceptance Test Plan

1. **Introduction**:

The Acceptance Test Plan outlines the procedures and criteria for testing the KBC (Kaun Banega Crorepati) project to ensure that it meets the specified requirements and satisfies user expectations. This document describes the approach, resources, and schedule for conducting acceptance testing.

2. **Test Objectives**:

The primary objectives of the acceptance testing are as follows:

- Validate that the KBC project meets the functional and non-functional requirements specified in the project documentation.

- Verify that the system operates as expected and delivers the intended functionality to end-users.

- Ensure that the user interface is intuitive, responsive, and user-friendly.

- Confirm that the system complies with security standards and regulations to protect user data.

- Assess the system's performance, reliability, and scalability under real-world usage scenarios.

3. **Scope**:

The acceptance testing will cover the following aspects of the KBC project:

- Functional testing of user management, organization management, unit management, plan management, addon management, module management, system privileges, and subscription management features.

- Non-functional testing of security, performance, reliability, scalability, usability, compatibility, maintainability, and compliance aspects.

- Validation of integration with Retrofit API for connecting with PHPMyAdmin and Android Studio.

- Testing across multiple devices, browsers, and operating systems to ensure compatibility.

- Assessment of the system's readiness for deployment and production use.

- Identification and reporting of any defects or discrepancies found during testing.

5.4 Test Cases

Test case ID	Scenario to test	Steps	Expected Result	Actual Result	Results/Fail
TC-01	Connecting PhpMyAdmin Server	1.Switching Server ON.	Getting data from server	Getting data from server	Pass
TC-02	Logging In	1.Giving Correct Login details. 2.Submit	Should Logged in	Logged in	Pass
TC-03	Not getting Logging In	1.Giving wrong Login details. 2.Submit	Should not Logged in	Log in failed	Pass
TC-04	Getting sum of pattern	1.Enter discounts for each questions	Should get total sum of entered discount	Getting correct sum	Pass

TC-05	Sum of discount of each question should be equal to the given discount by Admin	1.Enter maximum discount 2.Enter discounts to each questions	Maximum discount should be equal to the sum of discounts To get discount pattern recorded	Discount pattern recorded.	Pass
TC-05	Getting the List of all the product from the server and display it	1.Enter the product in the product module 2.Submit	List should get displayed	List displayed	Pass

TC-6	In the Game, Game should be over ,if user failed to give correct answer or time gets over for a particular question.	1.Do not give answer and let the time gets over.	Game should get overed	Game over	Pass
TC-7		1.Give the wrong answer	Game should get overed	Game over	Pass
TC-8		1.In user module click on create organization. 2.Fill correct details	Organization is created	Organization is created	Pass

5.5 Defect report

Defect ID	Summary	Severity	Priority
D01	Validation on some fields not available.	High	High

6.Limitations of proposed system

1. Dependency on User Participation:The success of the system relies heavily on user participation. If users are not interested or do not engage with the quiz format or do not find the discounts appealing, the effectiveness of the system may diminish.

2. Technical Constraints: The system's performance and reliability may be subject to technical constraints such as network connectivity issues, server downtime, or bugs in the software. These technical limitations could affect the user experience and overall functionality of the system.

3. Limited Reach: The system may have limited reach depending on factors such as geographical location, language barriers, or accessibility issues. Certain demographics or segments of the population may not have access to the system, thereby limiting its effectiveness in reaching a wider audience.

4. Security Concerns: As the system involves user data and transactions, security concerns such as data breaches, unauthorized access, or fraud could pose significant risks. Implementing robust security measures and protocols is essential to mitigate these risks, but there's always a possibility of security vulnerabilities.

5. Scalability Challenges: As the system gains popularity and user base grows, scalability challenges may arise in terms of handling increased traffic, processing large volumes of data, or accommodating new features and functionalities. Ensuring the system's scalability to meet growing demands is crucial for long-term sustainability.

6. Integration Complexity: Integrating the system with external APIs, databases, or third-party services may introduce complexity and dependencies. Any changes or updates to these integrations could potentially impact the system's functionality and require careful management and testing.

