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## **ABSTRACT**

It's the perfect time to change bad habits and replace them with better habits.

The purpose of the 28 days challenge is to adopt new habits and transform your lifestyle.

Studies have shown if you continue doing something for 28 days in a row it can become a habit; with 28 days challenge application it will change your lifestyle by gaining new habits with its gratitude journal that allows you to express thoughts and overcome challenges with appreciation.

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## LIST OF SYMPOLS AND ABBREVIATIONS:

<b>CPU</b>	<b>Central Processing Unit</b>
<b>RAM</b>	<b>Random Access Memory</b>
<b>JD</b>	<b>Jordanian Dinar</b>
<b>H</b>	<b>Hours</b>
<b>ROI</b>	<b>Return on Investment</b>
<b>SDLC</b>	<b>System Development Life Cycle</b>
<b>NFR</b>	<b>Non-Functional Requirement</b>
<b>DFD</b>	<b>Data Flow Diagram</b>
<b>GUI</b>	<b>Graphical User Interfaces</b>
<b>Os</b>	<b>Operating System</b>
<b>UX</b>	<b>User Experience</b>
<b>IDE</b>	<b>Integrated Development Environment</b>
<b>UML</b>	<b>Unified Modeling Language</b>
<b>RE</b>	<b>Requirement Engineering</b>
<b>DBMS</b>	<b>Database Management System</b>
<b>ERD</b>	<b>Entity Relationship Diagram</b>
<b>DOB</b>	<b>Date Of Birth</b>
<b>INT</b>	<b>Integer</b>
<b>IT</b>	<b>Information Technology</b>
<b>IOS</b>	<b>Iphone Operating System</b>
<b>KASIT</b>	<b>King Abdullah I School for Information Technology</b>
#	<b>Number Of</b>

## 1.0 INTRODUCTION

### 1.1 Preamble:

With the increase of the use of applications and websites, the pressure of delivering more professional, interactive, and appropriate features increased. Our application “28 days challenge” was a result of a group work presented to our faculty as a graduation project. In this chapter, you will be introduced to the motivation that leads us to adopt this idea as well as to the main objectives that it was designed to achieve. Software and hardware requirements, project scope and limitations, the expected output, project schedule, and report outline are also going to be stated.

### 1.2 Project Motivation:

There are many reasons that we choose to build an application and some of these reasons are:-

- 1) Applications are considered to be a return on investment (ROI) method for getting access to many sales channels.
- 2) It can be updated because it is open-source support, and the script code can be easily adopted.
- 3) Also, the android applications are fully available and improve the user experience (UX).
- 4) Android applications improved security, and make the implementation process faster
- 5) Easy to earn online money.
- 6) Our main goal is to create a user-friendly application to help users get rid of bad habits with our 28 days challenge and gain better ones instead; which will directly benefit our community.

### 1.3 Problem Statement

In our community, many people have bad habits, and they are suffering from a commitment to a new habit.

➤ **Issues:**

- Most applications are complicated as they don't have illustrations and many users have the ability and competition's love for challenging people and positively proved themselves but there's no feature or financial capability that allows them to participant in these challenges.
- Participating in traditional challenges can be time-consuming and also commitment can be hard.
- It's hard to keep your motivation flying high.
- Searching for a life coach needs a lot of effort, time, and money to attend live sessions, also if you find a suitable life coach, the development of your behaviors can't be followed constantly by the coach.
- No application provides a daily task to leave some habit or gain it.
- Human usually forgets his daily tasks.
- Some challenges in applications were not clear enough and its point isn't specific.

➤ **High Level Requirement:**

- Funny to use.
- Interesting tasks.
- Friendly user interface.

➤ **Constraint:**

- Development costs must not exceed 4500 JD.
- The application must be ready by December 28.

#### **1.4 Project Aim and Objectives:**

This project aims to implement an application that we will call “28 days”, and the purpose of it is to adopt healthy habits, transforming lifestyle like wellness, No social media, meditation, etc in an interactive way.

- User-friendly application, clear interface, and illustrations that help to understand the app easily
- Making challenges available online allowing the users to access them at any day and time. Also, it's free.
- Increased the interesting and enthusiasm for the participating people by adding challenges and earning points because human loves competition also providing motivation notifications.
- In the future plan, there will be a life coach for each challenge to keep track of the user achievements.
- Providing 28 tasks for 28 days to each challenge that the user chooses.
- Provide reminder notification to help the user remember his tasks.
- Every challenge has its description.

#### **1.5 Project Scope:**

- The “28 days” will be developed based on Android Studio using Java, for all people who use smart phones and looking for help in self-development.
- The overall objective we aim to achieve in this project circles around improving the user experience by providing a complete platform that contains online challenges and reminders that may transform lifestyles with a recommendation system.
- The user becomes passionate to compete himself.

## 1.6 Project Software and Hardware Requirements:

### 1.6.1 Software Requirements:

Table 1: Software Requirements

Software Requirements	Description
<b>Windows Os</b>	A series of operating systems developed by Microsoft. Each version of Windows includes a graphical user interface, with a desktop that allows users to view files and folders in window. (Windows 8. or higher) and must be 64-bit.
<b>Android studios</b>	The official integrated development environment (IDE) for Android application development, a Java integrated development environment for software, and incorporates its code editing and developer tools. (latest version)
<b>artdrow.com</b>	Used to design GUI.
<b>Notepad++</b>	Writing program's commands.
<b>Google Chrome</b>	Google Chrome 11.0 browser.
<b>Go.gliffy.com</b>	For UML Diagrams.

### 1.6.2 Hardware Requirements:

Table 2 Hardware Requirements

Hardware Requirements	Description
<b>Smart Phone</b>	Mobile phones that support android versions such as Huawei, Lenovo, Samsung, etc.
<b>Storage</b>	Between 850 MB and 1.2 GB, depending on the language version.
<b>Computer</b>	Core i7-1160G7 Processor (12M cache, up to 4.40 GHz).

### **1.7 Project Limitations:**

At first, we should inform the reader with this document that people who have bad habits; it is difficult to leave these habits without assistance, scheduling, and challenge.

For us, we decided to include the most common bad habits and schedule each habit to solve it, while providing a chat service and interactions with others, and a recommendation system as a first step.

These applications are not free of precision errors, even with a small percentage, so we may face some challenges to make the application more accurate.

### **1.8 Project Expected Output:**

The expected output of this project is an Android application that is free of bugs and errors along with well-written documentation. This application is supposed to provide users with the following services:

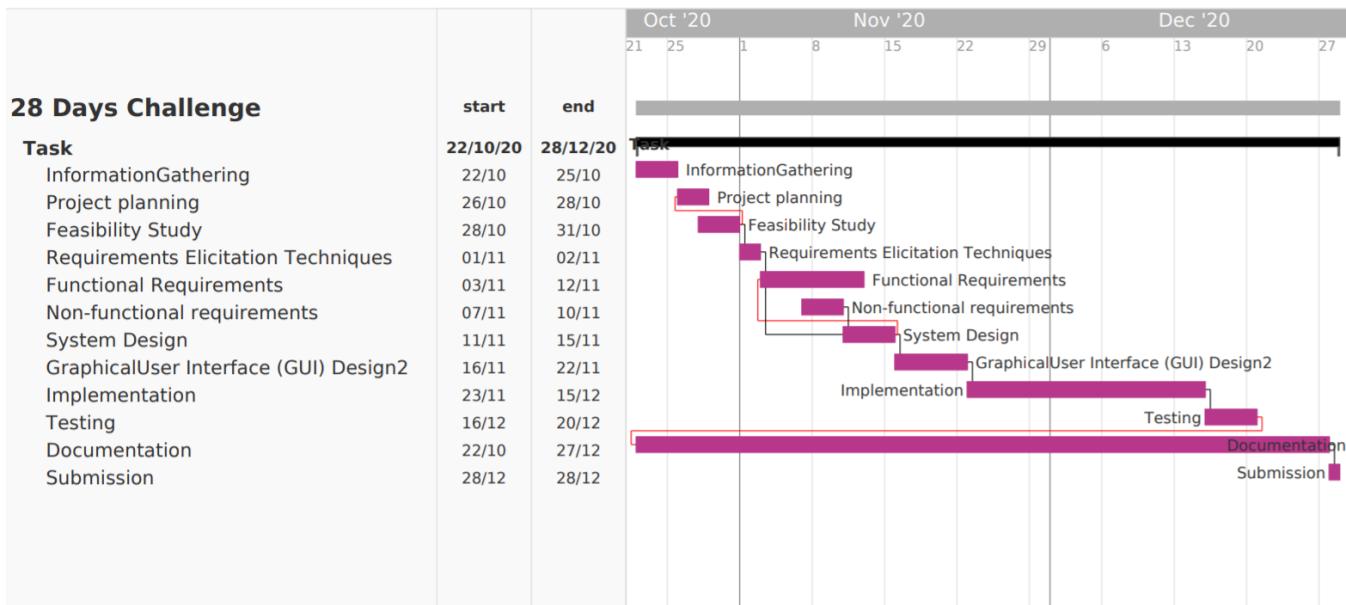
1. Once the users complete their daily tasks, they collect points, specific points to each challenge. This way, the users will use this app like a habit tracker.
2. Enable notifications and there are two types of notifications to remind the user to do the challenge or to encourage him every day.
3. Each challenge has its own description so the user decides to request the challenge or not.
4. Requesting challenges are available to users and there's no limit for choosing more than one challenge.
5. Each task's record needs to verify by the admin to accept it or reject it.
6. Some challenges provide a property that allows the user to upload his picture before starting the Task and after it or to write a note about what he did; to complete his points.

## 1.9 Project Schedule:

Table 3: | Schedule Table |

Task	Description	Start Time	End Time	Team member (Responsible)	Duration Time(day)	Dependenc y
T1	Information Gathering	22/10/20	25/10/20	All Team	4	
T2	Project planning	26/10/20	28/10/20	All Team	3	-
T3	Feasibility Study	28/10/20	31/10/20	All Team	4	T2
T4	Requirements Elicitation Techniques	1/11/20	2/11/20	All Team	2	T3
T5	Functional Requirements	3/11/20	6/11/20	All Team	4	T4
T6	Non-functional requirements	7/11/20	10/11/20	All Team	4	T4
T7	System Design	11/11/20	15/11/20	All Team	5	T4, T5
T8	Graphical User Interface (GUI) Design2	16/11/20	22/11/20	All Team	7	T5
T9	Implementation	23/11/20	15/12/20	All Team	23	T8
T10	Testing	16/12/20	20/12/20	All Team	5	T9
T11	Documentation	22/10/20	27/12/20	All Team	67	T1, T2, T3, T4, T5, T6,T7,T8, T9,T10
T12	Submission	28/12/20	28/12/20	All Team	1	T11

### 1.9.1 Gantt Chart



**Figure 1: | Gant Chart |**

### 1.10 Report Outline

In the following chapter, we will present an overall introduction to the related existing systems, also the problems that confront them. In addition to that, we will discuss their solutions approach which is used to get over these challenges.

In **Chapter 3**, related activities with the Requirements Engineering (RE) process will be discussed to the reader, firstly with the feasibility study followed by Elicitation Techniques, Targeted Users, Functional Requirements Definitions and Specifications, UML Use Case Diagram, and Non-Functional Requirements.

**Chapter 4** summarize the parts of the system design phase by including several diagrams such as Context Diagram, UML Sequence Diagram, UML Class Diagram, Data Flow Diagram (DFD), and Graphical User Interfaces (GUI).

**Chapter five** shows an introduction in Section 5.1, coding implementation includes in Section 5.2, database implementation is elaborated in Section 5.3, aslo, the graphical user interface implementation is stated in Section 5.4, Section 5.5, summary.

**Chapter six** shows an introduction in Section 6.1, heuristic evaluation in Section 6.2, besides, n the cooperative evaluation is stated in Section 6.3, Section 6.4, requirements validation and completeness Section 6.5 provide system installation, and Section 6.6 highlights 6.7 summaries.

**Chapter seven** shows an introduction in Section 7.1, overall weaknesses are elaborated in Section 7.2, and in addition the overall strengths are stated in Section 7.3 Section 7.4 future work.

## 2.0 RELATED EXISTING SYSTEMS

### 2.1 Introduction:

If you want to develop a new system, it is necessary to look at similar applications and know their weakness and strength to avoid weaknesses in your system. During our development process, we did our search to find out what are the existing systems that are related to our project to avoid their mistakes and improve the functionalities.

So an overview of some related existing systems will be enlightened in section 2.2. Overall problems and the solution approach will be further described in sections 2.3 and 2.4. Lastly, a summary is presented in section 2.5.

### 2.2 Existing System:

This step is considered to be one of the Elicitation Techniques for gathering data that will help us in writing the requirements; we'll talk about this step in detail in chapter 3. However, for now, we will mention some of the similar existing systems that will help us see what features already exist and what features are missing and need to be added to this type of website.

#### 2.2.1 Weight loss at Home in 21 days-Yoga and Exercise

This app delivers formula from scientific research which can help you to lose weight at earliest. 10Kg weight loss in 21 days with yoga-Exercises & diet. 7 min/day with 3D Trainer.

<https://play.google.com/store/apps/details?id=drzio.weightreduce.weightloss.yoga.exercise.food>

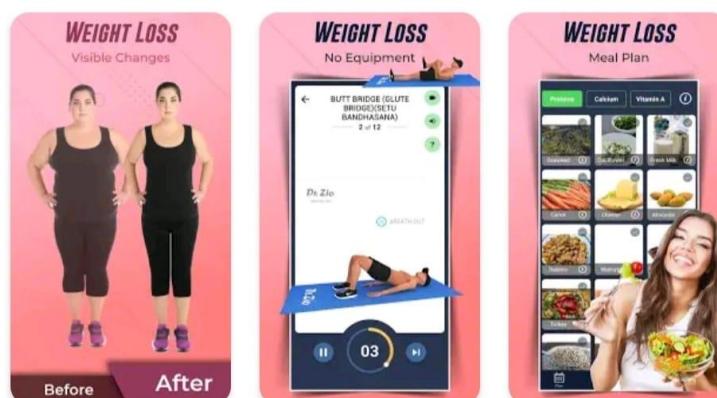


Figure 2: |Weight loss at Home in 21 days|

## 2.2.2 21 Days Body Transformation Application

Which is an application that includes a 3-week fitness plan includes daily bodyweight workouts designed to target the most important muscle groups in your body. The workouts are easy to follow with 5 to 10 moves per day.

<https://play.google.com/store/apps/details?id=com.studzone.dayschallenges>



Figure 3: 21DaysBody Transformation Application

### 2.3 Overall Problem:

- 1- Menu start is complicated.
- 2- The applications are limited to include just one challenge.
- 3- If you want to create a custom challenge you need to pay.
- 4- There is no registration option which means each user has no account to communicate with the admin to inquiry about what he wants.
- 5- Each challenge has limited minutes to practice the required task.
- 6- Nothing inspires the users or gets them excited to execute the required task or remind them to do it.

### 2.4 Overall Solution Approach:

- 1- Add a lot of features, one of them is simplicity.
- 2- Provide more than one challenge in the application and the user can create his challenge.
- 3- Support challenges that have the same goal with fitness such as no junk food challenge
- 4- Each user has one day to do his task and he isn't limited in time.
- 5- Provide free challenges and features.

- 6-** Support registration option so each user has his account.
- 7-** Enable notifications and choose the time to be notified to remind the user to do the challenge.

## **2.5 Summary:**

In this chapter, we introduced an existing system that is related to our project which has been taken into consideration to avoid its weak points and improve its strong points, and we proposed our solution approaches to make a new useful system.

## 3.0 SYSTEM REQUIREMENTS ENGINEERING AND ANALYSIS

### 3.1 Introduction:

To implement a good system, it must meet user needs and requirements. Each system has both functional and non-functional requirements. To achieve our goal, we gathered the needed requirements and specifications of our project to make sure we were satisfying them in our system.

### 3.2 Feasibility Study:

#### 3.2.1 Operational Feasibility

Operational feasibility is implemented to measure how well the new system works in the organization, the readiness and desire of users, and how they feel about the system. Therefore, operational feasibility determines whether users can use the system once it is installed and if users can use the new system without any complications, and it is also a measure of how users feel about the application.

Mobile applications are widely known to users, especially Android applications, so there is no need for much training on them as they are easy to use, and just only the administrator of the system can access the database and modify the data inside it.

#### 3.2.2 Technical Feasibility

To construct the application, we must have the needed technical resources and requirement which are:

- Programming Language :( software) Java, JavaScript, Android, PHP, and MySQL for database implementation.
- Hardware: Any technical device including an internet browser can open this application and internet access it.

### 3.2.3 Economic Feasibility

➤ **Development Cost:**

- Personal Cost:

Table 4: | Personal Cost |

Employee	Cost per hour	Hours	Total cost per hour
<b>1 System Analyst</b>	20 JD	20 hr.	400 JD
<b>1 Programmer</b>	15 JD	110 hr.	1650 JD
<b>1 GUI designer</b>	16JD	25hr.	300 JD
<b>1 Database Specialist</b>	15JD	15 hr.	225 JD
<b>Total</b>			<b>2575 JD</b>

- New Hardware's and Software's:

Table 5: | New Hardware's and Software's |

Hardware & Software	Cost
<b>1 Computer</b>	500 JD
<b>1 DBMS Software</b>	300 JD
<b>Mobile phone</b>	150JD
<b>1 Development Server</b>	650 JD
<b>Total</b>	1600 JD

**Development Cost=**  $2575+1600= 4175$  JD - (For Development Year).

➤ **Operating Cost:**

**Employees:**

1 Maintenance agreement for server = 500 JD.

1 Maintenance agreement for DBMS Software = 300 JD.

**Operating Cost** = 500+ 300= 800 JD.

- **Benefits:**

- **Tangible Benefits:** Benefits that can be measured in money and with certainty that resulted from information forms.
- **Total Tangible Benefits** = 3000 JD
- **Intangible Benefits:** Benefits that cannot be easily measured in money and with certainty that resulted from information forms.

**Table 6:| Economy Feasibility |**

Year	Estimated Net Operating Costs	Estimated Net Development Costs	Estimated Net Benefits	Discount Factor	PV Cost	PV Benefits	Accumulated PV Costs	Accumulated Benefits
0	0	4175	0	1	4175	0	4175	0
1	800	0	3000	0.893	714.4	2679	4889.4	2679
2	1600	0	4000	0.797	1275.2	3188	6164.6	5867
3	2400	0	4700	0.712	1708.8	3346.4	7873.4	9213.4
4	3200	0	5500	0.636	2035.2	3498	9908.6	12711.4

- 1) The total present value of benefits for 4 years: **12711.4 JD.**
- 2) The total present value of cost for 4 years: **9908 JD.**
- 3) Payback period: less than 4 years.
- 4) Is it feasible? Yes, since we only must wait 4years for a profit.
- 5) Lifetime ROI (Return on Investment) = (Estimated Lifetime Benefits - Estimated Lifetime Costs)/Estimated Lifetime Costs = (12711.4-9908.6) / (9908.6) =**28.3%.**
- 6) Annual ROI =lifetime ROI / lifetime of the system =**28.3/4= 7.1%**

### **3.3 Requirements Elicitation Techniques**

In this stage data and requirements of the proposed system were collected by conducting interviews and monitoring the progress of the current system. We focused on interviewing and monitoring the users to identify their needs and requirements.

#### **3.3.1 Exploring Existing Systems:**

This technique is very important to have a general idea of what is used, not used or missing as well as to appropriately take into account issues, common activities, and relative importance of tasks/features. We described the application we explored in detail in chapter2.

#### **3.3.2 Interviews:**

We conducted interviews with some people from the public; the interviews generally lasted for about 10-15 minutes. The interviews were great help with writing our requirements, and we were capable of covering some main topics including:

- Satisfaction about the current self-support app to leave the bad habit.
- Some problems facing the users.
- Missing features requested by users.

**Table 7: | Interview |**

<b>Duration in Minutes</b>	<b>Task</b>
<b>1</b>	<b>Introduction</b>
<b>3</b>	<b>Introducing ourselves, and explaining our idea and goals</b>
<b>1</b>	<b>Explaining the interview process</b>
<b>12</b>	<b>Interview questions</b>
<b>4</b>	<b>Satisfaction about the currently self-support app to leave the bad habit.</b>
<b>4</b>	<b>Some problems facing the users.</b>
<b>4</b>	<b>Missing features requested by users.</b>
<b>Total Time In</b>	
<b>Minutes : 29</b>	

We started the interviews by introducing them to our project idea and our goals and asked them if they can give us some of their time to answer a few questions. Below, you can see the questions we've asked in the interviews and the summary of the answers we have got.

**1) Do you find it difficult to improve yourself?**

The majority of the interviewees answered yes because they find it hard to know which habit they should Improve.

**2) Do you love to compete yourself to achieve something? Like what?**

Yes, some of them choose to study for continuous hours and the majority of them choose to stop smoking for at least 5 hours.

**3) If you have a challenge that will help you to do that, will you commit to it?**

Most of the answers were "Yes I should commit to it to improve myself".

**4) What things do you like to earn when you achieve something?**

Few of them want coins and the others want points so there's rank will increase but most of them want real money when they finished the challenge.

**5) Are there any other problems you are facing with the current challenges applications?**

The most repeated problems were that some applications include just one challenge and complicated design and there's no evidence that the user is completing his challenge.

**6) Are there any features you're interested in and you'd like us to add to the current application?**

The majority of the interviewees answered that they want a simple application, an easy explanation of the challenge, user-friendly interfaces.

### 3.3.3 Questionnaires:

**28 Days Challenge**

The idea of our graduation project is an android application made to transform your lifestyle and help people who have a bad habit to leave it or to have positive habits

فكرة مشروعنا للنجاح هي تطبيق اندرويد مصمم لتغيير نمط حياتك ومساعدة الأشخاص الذين لديهم عادة سيئة على تركها أو الحصول على عادات إيجابية

مطلوب\*

Figure 4: | about project idea |

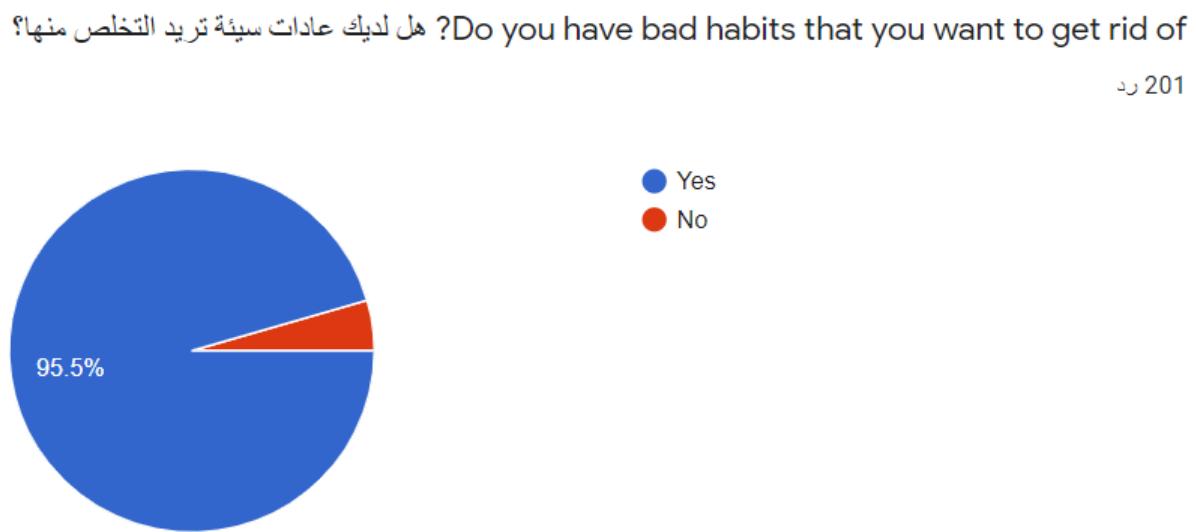


Figure 5: | Question 1 |

If there is an application that helps you build positive habits or leave a bad habit, will you use it?  
إذا كان هناك تطبيق يساعدك على بناء عادات إيجابية أو ترك عادة سيئة ، فهل ستسخدمه؟

رد 201

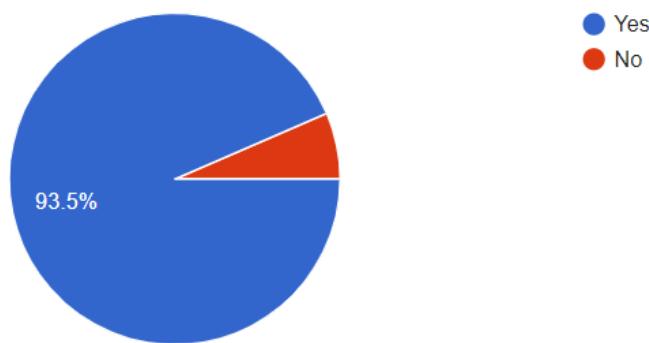


Figure 6: | Question 2 |

Do you think making an app to get rid of bad habits and gain new good habits will make it easier? هل تعتقد أن إنشاء تطبيق للتخلص من العادات السيئة واكتساب عادات جيدة جديدة سيجعل الأمر أسهل

رد 200

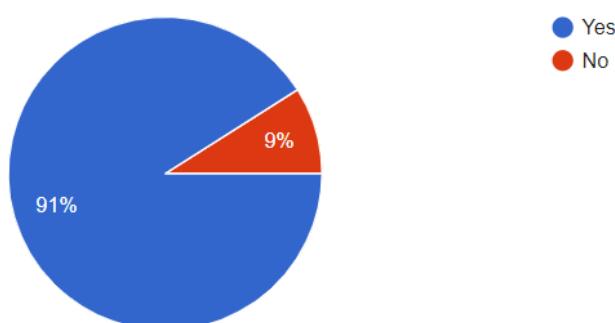


Figure 7: | Question 3 |

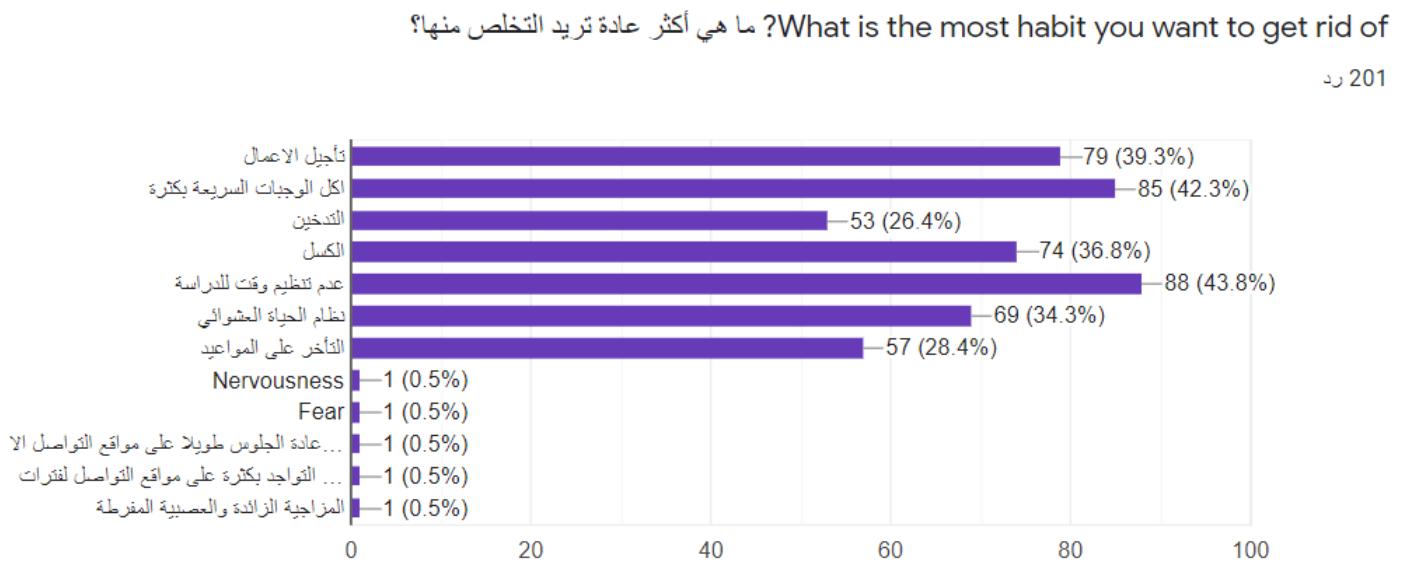


Figure 8: | Question 4 |

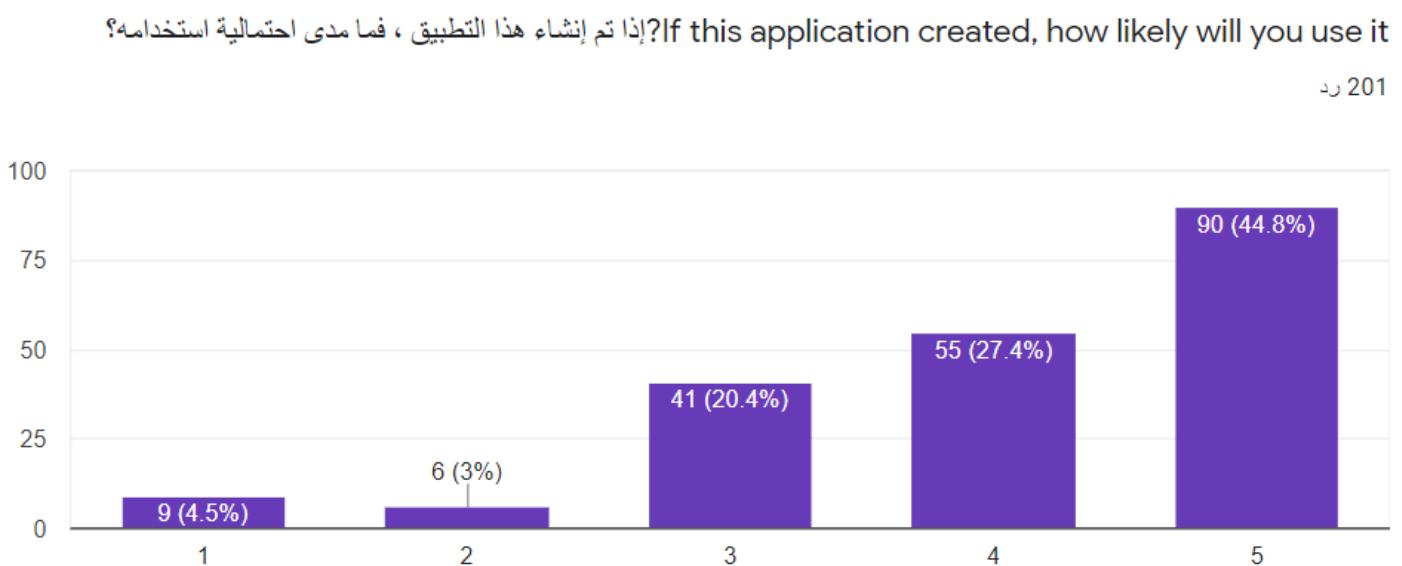


Figure 9: | Question 5 |

يرجى مشاركة اي اقتراح اضافي؟ Please share any additional suggestion

ردد 22

اضافه محادله بين المستخدمين

No thanks

No

Work hard

rank

ثانك يو

لـ

Figure 10: | Question 6 |

### 3.4 Targeted Users

- **User:** For people, who are interested in changing their lifestyle and their habit, there are no restrictions on the users to use our application; it's available for all ages and any gender, country.
- **Administrator:** The person who keeps track of user achievements and manages users and challenges information whether adding or delete etc.
- **Life Coach:** A Person with life and self-development experience who will provide advice and help the user organizes his life.

### 3.5 Functional Requirements Definition:

- **User :**
- **Sign up:**

Sign up by filling in the required information:

1. **Email Address:** should include a “@” and not used before in the application (required).
2. **DOB:** calendar form, , to choose the month and day, year (mm/dd/yyyy) (required).
3. **Password:** must contain at least one number and one uppercase, one lowercase letter, and at least 8 or more characters (required).
4. **Full name:** doesn't have any constraint to write, it can be numbers or alphabets or both and it can be in Arabic language (required).

Now an account will be created to access the application.

- **Sign-in:**

Accesses the application by entering:

1. Email Address: the same email that is used in the sign-up process should contain “@”.
2. Password: the same password he used in the sign-up process to sign-in to the application.

The user can't sign in if he didn't sign up first.

- **Forget a Password:**

If the user may forget his password or write it wrong he can reset it by writing the email address that he usually used when signing in and the system will send him a message to the email.

- **Manage Account:**

- Users can browse through their profile on my account option and can view his details (Email, password, DOB, full name, total points (he can't access it)).
- User can update his information by filling them again:

**1- Email Address:** should include a “@” and not used before in the application (required).

- 2- **DOB:** calendar form, to choose the month and day, year (mm/dd/yyyy) (required).
- 3- **Password:** must contain at least one number and one uppercase, one lowercase letter, and at least 8 or more characters (required).
- 4- **Full name:** doesn't have any constraint to write, it can be numbers or alphabets or both and it can be in Arabic language (required).

Now an account will be created to access the application.

- **Display Challenge:**

- User can choose any challenge from the available ones
- User can read the descriptions of the challenges, so he could request it.