7. User Experience Optimization: Continuous efforts may be required to optimize the user experience and address usability issues. Feedback from users and iterative improvements are essential for enhancing the system's usability and ensuring user satisfaction.

7.Proposed Enhancements

1. Gamification Elements: Introduce additional gamification elements such as leaderboards, achievements, and rewards to enhance user engagement and retention. By incorporating game-like features, users are motivated to participate more actively and frequently.

2. Personalized Discounts: Implement a personalized discount system based on user preferences, purchase history, and behavior analysis. By offering tailored discounts, users are more likely to find value in the rewards, leading to increased sales conversion rates and customer satisfaction.

3. Interactive User Feedback: Introduce interactive feedback mechanisms within the system to gather real-time user feedback on quiz questions, product offerings, and overall experience. Utilize this feedback to continually refine and optimize the system for better user engagement and satisfaction.

4. Multi-platform Accessibility: Extend the system's accessibility across multiple platforms such as mobile devices, web browsers, and smart TVs to reach a wider audience. Providing seamless

access from various devices enhances user convenience and expands the system's reach.

8.Conclusion

In conclusion, the proposed enhancements aim to transform the KBC (Kaun Banega Crorepati) system into a more dynamic and user-centric platform, driving higher engagement, satisfaction, and sales conversion. By introducing gamification elements, personalized discounts, and interactive feedback mechanisms, users are incentivized to participate actively and frequently, leading to increased user retention and loyalty.

Moreover, extending the system's accessibility across multiple platforms and integrating social media sharing functionalities enhance user convenience and enable organic growth through user-generated content and word-of-mouth marketing. Advanced analytics tools empower stakeholders to gain deeper insights into user behavior and preferences, facilitating data-driven decision-making and targeted marketing campaigns.

Embracing a culture of continuous learning and adaptation ensures that the system remains responsive to changing user needs and market trends, fostering long-term success and competitiveness. Overall, these enhancements position the KBC system as a leading platform in the online quiz and e-commerce space, delivering exceptional value to users and stakeholders alike.