- **Manage User's Challenges:**

- **User can:**

- Users can view all his challenges list information after requesting them successfully.
- Users can search for a challenge by writing its name on the search box.
- Users can view each challenge task.
- Delete the challenges that he doesn't need or have already done.
- Users can enter a specific day task to upload their task record, he should write:
  - 1- Note: any text explains his achievement in the required task(required).
  - 2- Date: calendar form, to choose the month and day, year (mm/dd/yyyy) (required).
  - 3- Picture (before, after): uploading an image from a user device, according to challenge requirements (optional).

Once the user sends his task record, he can't enter it again. Also can't send the record task for the next day.

- **Logout:**

Logout from the account or exiting the application.

---

- **Admin**

- **Login:**

The admin uses his (specific username and password which is “admin”) to log in so he can access the system.

- **Manage Users:**

1. Admin will manage user’s Task records table including the following functions (Accept, Delete and Display):-

- Accept the user’s task in his records table and check his actions.
- Delete a user’s task record.

2. Admin can delete any user he wants.

3. Update the user’s information:

- **Email Address:** should include a “@” and not used before in the application (required).
- **DOB:** calendar form, to choose the month and day, year (mm/dd/yyyy) (required).
- **Password:** must contain at least one number and one uppercase, one lowercase letter, and at least 8 or more characters (required).
- **Full name:** doesn’t have any constraint to write, it can be numbers or alphabets or both and it can be in Arabic language (required).

Now an account will be created to access the application

- **Status:** if the user is active (that mean he is doing his task record daily) or deactivate (which mean he is not committed to doing his tasks)

4. View user challenges lists and delete them.

5. Admin can search on the challenge name by writing it in the search box.

- **Manage Challenges:**

1. Admin will manage challenges Task table including the following functions (view, Add, Delete):-
  - View task list information, to see the definition of each task.
  - Add a new task by writing:
    - a. Day number: "day number" to a required task, shouldn't be more than 28 days (required).
    - b. Description: definition of the task (required).
    - c. Required total points (at least 1 point) and can clear it to fill it again and the input should be numeric (required).
  - Delete a specific task.
2. Add new challenges by writing:
  - a. Title: name of the challenge (required).
  - b. Description: summary of the challenge definition (required).
  - c. Picture: image explains the challenge (required).
3. View challenge list information, picture of it and its total points.
4. Update challenges information:
  - a. Title: name of the challenge (required).
  - b. Description: summary of the challenge definition (required).
5. Delete any challenge.
6. Display challenge notification
7. Add a new notification by writing:
  - a. Title: name of the notification (required).
  - b. Description: definition of the notification (required).
  - c. Type: motivation to encourage user, and a reminder to remind him to do his task (required).
- 8- Delete notification.

- **Logout:**

Logout from the account and exiting the system.

- **System Report:** Admin will request system reports from the system which include every view in the system (View challenges, view user list, view task list, view task record), we have considered it as a report to display the thing we want as a summary.

### 3.6 Functional Requirements Specification

- **User**

- The main application screen includes sign-up \ sign-in buttons.

- **Sign-up:**

1) Select the “Sign-up” button.

2) Enter your full name.

3) Enter your password, if it's valid to use, the user will sign up successfully, if it's not valid, a message “Please match the requested format” will appear.

4) Enter your E-mail, if its syntax error a message ‘Please include a '@' in the email.

5) Write or choose your date of birth from the calendar.

6) Click the sign-up button.

7) A verification message will appear (Thanks a lot for sign-up) which means the signup process is successfully done.

8) If the email is already used, a message “Error, Email address is already used” will appear.

9) Click on the cancel button if you already have an account.

- **Sign in:**

- 1) Press the sign-in button on the main screen.
- 2) Enter your email and password.
- 3) Click on the sign-in button.
- 4) Check users with the application database.
- 5) If it's valid, log in to the system will do successfully.
- 6) If it's not, return the "Sorry! Check your access information" message.
- 7) If you don't have an account a message "Please sign up first" will appear, and then clicks on the sign-up button.

- **Forget a Password**

- 1) Click on the "Forget Password" button on the login screen.
- 2) Enter your E-mail, if your email does not contain a "@", or it's not the same email you usually used to sign in a message "Error, please check email address" will appear
- 3) Click on the reset button.
- 4) A message will send to the user email to reset his password.
- 5) If valid, log in to the system.

- **Manage Account:**

- 1) Sign-in to "28 days challenge".
- 2) Click on my account option.
- 3) Filling your information (Full name, Date of birth, email address, password) if you want to update it.
  - If the email doesn't have a "@", an error message will appear.
  - If the password doesn't follow the requested form, an error message will display.
  - If he left something empty, it couldn't be updated and a message "please fill out this field" will appear.

- 4) Click on the update button.
- 5) “Your information has been updated” message will display.

- **Display Challenges:**

- 1) After sign-in successfully, available challenges will appear on the home screen.
- 2) Press on any challenge icon that you want to join.
- 3) The definition of the challenge screen will open; press on request challenge to register in it.
- 4) A message “This challenge has been added successfully” will appear.
- 5) If you already have the challenge, a message “You already have this challenge before” will display.

- **Manage User’s Challenges:**

- 1) Sign-in to “28 days challenge”.
- 2) After sign-in successfully click on my challenges option.
- 3) The challenges list that you are choosing will appear.
  - Write the challenge name on the search box if you want, then the challenge will appear to you.
  - Click on view challenge task to see the challenge’s tasks.
  - A 28 days that each day contains one task for the user to do, each task required to write a note to it, and if he wants he can upload a before and after picture.
  - “New Task Record has been added” Message will appear.
  - A warning message will appear “You can’t send this record” if the user sends the task of the next day.
  - The task status will be appending till the admin accepts it, when the admin accept the task, the task day recolor to green, the black color means he doesn’t complete it yet.
  - Press on the Clear button if you want to rewrite your note.
  - After adding your task, you can’t enter the task of the same day again and a “You already send this task “message will display.

- 4) Click on the delete button if you need to delete challenges.
  - Verification message will appear that the user challenge is deleted successfully.

- **Logout:**

- 1) Click on the "Logout" option.
  - 2) A verification message will display that you're successfully logged out.
  - 3) Exit the application.
- 

➤ **Admin**

- **Login:**

- 1) Enter the specific username and password which is (username: admin, password: admin).
- 2) Click on the login button.
- 3) Check users with the application database.
- 4) If it's valid, log in to the system.
- 5) If it's not, return not valid message which contains (Error ... Please Check Administrator Username or Password!)

- **Manage Users:**

- 1) Login successfully.
- 2) Click on the user option then view users list.
- 3) A table that contains the user's information will display.
- 4) Click on view user challenge list to show users challenge table and their challenges information:
  - Click on view user challenge tasks to see the user's records table, so he can accept or reject his task.
  - Delete button to delete the challenge.

**5)** Click on the edit button to update user information, a form of (Full Name, DOB, Email Address and status include active \ deactivate)

- Filling user information (Full name, Date of birth, email address, password) if you want to update it.
- If the email doesn't have a "@", an error message will appear.
- He should choose the user status if he active or deactivate.
- If he left something empty, it couldn't be updated and a message "please fill out this field" will appear.
  - Verification message will appear that the user information was updated successfully.
  - If you want to fill them again, click on the clear button.

**6)** Click on the delete button to remove users.

- Verification message will appear that the user deleted successfully.

- **Manage Challenges:**

**1)** Login to "28 days challenge".

**2)** After login successfully, click on the "Challenges" option.

**3)** To add a challenge click on the add new challenge option.

- Blank form of required data (Title, Description, Picture) will appear so you should fill them then click on the add button.
- If he left something empty, it couldn't be adding the challenge and a message "please fill out this field" will appear.
- If you want to fill them again, click on the clear button.
- Verification message will appear that the challenge was added successfully.

**4)** To view challenges click on the view challenges option then a table of challenges and its description will display.

- To view tasks press view challenge tasks, table of day's tasks will appear, and you can delete unnecessary tasks.
  - To add a new task press add new task button which is above the tasks table, then a blank form of required data (Day number(value must be less or equal to 28), Description, Total Points) will appear, you should fill them with the required information.
  - If you want to fill them again, click on the clear button.
  - Warning message will display if the user keeps the information empty.
  - A verification message will appear that the task was added successfully.
- 5) Press on the view challenge notification button to see the notifications list information.
- Press the delete button to remove unwanted notifications.
  - To add a new notification press the add new notification button which is above the notification table, then a blank form of required data (Title, Description, Type(choose if it reminder or motivation notification) ) will appear, you should fill them with the required information if you want to fill them again, click on clear button.
  - Warning message will display if the user keeps the information empty.
  - Verification message will appear that the notification was added successfully.
- 6) Click on (edit or delete) the challenges information.
- Verifying the message will display if you choose to delete a challenge.
  - Form of the required information will appear to fill them with (Title and description of a new updated challenge).
  - Verification message will appear that the challenge is edited successfully.
  - Warning message will display if the user keeps the information empty.
  - Press clear to remodify the challenge information.

- **System Reports:** The administrator can request system reports for all transactions from the system after making a successful login to the administration area.
- **Logout:**
  - 1) Click on the "Logout" button.
  - 2) A verification message will display that you're successfully logged out.
  - 3) Exit from the application.

### 3.7 Non-Functional Requirements:

Table 8: | Non-Functional Requirements |

NF#	Non-Functional Requirements	Description
<b>NF1</b>	<b>Simplicity</b>	The system uses simple language and design understandable by all users of the system.
<b>NF2</b>	<b>Performance</b>	<ul style="list-style-type: none"> <li>- The system should be responsive and fast.</li> <li>- We use modern hardware so our system must be fast.</li> </ul>
<b>NF3</b>	<b>Security</b>	All data inside our system or its part will be protected against malware attacks or unauthorized access.
<b>NF4</b>	<b>Maintainability</b>	<ul style="list-style-type: none"> <li>-The system will be updated on whether bugs are found, or modifications are needed.</li> <li>-The ability to update the system to meet changing user requirements.</li> </ul>
<b>NF5</b>	<b>Portability</b>	The system will be made available to android users.
<b>NF6</b>	<b>Availability</b>	<ul style="list-style-type: none"> <li>-The system will be available whenever the user needs it.</li> <li>-The system should be operable 24 hours and accessible in real-time.</li> <li>-The system should be available for all stakeholders when they want to use it without difficulties.</li> </ul>
<b>NF7</b>	<b>Usability</b>	Users should be able to understand the flow of App easily ie users should be able to use apps without any guidance or help from experts/manuals.

### 3.8 Summary

This chapter includes a feasibility study, project cost, target people, some interviews and a survey to find out how interested people are in the idea of the project, it's also included functional and non-functional requirements of the system.

## 4.0 SYSTEM DESIGN

### 4.1 Introduction:

Modeling Diagrams help to clarify and communicate ideas about the user requirements that the software system must support. As well as they identify and describe the functional behavior and structure of the software.

In this chapter we will focus on system design, the context diagram that clarifies the system requirements and their relationships are addressed in section 4.2, Data flow diagrams DFD in section 4.3, in section 4.4 is Entity-relationship diagram ERD, UML use case diagram in section 4.5, UML sequence diagram in section 4.6, UML class diagram in section 4.7, Graphical user interface GUI in section 4.8, and finally summary will be in 4.9.

### 4.2 Context Diagram

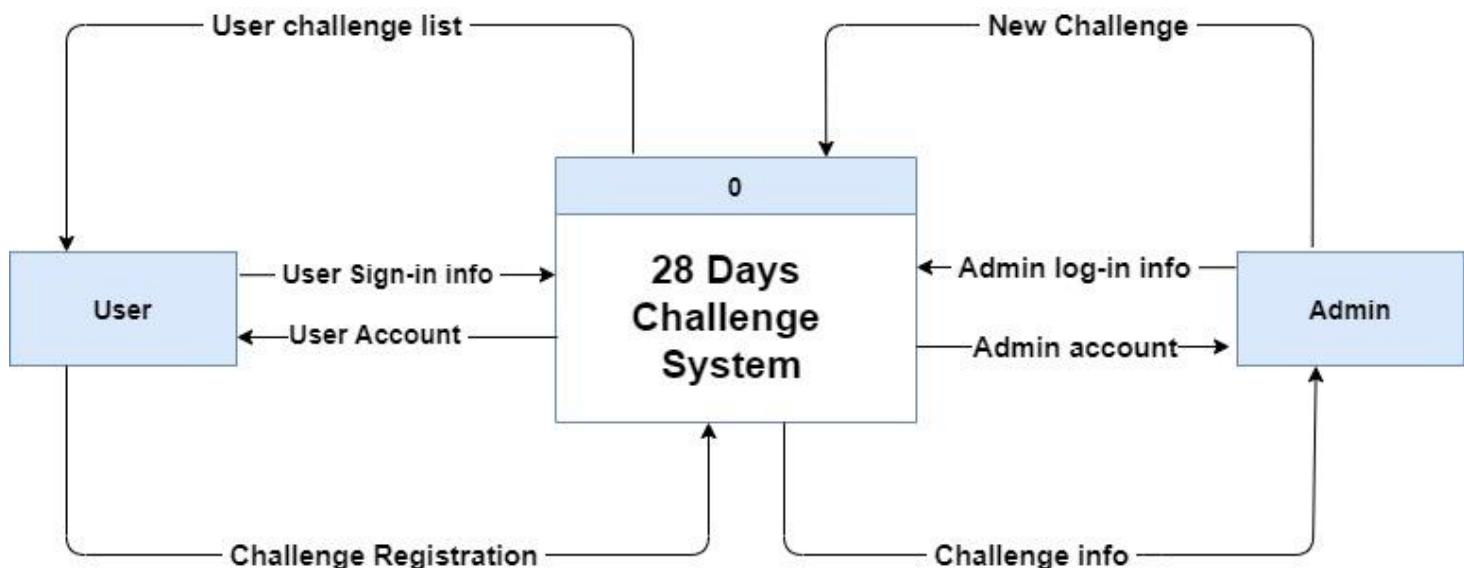


Figure 11: | Context Diagram|

#### 4.3 Data Flow Diagram (DFD)

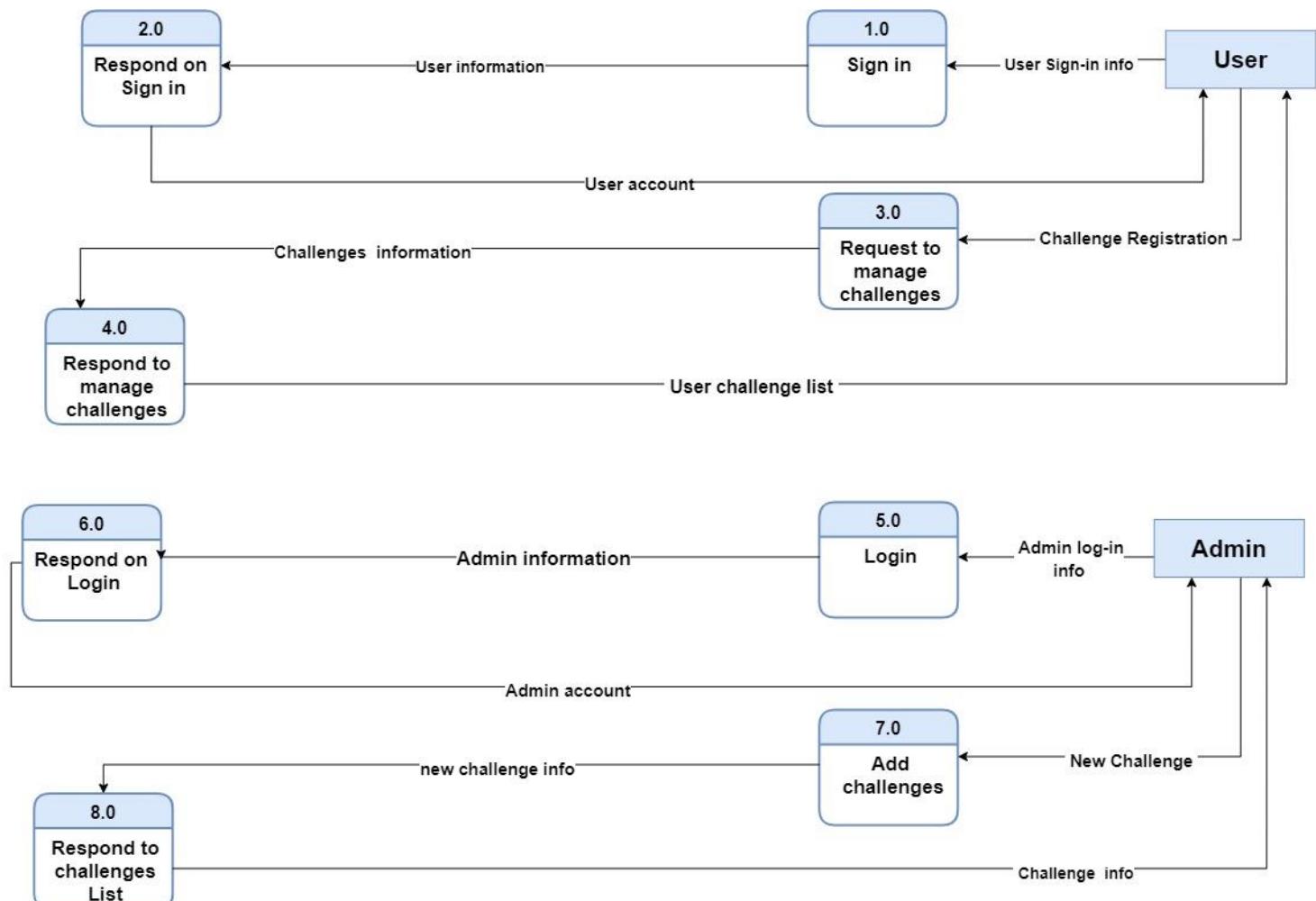


Figure 12: | Data Flow Diagram |

#### 4.4 Entity Relationship Diagram(ERD)

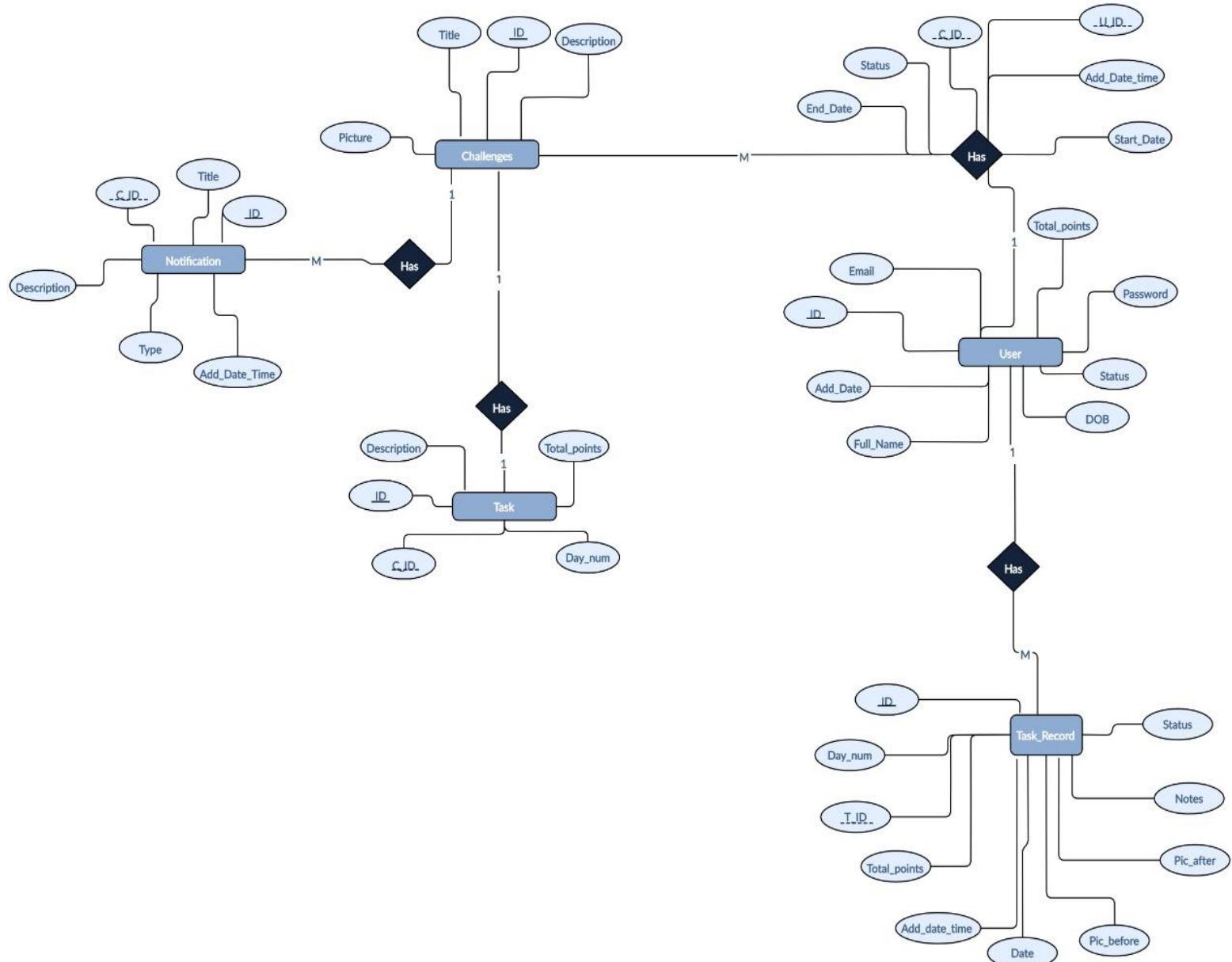


Figure 13: |Entity relationship Diagram|

#### 4.5 UML Use Case Diagram

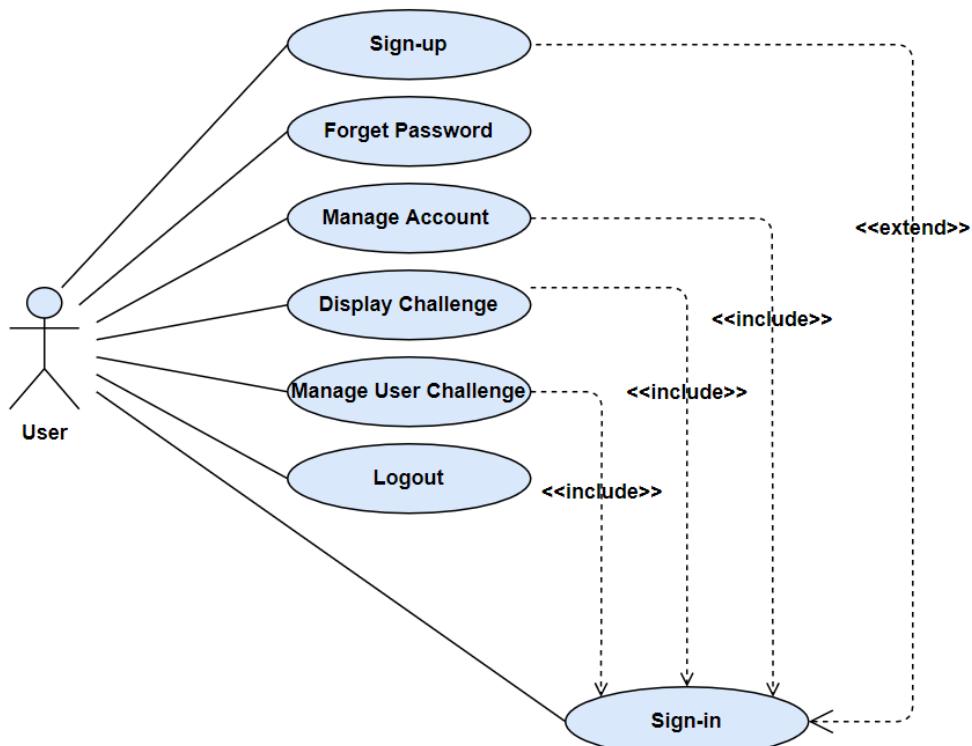


Figure 14: | User Use Case Diagram |

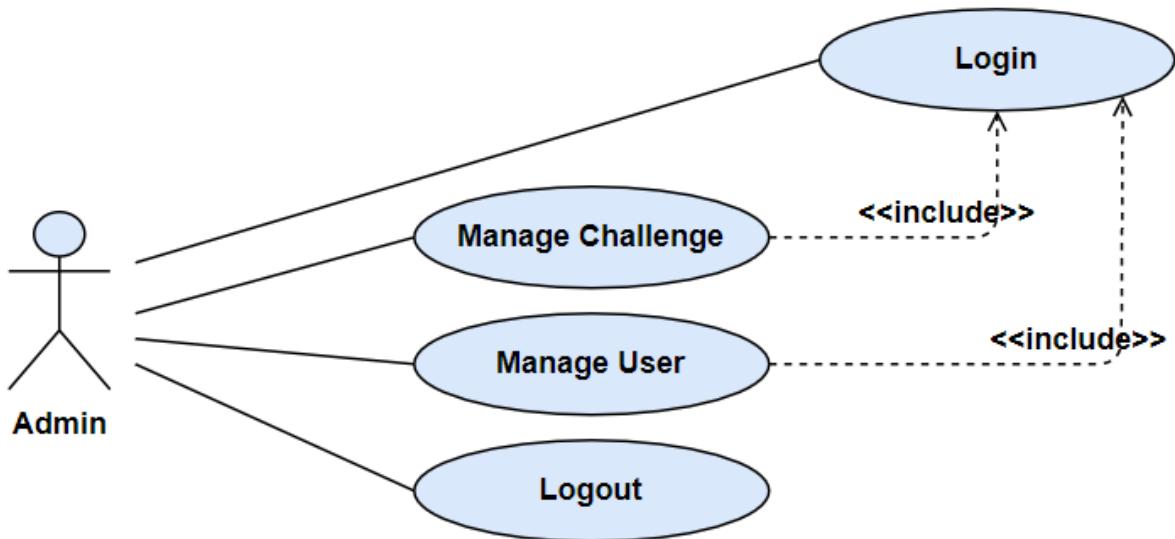


Figure 15: | Admin-Use Case Diagram |