9.BIBLIOGRAPHY

Android Studio
https://developer.android.com/studio

Error solving
https://stackoverflow.com

User Interface
https://developer.android.com/studio/write/layout-editor

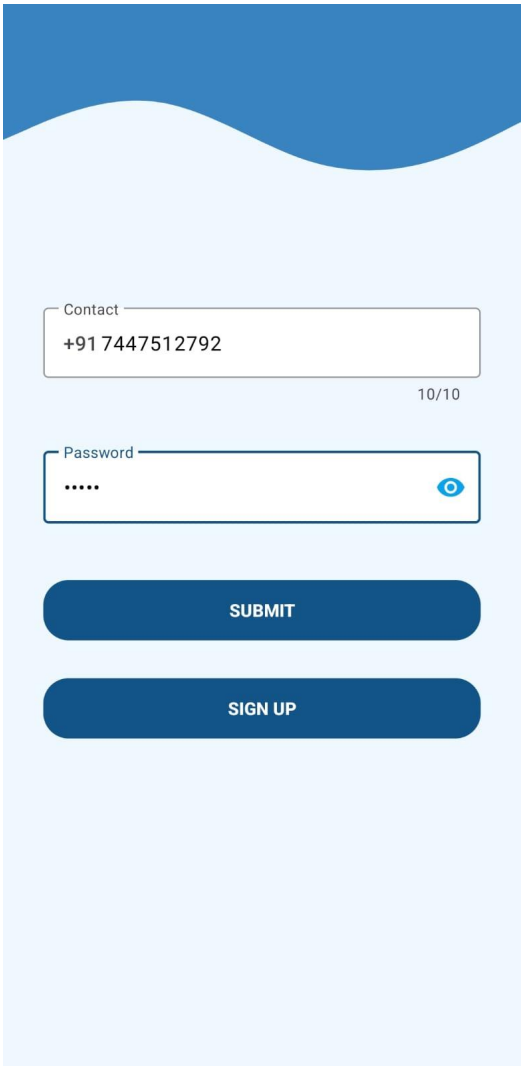
GitHub
https://docs.github.com/en

phpMyAdmin
www.phpmyadmin.net

10.USER MANUAL

User Manual for Admin

- Logging In

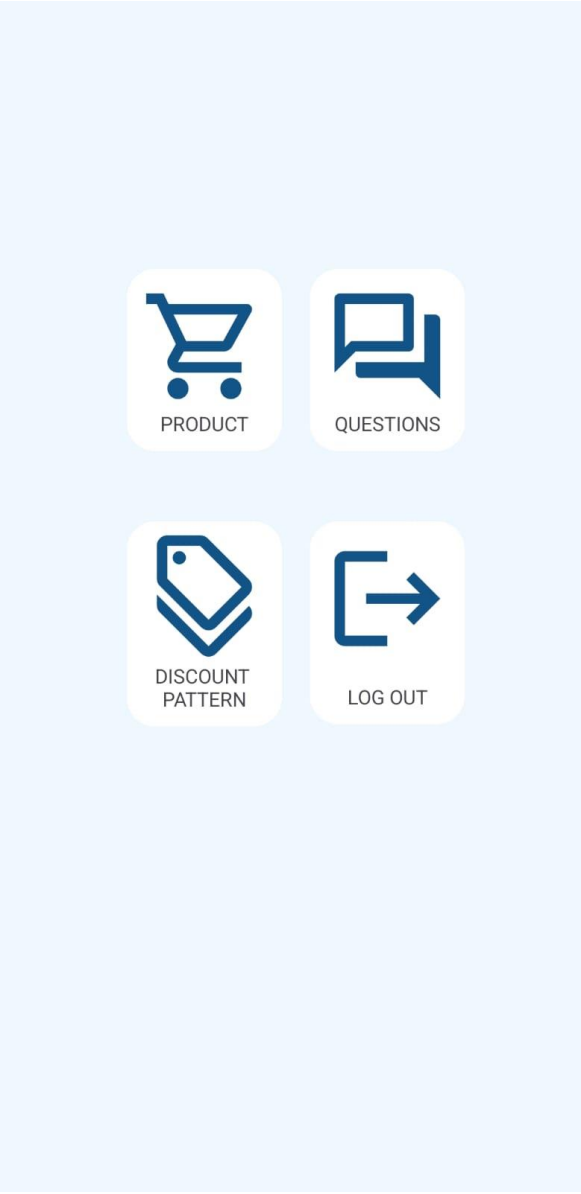


1. Open the KBC Admin application.

2. Enter your username and password.

3. Click on the "Login" button to access the admin dashboard.

- Dashboard Overview



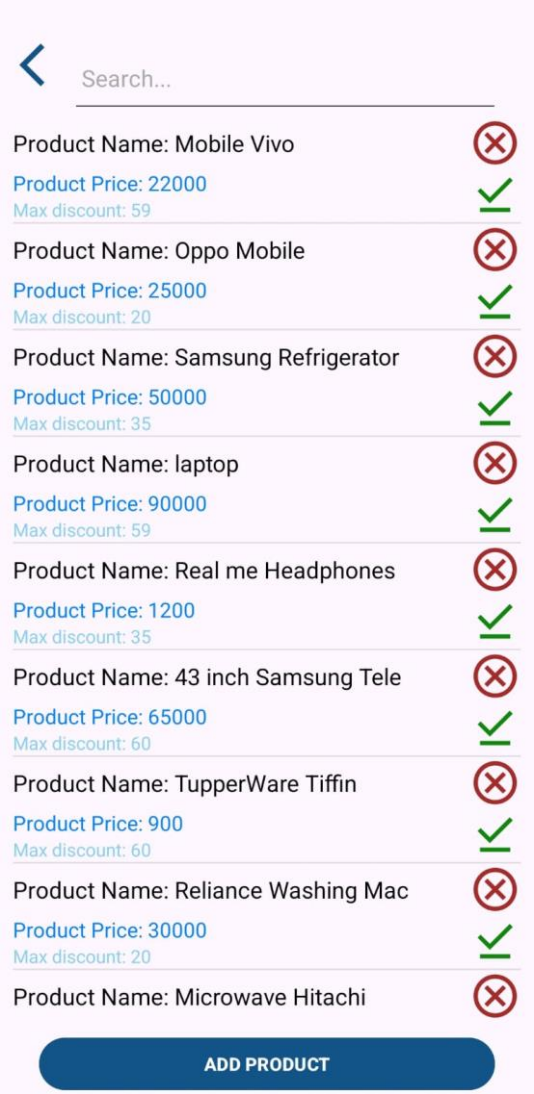
Upon logging in, you will be greeted with the admin dashboard, where you can perform various tasks:

1. Product : Add, edit, or remove products available for users to play and win discounts.

2. Discount Pattern: Set discount patterns for different products based on user performance.

3. Questions: Addding new questions to the question bank.

- Product Management



1. Navigate to the "Product Management" section.

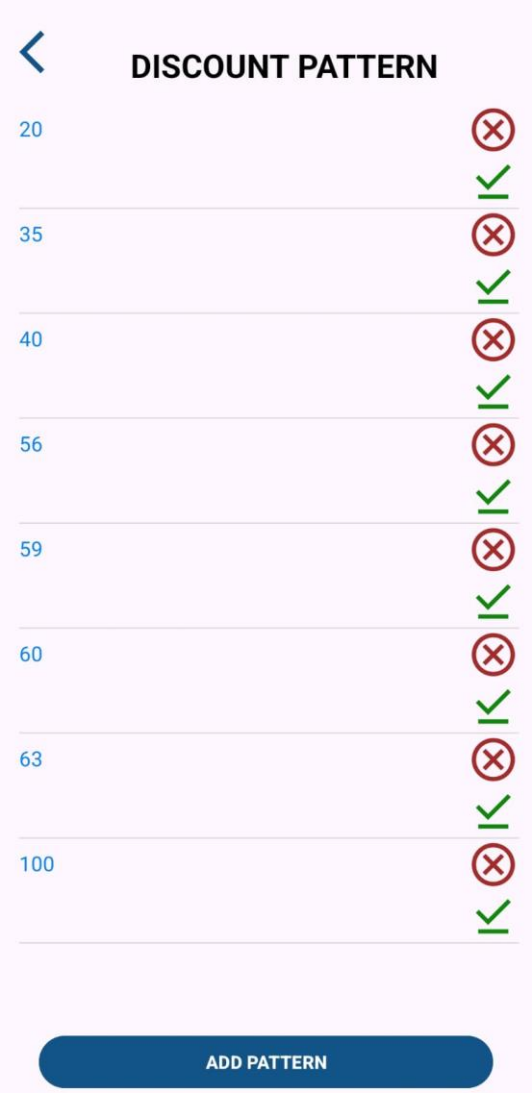
2. Add new products by clicking on

“ADD PRODUCT”.

Fill the details such as name, price, and discount.