## 4.6 UML Sequence Diagram

### ❖ Admin Sequences:

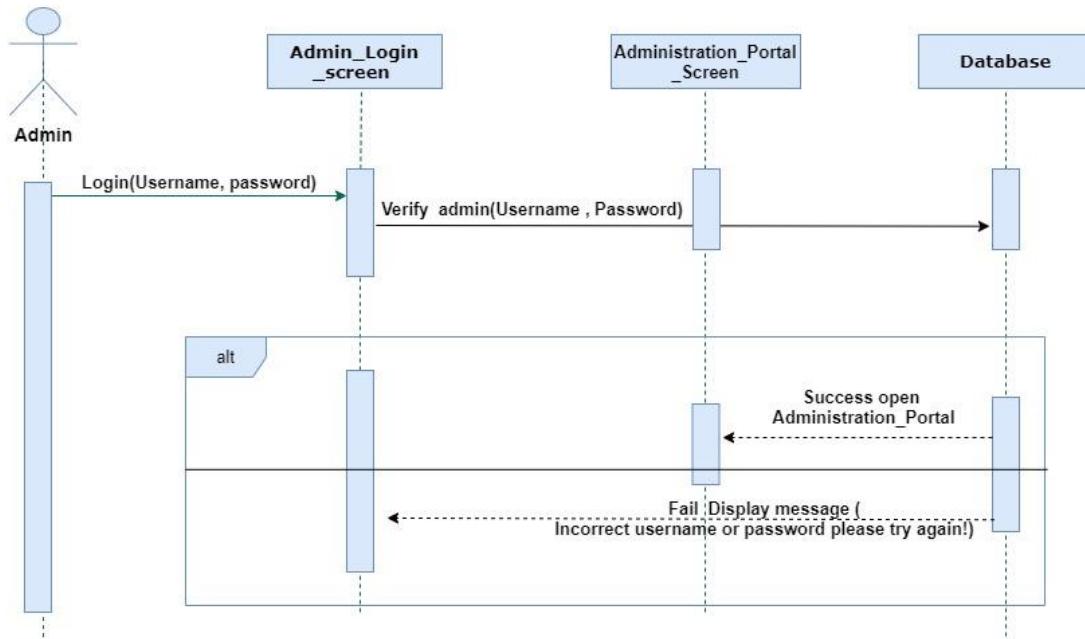


Figure 16 :| Admin Log-in Sequence |

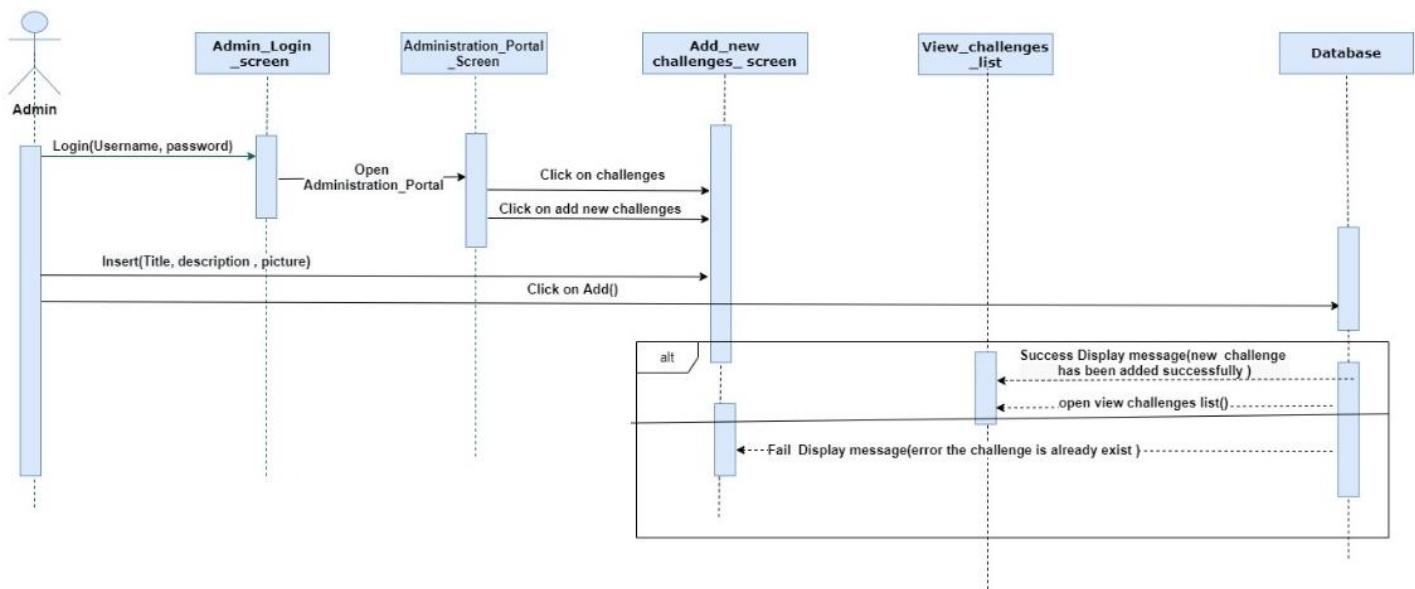


Figure 17:| Admin -Add New Challenge Sequence |

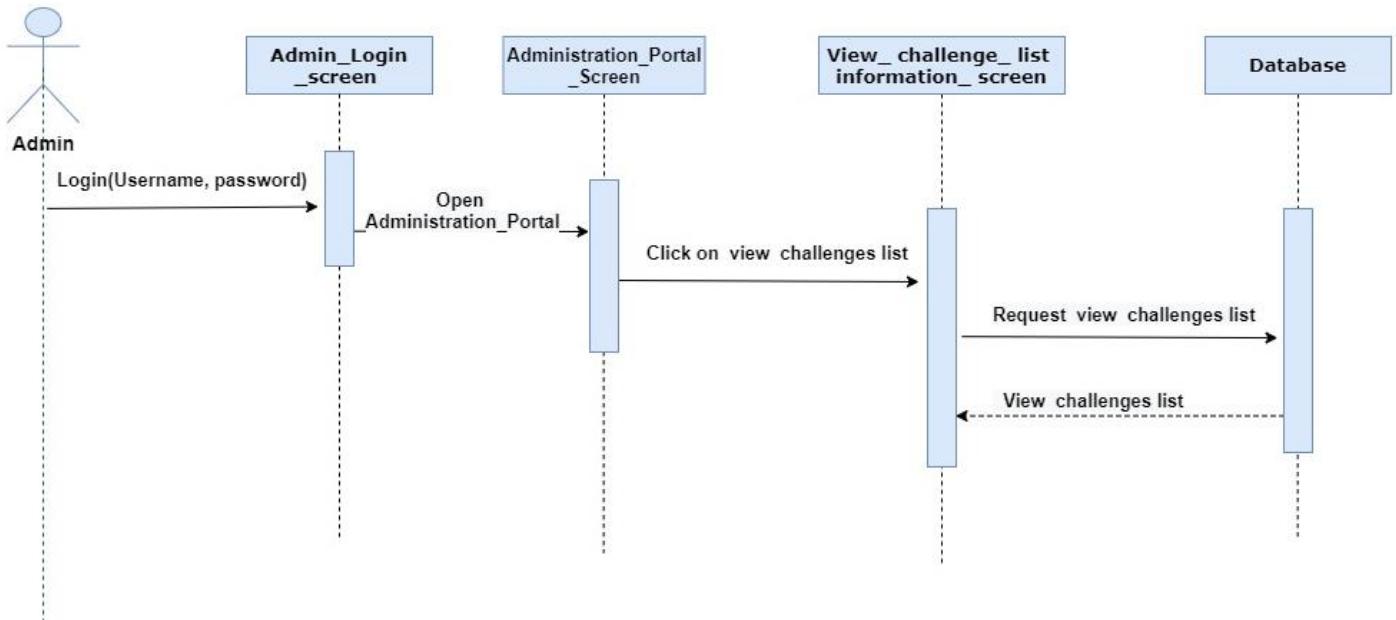


Figure 18: |Admin-View Challenge List Sequence|

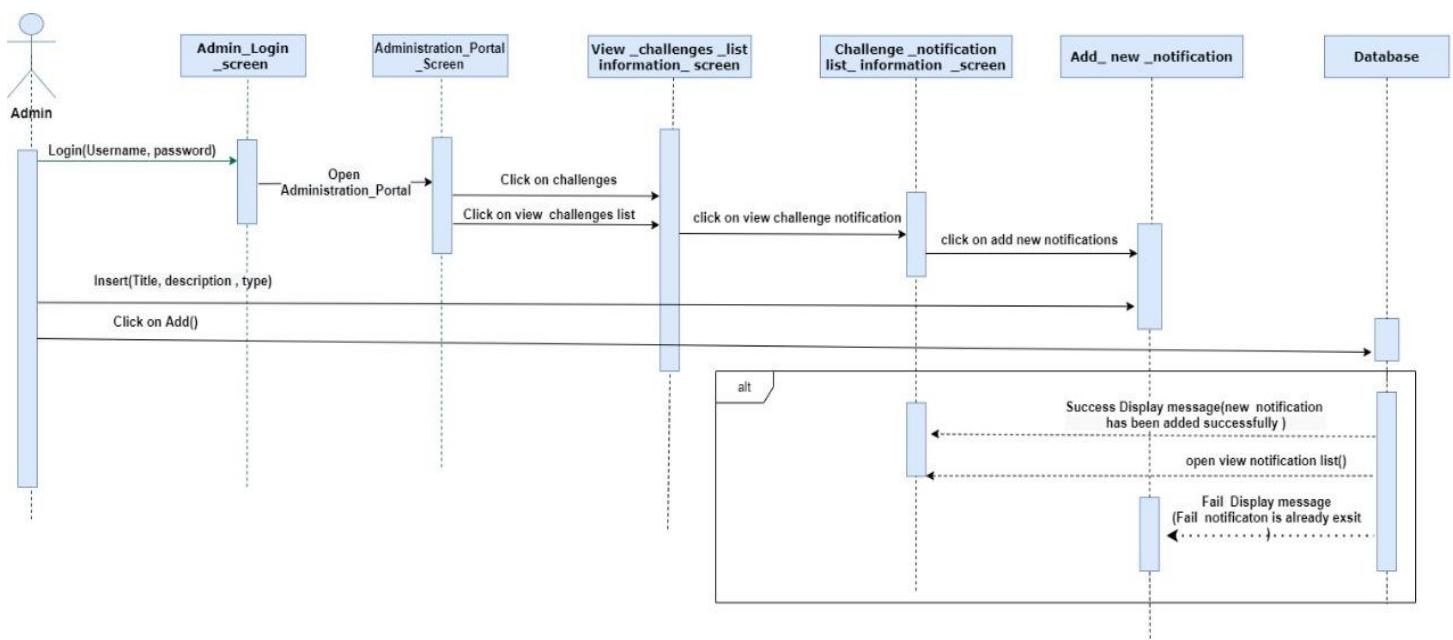


Figure 19: |Admin-Add New Notification Sequence|

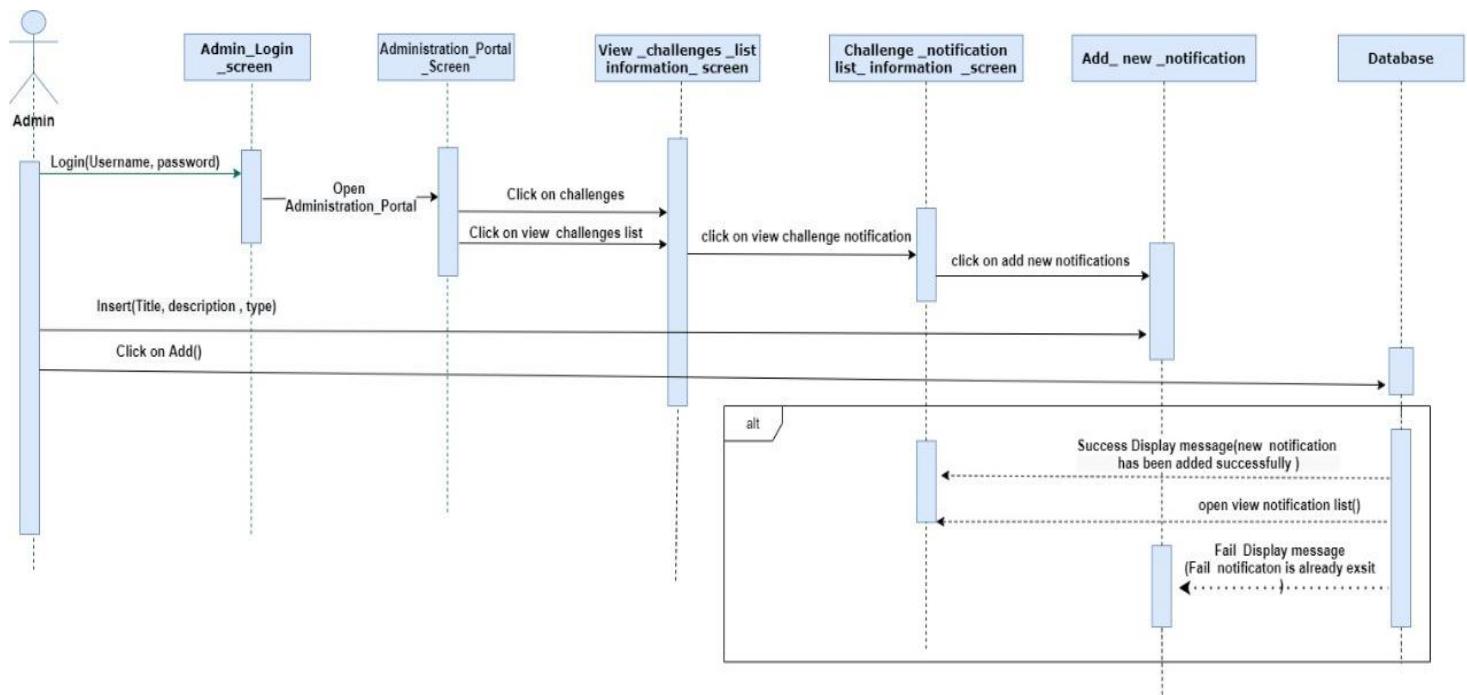


Figure 20: |Admin-Add New Task Sequence|

❖ User Sequences:

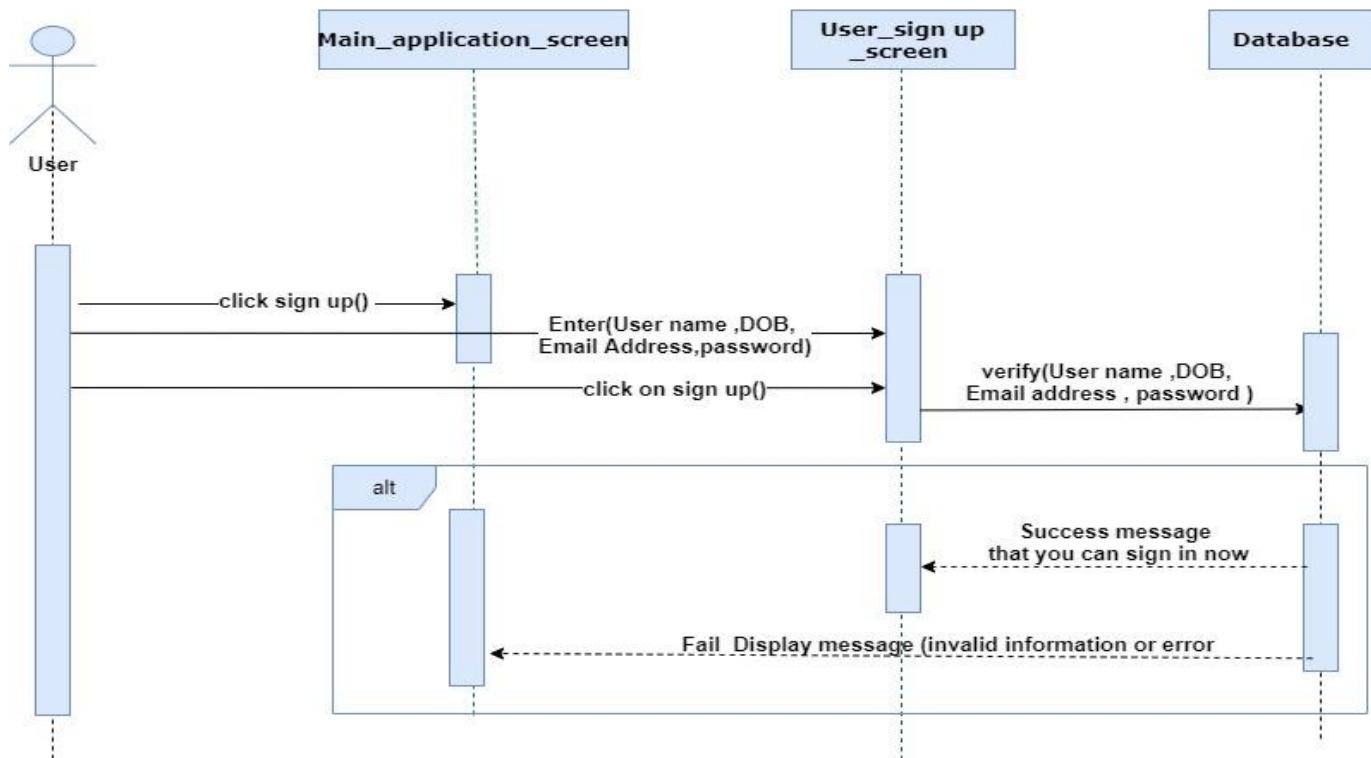


Figure 21: | User-Signup Sequence |

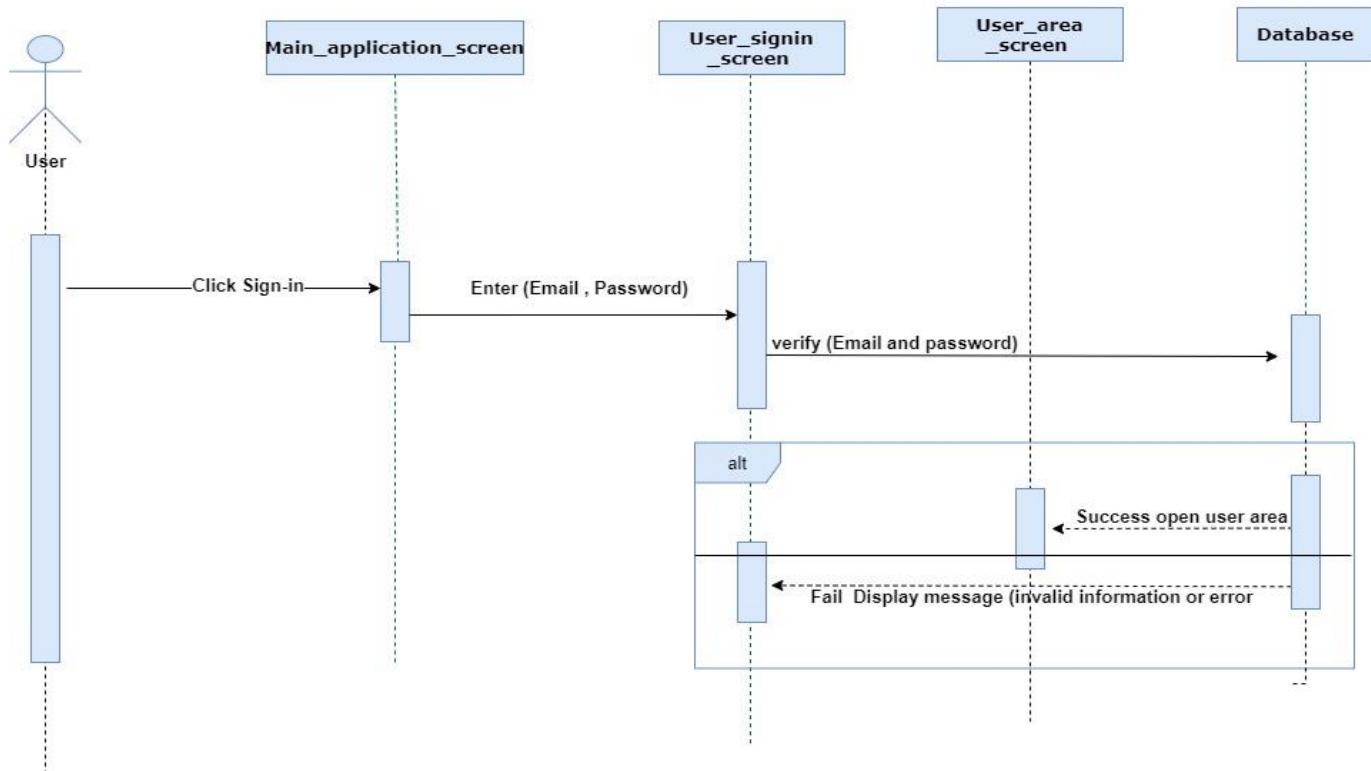


Figure 22: | User-Signup Sequence |

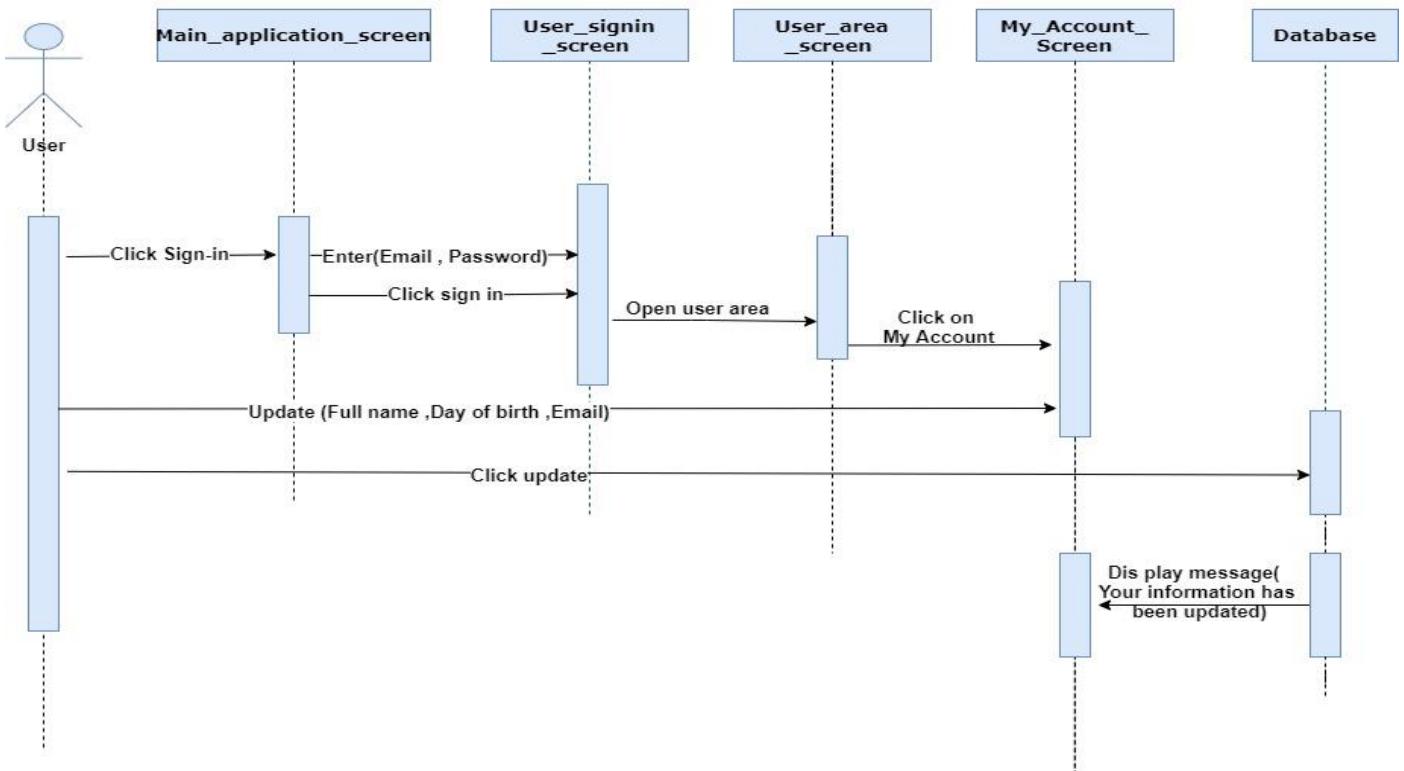


Figure 23:|User-Update User Information |

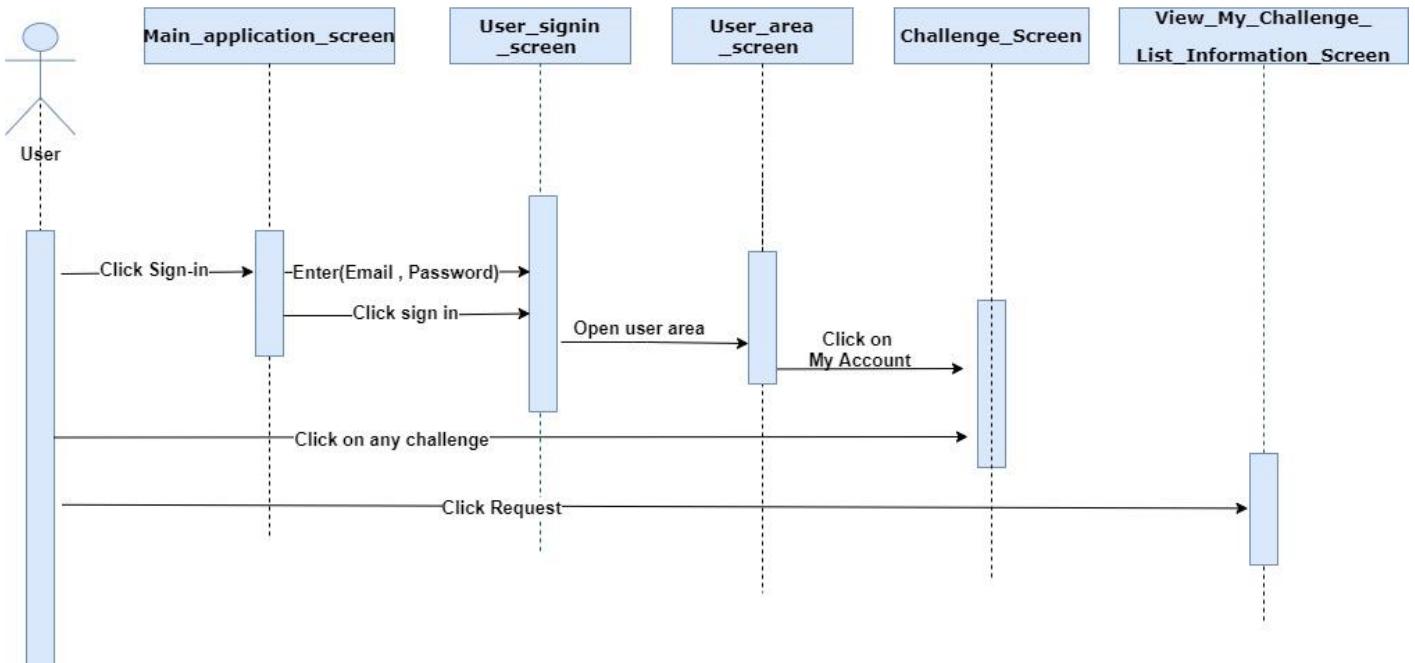


Figure 24:|User- Request Challenge Sequence|

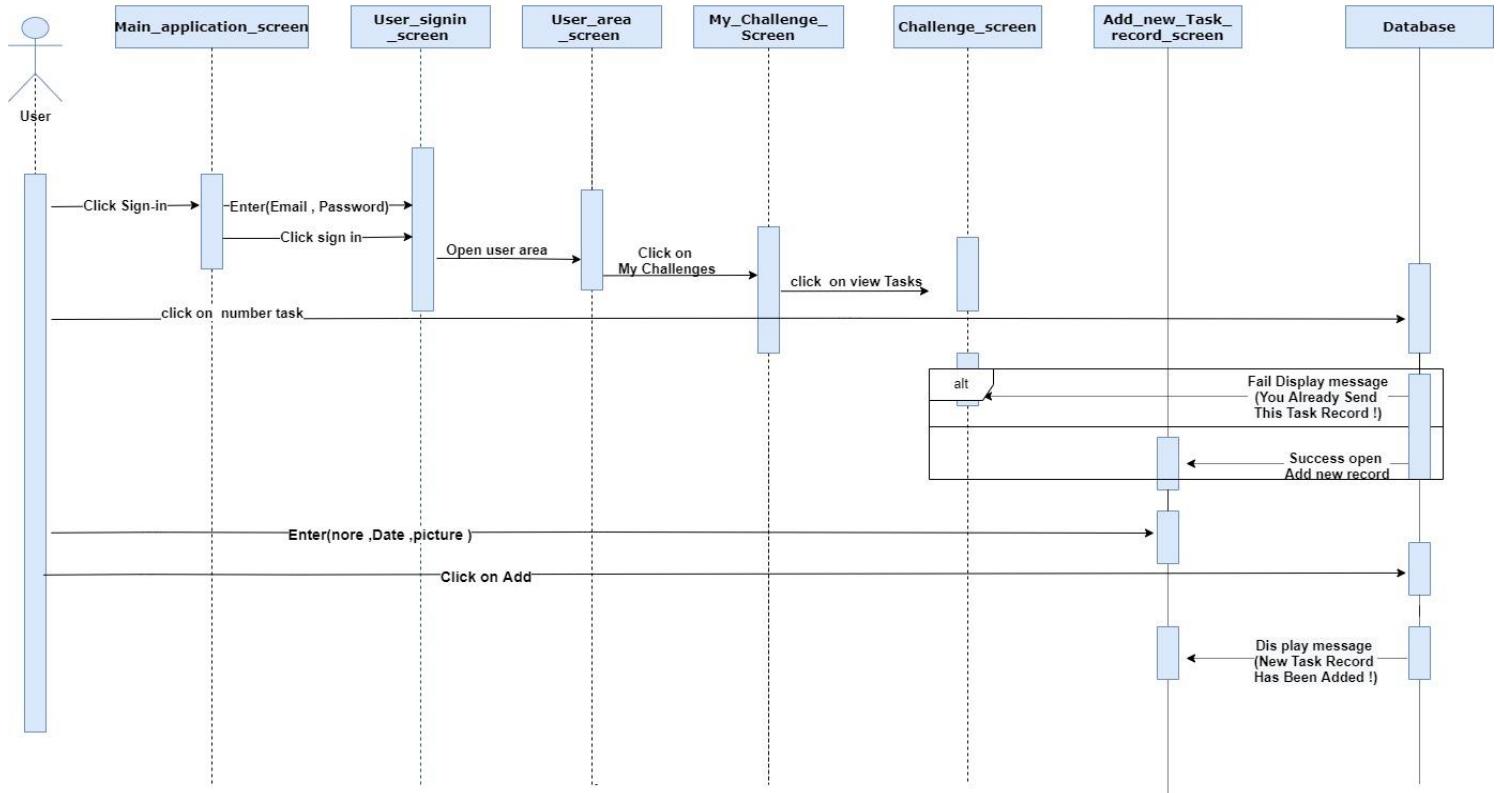


Figure 25: | User-Send Record Sequence |

## 4.7 UML Class Diagram

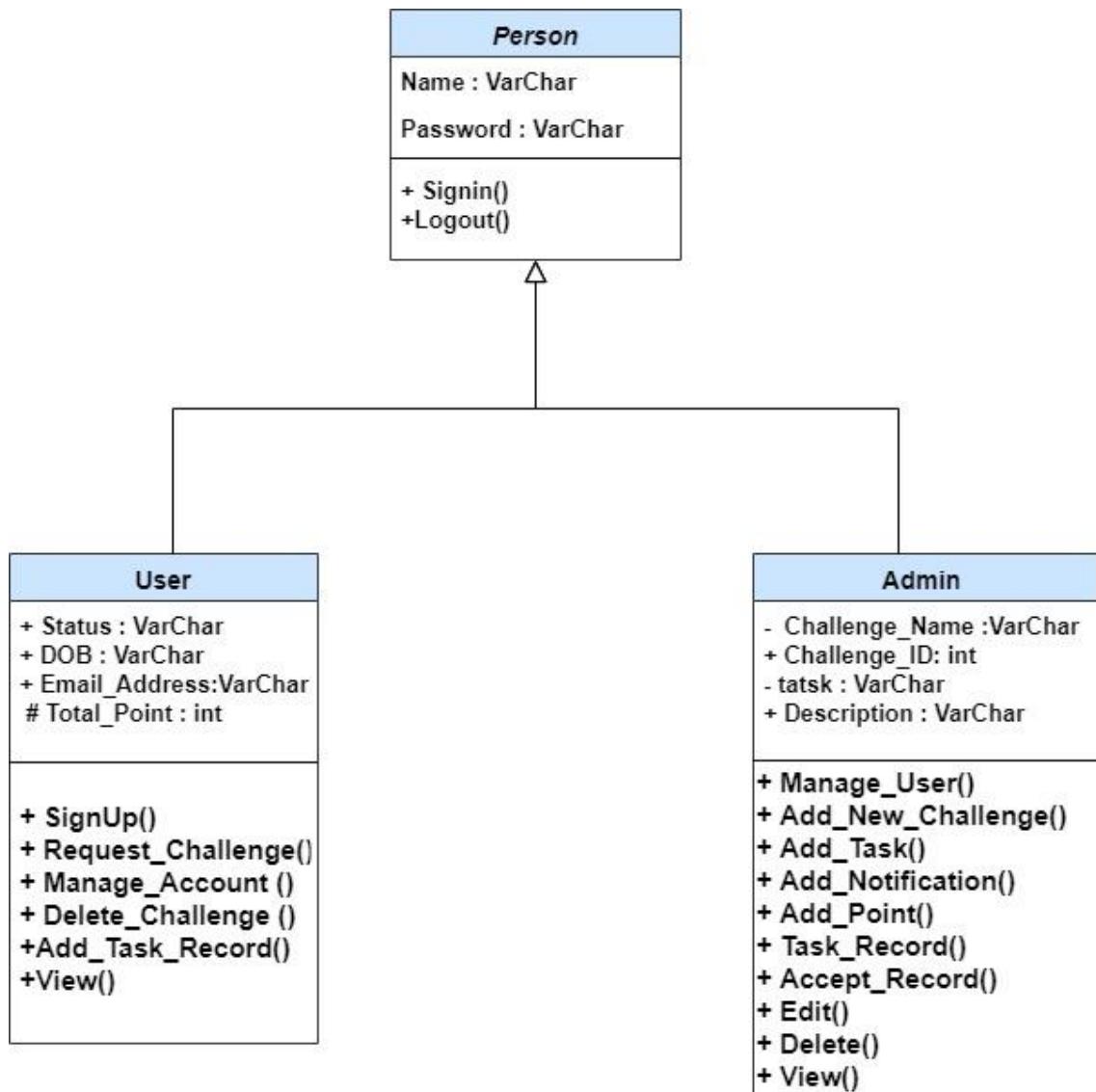
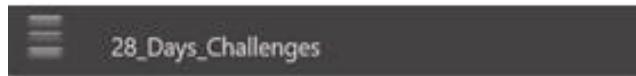


Figure 26: | Class Diagram |

#### 4.8 Graphical User Interface (GUI) Design

Design Below, you can see the medium-fidelity we made using a prototyping tool to help us with the implementation of the actual application.

➤ **User:**



Welcome to 28 Days Challenges



Sign in

Sign up



28\_Days\_Challenges

Signup

Full Name\*

DOB\*

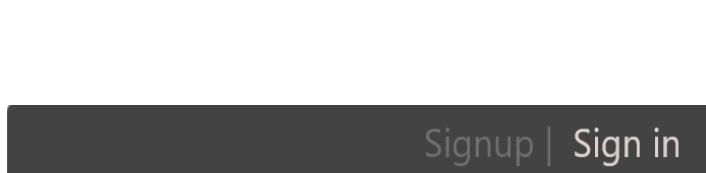
Email Address\*

Password\*

Signup

Figure 27: | User Main Screen|

Figure 28:| User Sign up |



I don't have an account? [Sign Up](#)

[Forgot Your password?](#)

Figure 29: | User Sign-in |

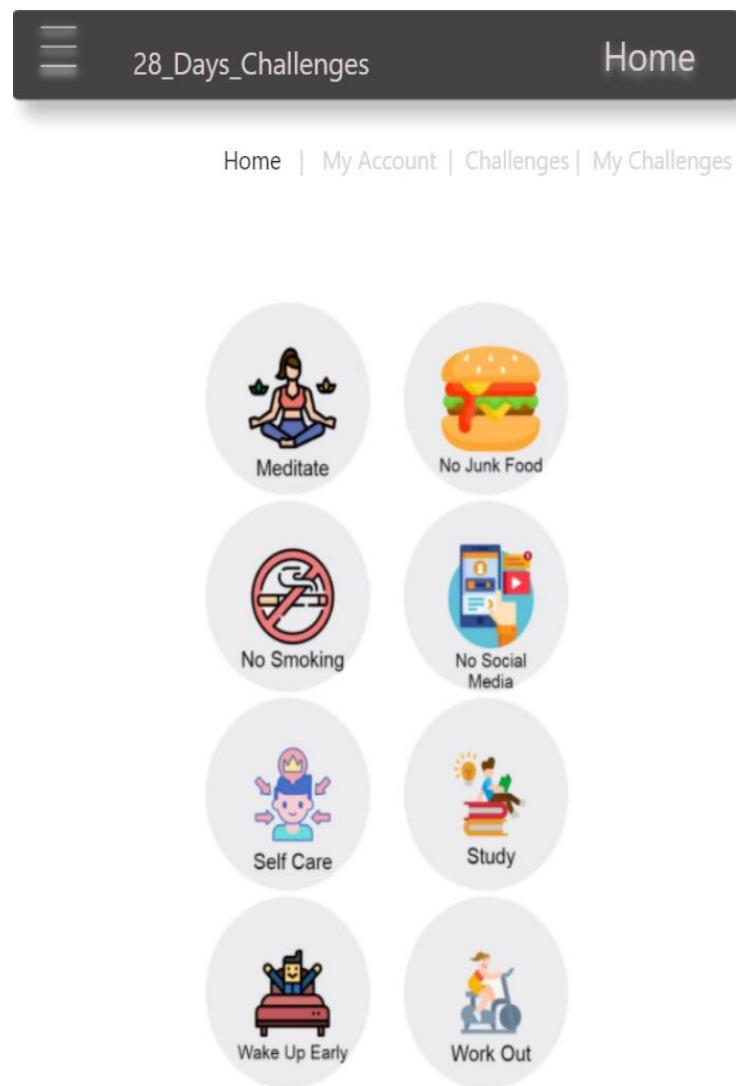


Figure 30: | Home Screen |



Figure 31:| User Request Challenge Screen|

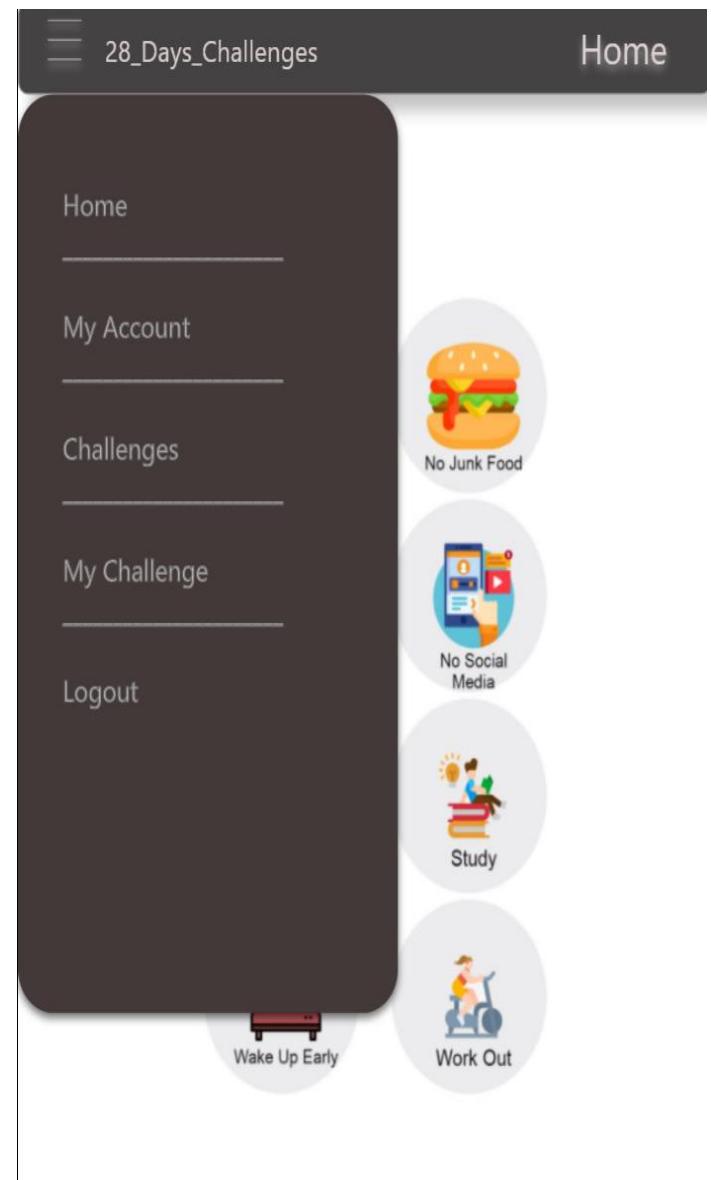


Figure 32:| User Main Options Screen|

28\_Days\_Challenges | My Account

Home | My Account | Challenges | My Challenges

Total Point

Full Name

DOB

Email Address

Password

Update Cancel



Figure 33: User Account Screen |

Figure 34: My Challenge Screen |

28\_Days\_Challenges | No Smoking

Home | My Account | Challenges | My Challenges | Log out



If you want to stop smoking, you can make small changes to your lifestyle that may help you resist the temptation to light up.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28		

Figure 35:| Challenge Task Days|

28\_Days\_Challenges | No Smoking

Home | My Account | Challenges | My Challenges | Log out



No Smoking

## Day one

Identify when you crave cigarettes  
A craving can last 5 minutes. Before you give up, make a list of 5-minute strategies. For example, you could leave the work for minute, eat or go have some drink.