3. Edit existing products by clicking on ‘tick’ or remove them as needed by clicking on ‘cross’.

- Pattern Management

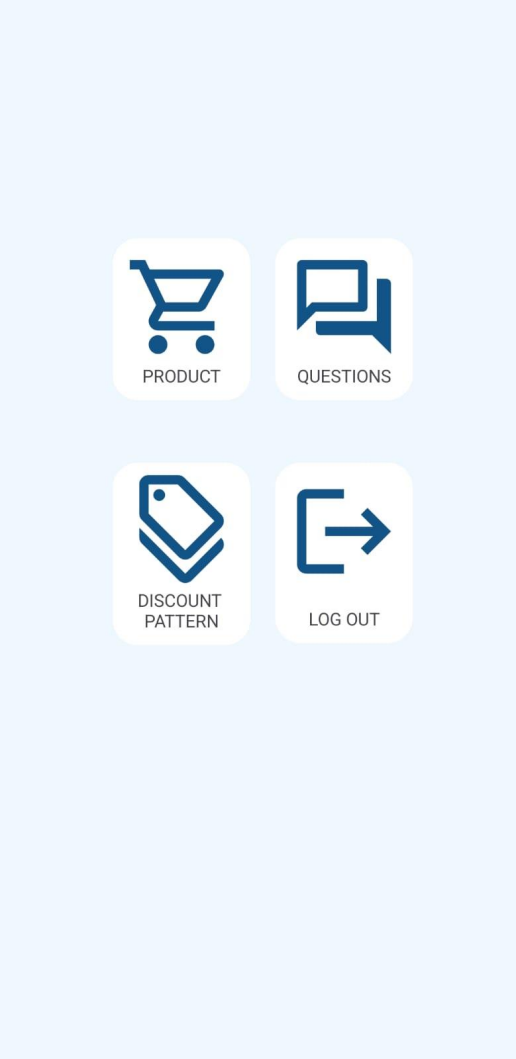


1. Access the "Discount Pattern" tab.

2. Define discount patterns for products based on user performance in the KBC game.

3. Set specific discounts for different question completion rates.

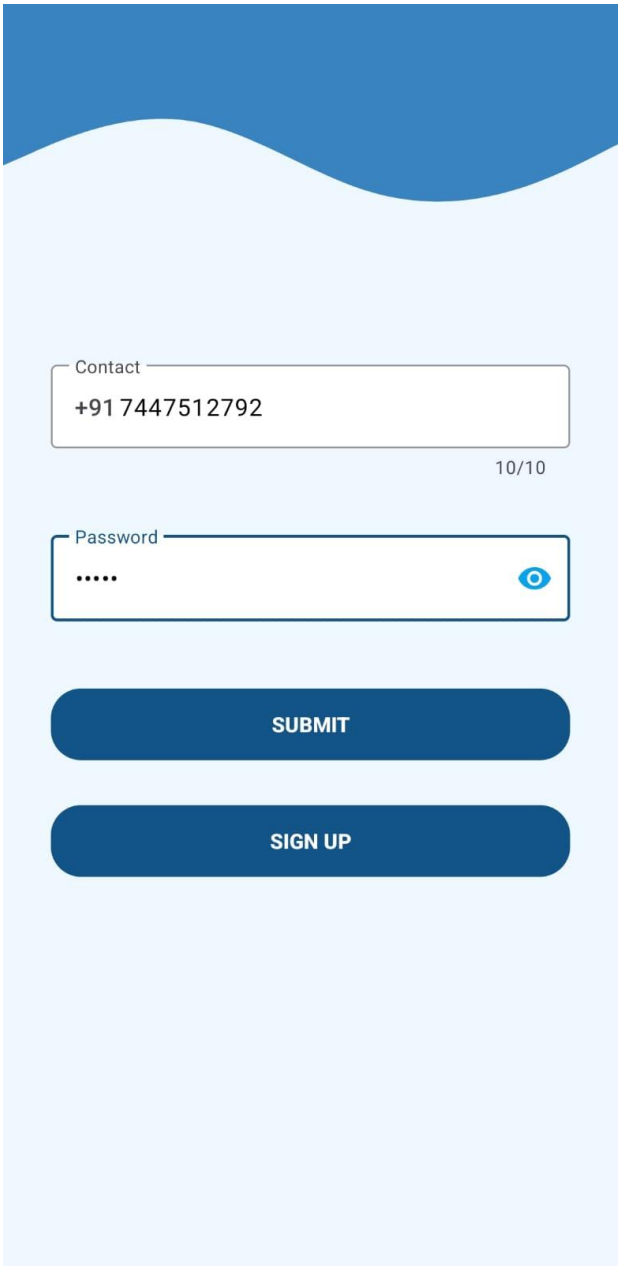
- Logging Out



1. Once you have completed your tasks, click on the "Logout" button to securely log out of the admin dashboard.