Note

Pic Before      Pic After



Done

Figure 36:| Task Day one Screen|

➤ Admin:



Figure 37:| Admin Login Screen |



Figure 38:| Admin Menu Option Screen |



Figure 39:| Add Challenge Screen|

Figure 40:| View User List Screen|

#### 4.9 Summary

System modeling helps the analyst understand the functionality of the system and models are used to communicate with customers.

## 5.0 SYSTEM IMPLEMENTATION

### 5.1 Introduction

Up to now the system has been planned, analyzed, and designed. Now we will start with the implementation phase, in implementation, we will use different programming languages for different parts of the website. The User Interface, Admin Interface, Recommendation system will be built using the PHP framework in addition to jQuery, Java, CSS, and HTML. In this chapter, we will go through Database Implementation, Graphical User Interface Implementation.

### 5.2 Code Implementation

```
<?php
session_start();
include("../includes/config.php");
$U_ID = $_SESSION['U_Log'];
if (!$_SESSION['U_Log'])
echo '<script language="JavaScript">
document.location=("../Users_Signin.php";
</script>';
$T_ID = $_GET['T_ID'];
$C_ID = $_GET['C_ID'];
$sql1 = mysqli_query($dbConn,"select * from tasks_records where T_ID='$T_ID' AND U_ID='$U_ID'");
if (mysqli_num_rows($sql1)>0){
echo "<script language='JavaScript'>
alert ('You Already Send This Task Record !');
</script>";
echo '<script language="JavaScript">
document.location="View_Tasks.php?C_ID='.$C_ID.'";
</script>';
```

```

}

$sql123 = mysqli_query($dbConn,"select * from challenges where ID='$C_ID'");

$row123 = mysqli_fetch_array($sql123);

>Title=$row123['Title'];

$Picture=$row123['Picture'];

$sql456 = mysqli_query($dbConn,"select * from tasks where ID='$T_ID'");

$row456 = mysqli_fetch_array($sql456);

$Day_Number=$row456['Day_Number'];

$Description=$row456['Description'];

$Error = "";

if(isset($_POST['Submit']))

{
    $C_ID = $_POST['C_ID'];

$Day_Number=$_POST['Day_Number'];

$T_ID=$_POST['T_ID'];

$U_ID=$_POST['U_ID'];

$Date=$_POST['Date'];

$Notes=$_POST['Notes'];

$file;

$file2;

move_uploaded_file($_FILES["file"]["tmp_name"], "Files/" . $_FILES["file"]["name"]);

$file=$_FILES["file"]["name"];

$file = 'Files/'.$file;

move_uploaded_file($_FILES["file2"]["tmp_name"], "Files/" . $_FILES["file2"]["name"]);

$file2=$_FILES["file2"]["name"];

$file2 = 'Files/'.$file2;

$insert = mysqli_query($dbConn,"insert into tasks_records
(Day_Number,T_ID,U_ID,Date,Picture_Before,Picture_After,Notes,Status) values
('$Day_Number','$T_ID','$U_ID','$Date','$file','$file2','$Notes','Pending')");

```

```
$Error = 'New Task Record Has Been Added !';

echo "<script language='JavaScript'>
alert ('New Task Record Has Been Added !');
</script>";

echo ' <script language="JavaScript">
document.location='View_Tasks.php?C_ID='.$C_ID.'';
</script>';

}
```

## 5.3 Database Implementation

For our database implementation, we used the phpMyAdmin relational database intended to handle the administration of MySQL over the Web.

This database stores all the data needed for the website in five tables (challenges, challenges\_records, notifications, users, users\_challenges). Below you can see a specific description of each table.

### 5.3.1 Challenges Table:

This table contains all the challenges that are available on the application:-

	ID	Title	Description	Picture
<input type="checkbox"/>	4	Meditate	Meditate	Challeneges_Pictures/Meditate.png
<input type="checkbox"/>	6	No Junk Food	Are you gaining extra weight? Are you feeling tire...	Challeneges_Pictures/No Junk Food.png
<input type="checkbox"/>	7	No Smoking	If you want to stop smoking, you can make small c...	Challeneges_Pictures/No Smoking.png
<input type="checkbox"/>	8	No Social Media	There is no denying that social media has become a...	Challeneges_Pictures/No Social Media.png
<input type="checkbox"/>	9	Self Care	It's so important to make sure you take good care o...	Challeneges_Pictures/Self Care.png
<input type="checkbox"/>	10	Study	Study effectively. Most students start out each ne...	Challeneges_Pictures/Study.png
<input type="checkbox"/>	11	Wake Up Early	Improve your sleep quality, wake up and go to bed e...	Challeneges_Pictures/Wake Up Early.png
<input type="checkbox"/>	12	Work Out	We hear a lot of excuses about why people can't sta...	Challeneges_Pictures/Work Out.png
<input type="checkbox"/>	14	Learning English	English might be a popular language to learn, but ...	Challeneges_Pictures/eng.jpg

Figure 41 : |Challenges Table |

**This Table has 4 attributes which are:**

- **ID** which is of type INTEGER (20). It stores the id of the challenges. And it is the primary key of the table.
- **Title** which is of type VARCHAR (250). It stores the name of the challenges.
- **Description** which is of type VARCHAR (250). It stores a brief description about the challenges.
- **Picture** which is of type VARCHAR (250). It stores the picture of challenge.

### 5.3.2 User Table:

This table has 8 attributes which are:

The screenshot shows the phpMyAdmin interface with the following details:

- Server:** 127.0.0.1 | **Database:** 28\_days\_challenge\_2021 | **Table:** users
- Table Structure:** Shows the schema with columns: ID, Full\_Name, DOB, Email\_Address, Password, Total\_Points, Status, and Add\_Date\_Time.
- Data:** Displays 8 rows of user data:

ID	Full_Name	DOB	Email_Address	Password	Total_Points	Status	Add_Date_Time
2	Nada	1999-04-26	nada@gmail.com	81dc9bdb52d04dc20036dbd8313ed055	10	Active	2020-12-12 17:00:06
3	Layan ismail	1989-05-01	layan22@hotmail.com	81dc9bdb52d04dc20036dbd8313ed055	0	Active	2020-12-12 17:03:17
4	Hadeel Daraghmeh	1980-05-06	Hadeel22@gmail.com	81dc9bdb52d04dc20036dbd8313ed055	0	Active	2020-12-12 17:03:32
5	Dana Odeh	1998-02-21	Dana_nn@yahoo.com	81dc9bdb52d04dc20036dbd8313ed055	0	Active	2020-12-12 17:03:46
6	Ahmed mahmoud	2000-05-06	Ahmed20@gmail.com	81dc9bdb52d04dc20036dbd8313ed055	0	Active	2020-12-12 17:04:00
7	Hussein adam	1996-09-08	Huss20@gmail.com	81dc9bdb52d04dc20036dbd8313ed055	0	Active	2020-12-12 17:04:23
8	Nasser	1995-12-11	nasser_m@yahoo.com	81dc9bdb52d04dc20036dbd8313ed055	0	Active	2020-12-12 17:04:49

Figure 42 : | User Table |

- **ID** which is of type INTEGER (20). It stores the id of the user. And it is the primary key of the table.
- **Full\_Name** which is of type VARCHAR (250). It stores the username that is entered by the user.
- **Email\_Address** which is of type VARCHAR (250). It stores the email address that the user chose to login with.
- **DOB** which is of type VARCHAR (250). It stores the date of user's birth that he chose to log in with.
- **Password** which is of type VARCHAR (250). It stores the password of the user that he entered.
- **Total\_Points** which is of type INTEGER (20) .Its stores the number of points for the user.
- **Status:** which is of type VARCHAR (250). It stores the user's situation if he is active or deactivate.
- **Add\_Date\_Time:** which is type of TIMESTAMP. It stores the date and time of entering the database.

### 5.3.3 User Challenges Table

This table contains the subscription relationship between users and challenges, and has 3 attributes:-

The screenshot shows the phpMyAdmin interface with the following details:

- Database:** 28\_days\_challenge\_2021
- Table:** users\_challenges
- SQL Query:** SELECT \* FROM `users\_challenges`
- Results:** 15 total rows (0 - 14)
- Columns:** ID, U\_ID, C\_ID
- Data:**

ID	U_ID	C_ID
5	2	12
6	2	7
7	2	4
8	2	6
9	5	11
10	5	9
11	5	6
12	3	8
13	3	10
14	7	12
15	7	7
16	7	4
17	4	10
18	4	11
19	4	6

Figure 43 :| User Challenges Table |

- **ID** which is of type of INTEGER (20). It stores the id of the notifications. And it is the primary key of the table.
- **U\_ID** which is of type of INTEGER (20) , it stores the id of the user. It is a foreign key coming from the users table.
- **C\_ID** which is of type INTEGER (20) , it stores the id of the challenges. It is a foreign key coming from the challenges table.

### 5.3.4 Notifications Table

This Table has six attributes which are:

The screenshot shows the phpMyAdmin interface with the following details:

- Database:** 28\_days\_challenge\_2021
- Table:** notifications
- SQL Query:** SELECT \* FROM `notifications`
- Rows:** 6 (0 - 5)
- Columns:**
  - ID
  - C\_ID
  - Title
  - Description
  - Type
  - Add\_Date\_Time
- Data:**

ID	C_ID	Title	Description	Type	Add_Date_Time
3	4	You Can Do it !	Many smokers struggle with withdrawal and cravings...	Motivation	2020-12-12 16:45:24
4	10	Study	All our dreams can come true, if we have the coura...	Motivation	2020-12-12 20:04:59
5	12	Work out	Stay physically active with this home workout. Tak...	Reminder	2020-12-12 20:05:41
6	14	Learning English	always take notes	Reminder	2020-12-12 20:06:11
7	6	No Junk Food	Hope you are eating healthy food !	Reminder	2020-12-12 20:06:35
8	8	No Social Media	This challenge will make you realize how nice its ...	Motivation	2020-12-12 20:07:23

Figure 44: | Notification Table |

- **ID** which is of type INTEGER (20). It stores the id of the notifications. And it is the primary key of the table.
- **C\_ID** which is of type INTEGER (20). It stores the id of the challenges. It is a foreign key coming from the challenges table.
- **Title** which is of type VARCHAR (250). It stores the name of the notifications.
- **Description** which is of type VARCHAR (250). It stores a formal notifying.
- **Type** which is of type VARCHAR (250). It stores a type of notification that the admin choose.
- **Add\_Date\_Time** which is of type TIMESTAMP. It stores the date and time of entering the database.

### 5.3.5 Tasks Records

This table has 10 attributes which are:

The screenshot shows the phpMyAdmin interface with the following details:

- Database:** 28\_days\_challenge\_2021
- Table:** tasks\_records
- Query:** SELECT \* FROM `tasks\_records`
- Results:** Showing rows 0 - 5 (6 total, Query took 0.0006 seconds.)
- Table Structure:**

ID	Day_Number	T_ID	U_ID	Date	Picture_Before	Picture_After	Notes	Status	Add_Data_Time
8	2	30	2	2020-10-11	Files/	Files/	I have done this task easily	Accepted	2020-12-12 17:00:06
9	1	35	2	2020-09-11	Files/unhealthy.jpg	Files/health.jif	That was so easy to do , i eat vegetables and shop...	Pending	2020-12-12 20:38:54
10	1	1	2	2019-09-12	Files/	Files/	Today I left my work and go to the coffee shop and...	Pending	2020-12-12 20:40:58
11	3	31	2	2020-04-04	Files/	Files/	My reasons are . Because smoking interferes with my...	Pending	2020-12-12 20:43:18
12	4	32	2	2020-10-11	Files/	Files/	My Family support me	Pending	2020-12-12 20:44:02
13	5	33	2	2020-12-12	Files/	Files/	Yeah I tried sometimes and I could not do it ,but ...	Pending	2020-12-12 20:45:34
- Operations:** Check all, With selected: Edit, Copy, Delete, Export
- Query results operations:** Print, Copy to clipboard, Export, Display chart, Create view
- Bookmark this SQL query:** Label: [ ] Let every user access this bookmark

Figure 45 : | Tasks Records |

- **ID** which is type of INTEGER (20), it stores the id of the Tasks\_records. And it is the primary key of the table.
- **U\_ID** which is of type of INTEGER (20) , it stores the id of the user. It is a foreign key coming from the users table.
- **Date** which is type VARCHAR (250), it stores the date of the start for the selected challenge.
- **Picture\_Before** which is type of VARCHAR (250), it stores the first image before the start of the challenge.
- **Picture\_After** which is type of VARCHAR (250), it stores the first image After the end of the challenge.
- **Add\_Data\_Time** which is type of TIMESTAMP, It stores the date and time of entering the database
- **Day\_Number** which is type of INT(20) , it stores the number of the task day.

- **Notes** which is type of VARCHAR(250) ,it stores what user writes about how the task implemented , difficulties and problems.
- **T\_ID** which is type of INT(20) ,it stores the ID of each task.
- **Status** which is type of VARCHAR(250) ,It stores the user's situation if he is active or deactivate.

### 5.3.6 Tasks Record

This Table has 5 attributes which are:

	ID	C_ID	Day_Number	Description	Total_Points
<input type="checkbox"/>	1	7	1	Identify when you crave cigarettes A craving can ...	10
<input type="checkbox"/>	35	6	1	Plan ahead Try to plan out each weeks meals on Sun...	10
<input type="checkbox"/>	30	7	2	Get moving A review of scientific studies have pro...	10
<input type="checkbox"/>	36	6	2	Shop the perimeter the perimeter of the grocery st...	10
<input type="checkbox"/>	31	7	3	Make a list of reasons to quit Keep reminding you...	10
<input type="checkbox"/>	66	6	3	Drink Water: If you feel a sudden urge for a speci...	10
<input type="checkbox"/>	67	6	4	Eat More Protein Eating more protein may reduce yo...	10
<input type="checkbox"/>	32	7	4	Get some stop smoking support: If friends or famil...	10
<input type="checkbox"/>	33	7	5	Think positive : You might have tried to quit smok...	10
<input type="checkbox"/>	68	6	5	Eat healthy snacks	10
<input type="checkbox"/>	34	7	6	Give Yourself a Break: One reason people smoke is ...	10
<input type="checkbox"/>	69	6	6	Eat Fresh Fruit and Vegetables	10
<input type="checkbox"/>	70	6	7	eat small servings of food six times a day. It can...	10
<input type="checkbox"/>	63	7	7	Avoid triggers Dont set yourself up for a smoking ...	10
<input type="checkbox"/>	64	7	8	Get physical try squats, deep knee bends, pushups,...	10
<input type="checkbox"/>	71	6	8	Try healthy stress management tools like: taking a...	10
<input type="checkbox"/>	72	6	9	Get more sleep	10
<input type="checkbox"/>	65	7	9	Remind yourself of the benefits Write down or say...	10

Figure 46: | Tasks Records |

- **ID** which is Type of INT(20) , it stores the task id and it's the primary key of the table.
- **C\_ID** which is of type INTEGER (20). It stores the id of the challenges. It is a foreign key coming from the challenges table.
- **Day\_Number** which is type of INT(20) , it stores the number of the task day.

- **Description** which is of type VARCHAR (250). It stores a task definition and what should the user do in each day.
- **Total\_Point** which is of type INTEGER (20) .Its stores the number of points to each task.