User Manual for Player

- Logging In

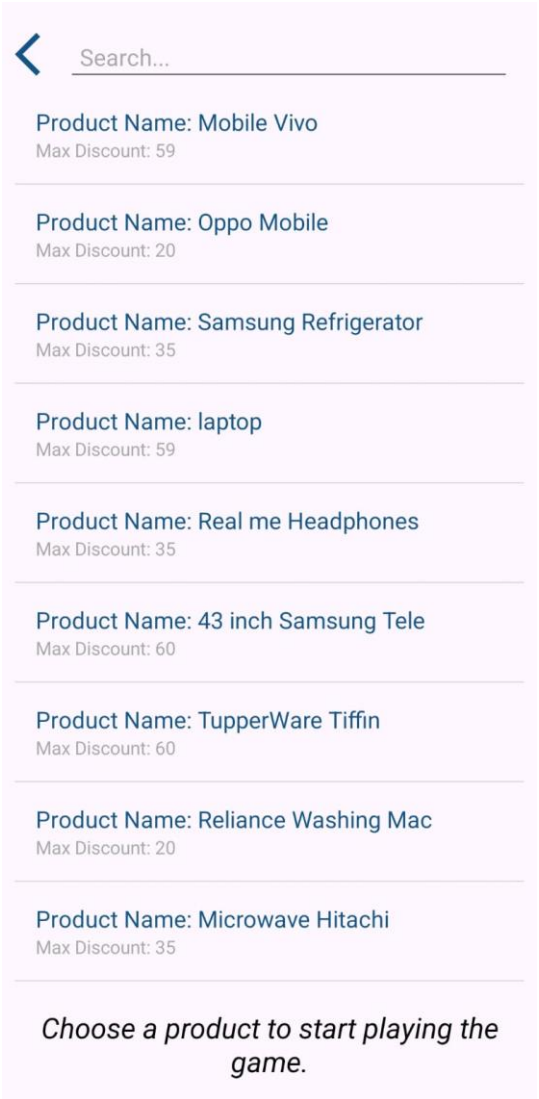


1. Open the KBC Player application on your device.

2. Enter your login credentials or sign up if you're a new user.

3. Click on the "Login" button to access the Game

- Product Catalog

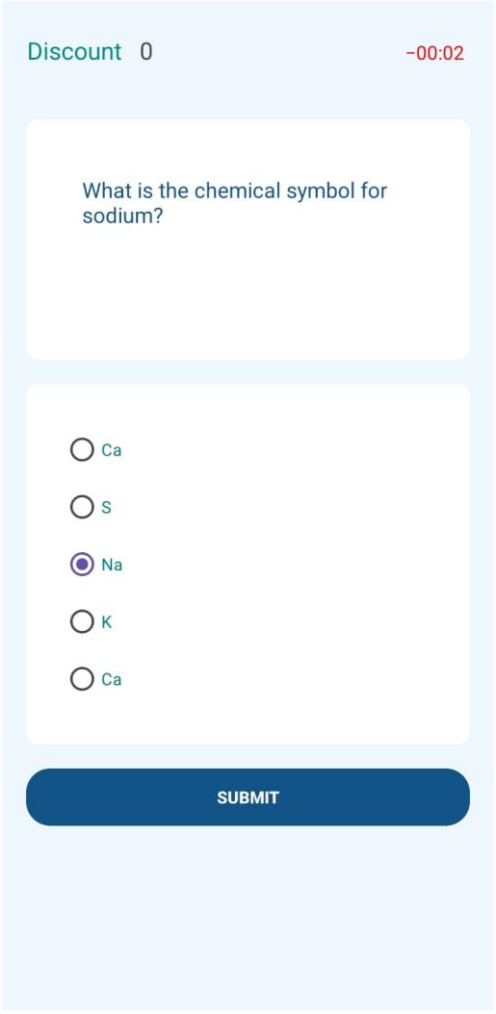


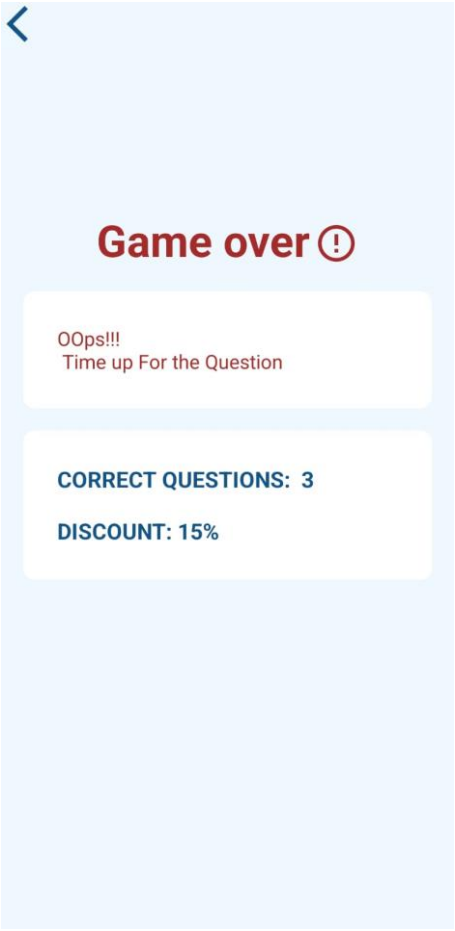
1. Explore the "Product Catalog" to discover available products.

2. View product details, including name, price, and discount percentage.

3. Choose products you're interested in and proceed to purchase

- Gameplay





1. Click on the "Play Now" button to start a KBC quiz.

2. Answer multiple-choice questions within the given time limit.

3. Earn discounts based on your performance – the more questions you answer correctly, the higher the discount.

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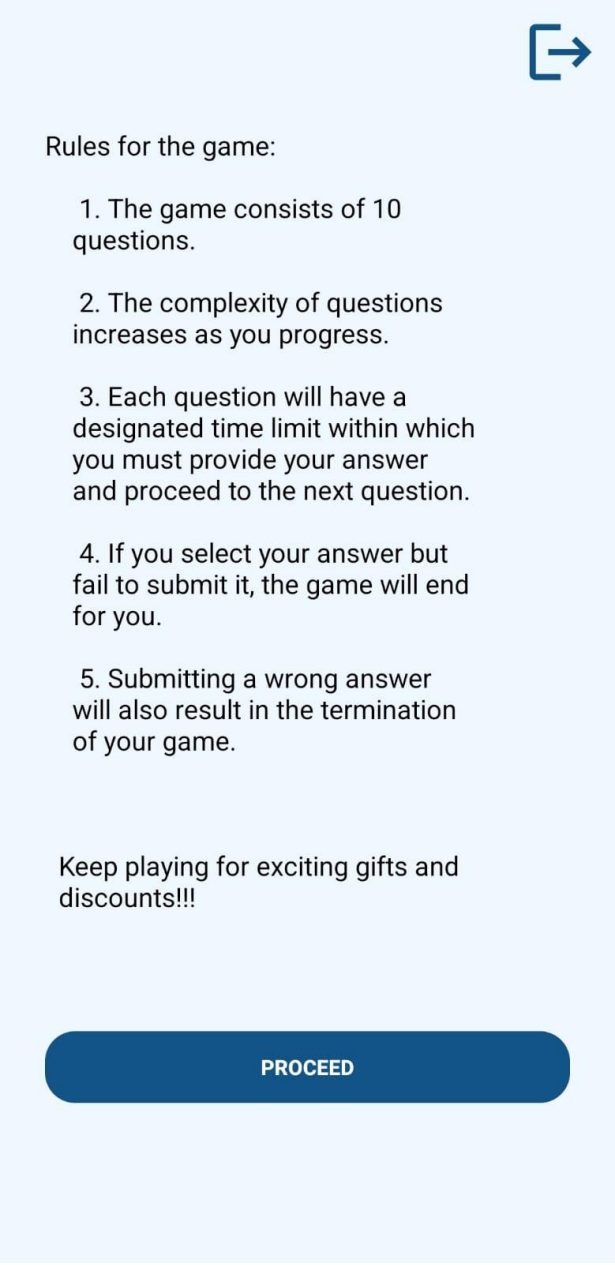
- Logging Out



1. Once you're done using the app, click on the "Logout" button to securely log out of your account.