#### 5.4 Data Dictionary:

❖ Challenges:

**Table 9: | Challenges Data Dictionary|**

Field Name	Data Type	Field length	Constraint	Description	Example
<b>ID</b>	INT	20	Primary key	ID of challenge	123654
<b>Title</b>	VARCHAR	250	NOT NULL	Title of challenge	No Junk food
<b>Description</b>	VARCHAR	250	NOT NULL	Description of the challenge	Try to include more vegetables in your meals today.
<b>Picture</b>	VARCHAR	250	NOT NULL	Picture of each challenge	-Upload file-

❖ User:

Table 10 : | User Data Dictionary |

Field Name	Data Type	Field length	Constraint	Description	Example
<b>ID</b>	INT	20	Primary Key	ID of user	123654
<b>Full_Name</b>	VARCHAR	250	NOT NULL	Name of user	Nadia
<b>DOB</b>	VARCHAR	250	NOT NULL	User date of birth	15/5/1999
<b>Email_Address</b>	VARCHAR	250	NOT NULL	Email of user	<a href="mailto:nana@gmail.com">nana@gmail.com</a>
<b>Password</b>	VARCHAR	250	NOT NULL	Password of the user	*****
<b>Total_Point</b>	INT	20	NOT NULL	Number of point	20
<b>Status</b>	VARCHAR	250	NOT NULL	Active or not	Not Active
<b>Add_Date_Time</b>	TIMESTAMP	—	NOT NULL	Date and time of entering the database	

❖ User Challenges:

Table 11 :| User Challenges Data Dictionary |

Field Name	Data Type	Field length	Constraint	Description	Example
<b>ID</b>	INT	20	Primary Key	ID of the notifications	123654
<b>C_ID</b>	INT	20	Foreign Key	ID of the challenges	987456
<b>U_ID</b>	INT	250	Foreign Key	ID of the user	555555

❖ Tasks\_ Records :

Table 12 :| Tasks Records Data Dictionary |

Field Name	Data Type	Field length	Constraint	Description	Example
<b>ID</b>	INT	20	Primary Key	ID of the Challenges_records	123654
<b>U_ID</b>	INT	20	Foreign Key	User challenges ID	789654
<b>T_ID</b>	INT	20	Foreign Key	Tasks ID	1479632
<b>Day_Number</b>	INT	20	NOT NULL	The current day of the task, from 1-28	15
<b>Picture_After</b>	VARCHAR	250	NOT NULL	The image After the end of the challenge	Upload file
<b>Picture_Before</b>	VARCHAR	250	NOT NULL	The image Before the end of the challenge	Upload file
<b>Note</b>	VARCHAR	250	NOT NULL	Note about the task	The Task is done, its easy.
<b>Status</b>	VARCHAR	250	NOT NULL	If the task is accepted or rejected	Active
<b>Add_Date_Time</b>	TIMESTAMP	—	NOT NULL	Date and time of entering the database.	

❖ Notifications:

Table 13 : | Notifications Data Dictionary |

Field Name	Data Type	Field length	Constraint	Description	Example
<b>ID</b>	INT	20	Primary Key	ID of the notifications	123654
<b>C_ID</b>	INT	20	Foreign Key	ID of the challenges	987456
<b>Title</b>	VARCHAR	250	NOT NULL	Name of the notifications	Day 3 of the challenge “No Junk food”
<b>Description</b>	VARCHAR	250	NOT NULL	Formal notifying	Make a study schedule ,always take a break
<b>Type</b>	VARCHAR	250	NOT NULL		Reminder
<b>Add_Date_Time</b>	TIMESTAMP	—	NOT NULL	Date and time of entering the database	

❖ Tasks:

Table 14: | Tasks Data Dictionary |

Field Name	Data Type	Field length	Constraint	Description	Example
<b>ID</b>	INT	20	Primary Key	ID of the notifications	123654
<b>C_ID</b>	INT	20	Foreign Key	ID of the challenges	987456
<b>Day_Number</b>	INT	20	NOT NULL	Day of task	2
<b>Description</b>	VARCHAR	250	NOT NULL	Task definition	Do a setup 10 times
<b>Total_Points</b>	INT	20	NOT NULL	Required points of each task	10

## 5.5 Graphical User Interface Implementation

❖ Admin:

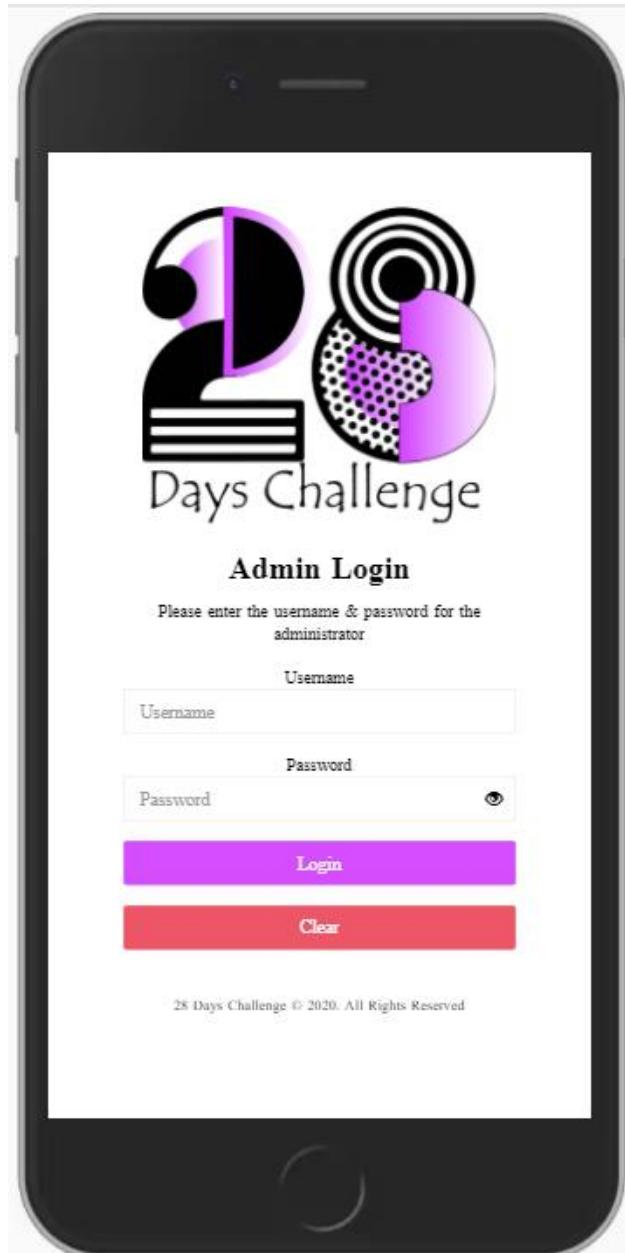


Figure 47:| Admin Login Screen |

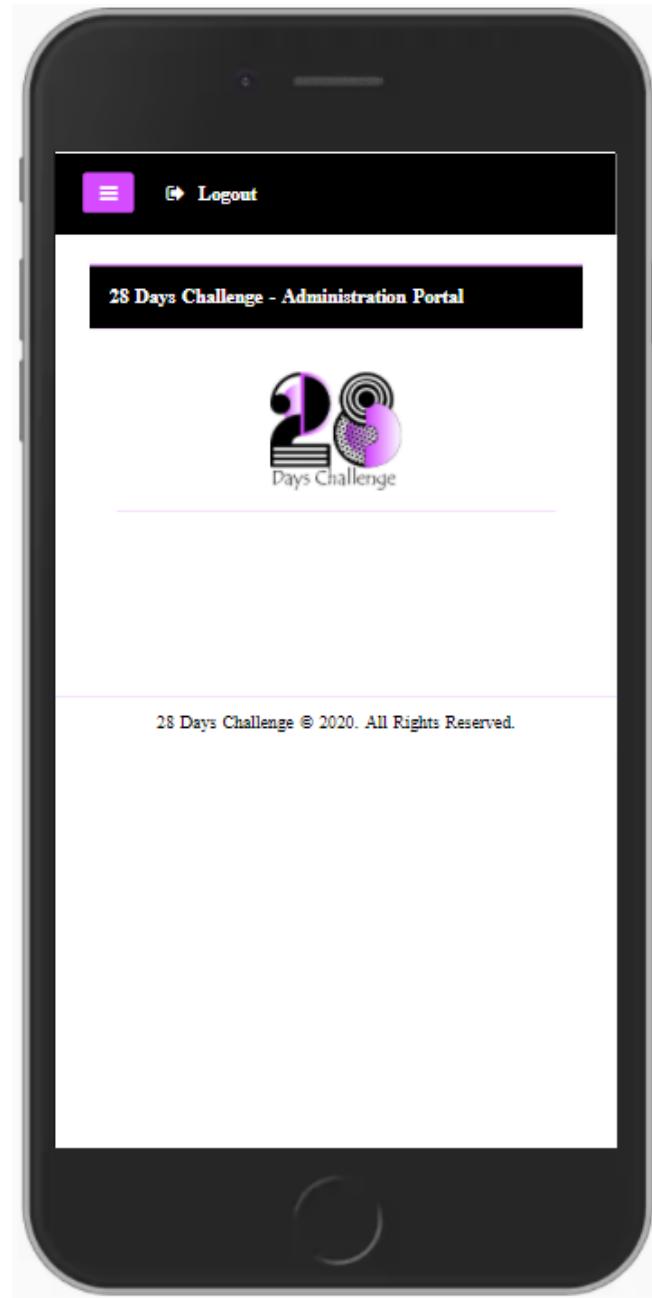


Figure 48:| Admin Area Screen |

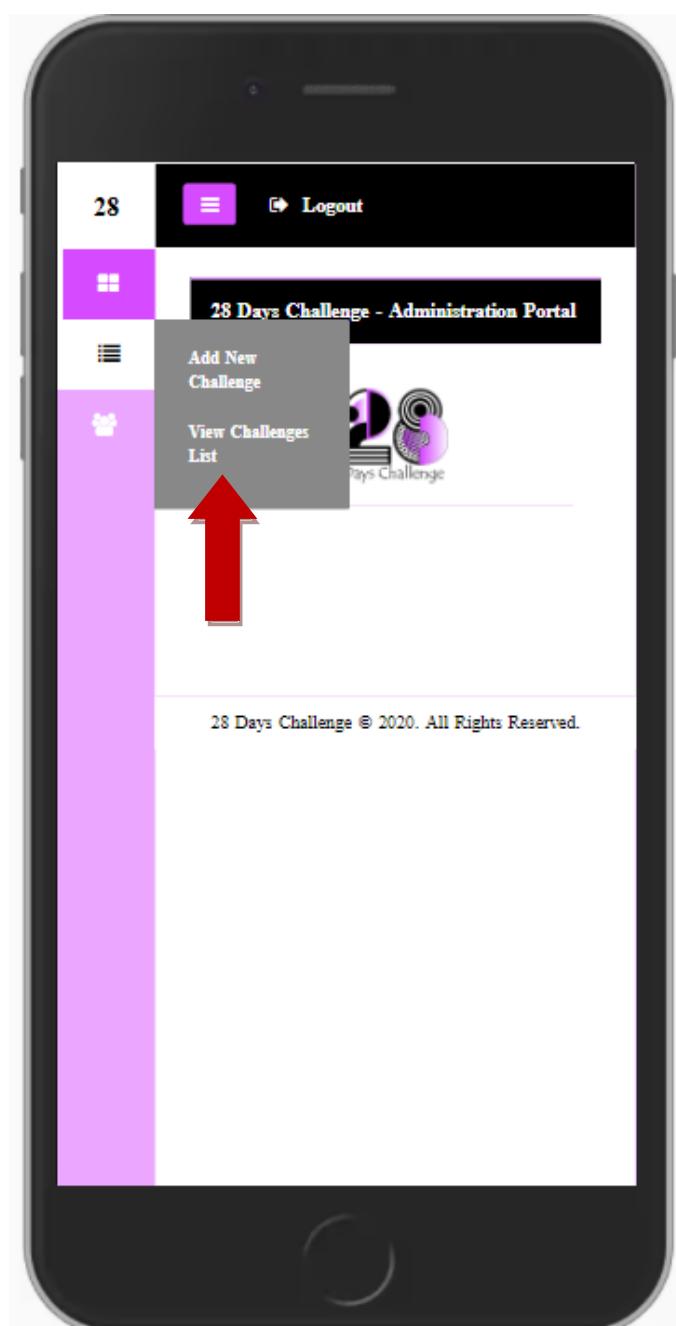


Figure 49: | Admin Menu Option Screen |

This screenshot shows the 'View Challenges List Information' screen. At the top is a black header bar with the title. Below it is a search bar labeled 'Search:' and a dropdown menu set to 'Show: 10 entries'. The main content is a table titled 'View Challenges List Information' with the following columns: 'Title', 'Description', 'Picture', and 'Actions'. There are nine rows of data, each representing a challenge:

Title	Description	Picture	Actions
Learning English	English might be a popular language to learn, but this doesn't necessarily mean it is a simple language to master, there are many challenges people face when learning English and if you are aware of these beforehand you stand a much greater chance of		<a href="#">View Challenge Tasks</a> <a href="#">View Challenge Notifications</a> <a href="#">Edit</a> <a href="#">Delete</a>
Meditate	Meditate		<a href="#">View Challenge Tasks</a> <a href="#">View Challenge Notifications</a> <a href="#">Edit</a> <a href="#">Delete</a>
No Junk Food	Are you gaining extra weight? Are you feeling tired all the time? This can be due to your sedentary lifestyle and unhealthy diet. If you want to feel better, boost your energy and slim down, you should change your eating habits.		<a href="#">View Challenge Tasks</a> <a href="#">View Challenge Notifications</a> <a href="#">Edit</a> <a href="#">Delete</a>
No Smoking	If you want to stop smoking, you can make small changes to your lifestyle that may help you resist the temptation to light up.		<a href="#">View Challenge Tasks</a> <a href="#">View Challenge Notifications</a> <a href="#">Edit</a> <a href="#">Delete</a>
No Social Media	There is no denying that social media has		<a href="#">View Challenge Tasks</a>

Figure 50: | View Challenges List Screen |

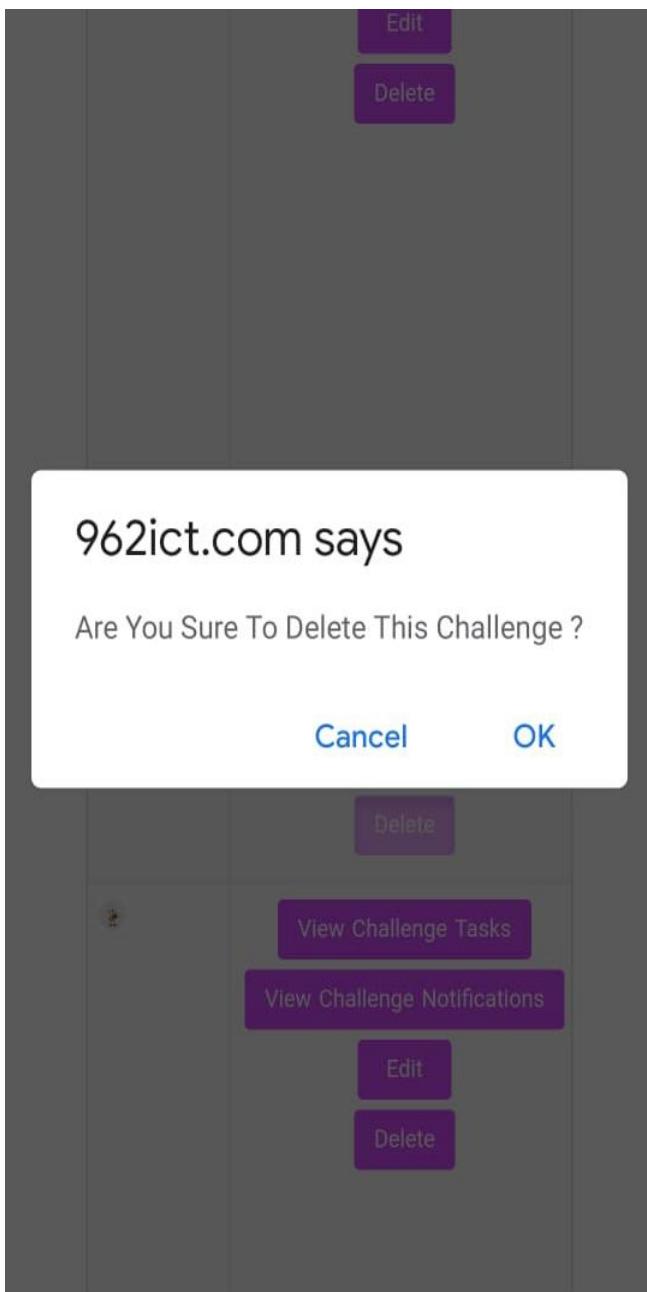


Figure 51:| Verify Delete Challenge Message|

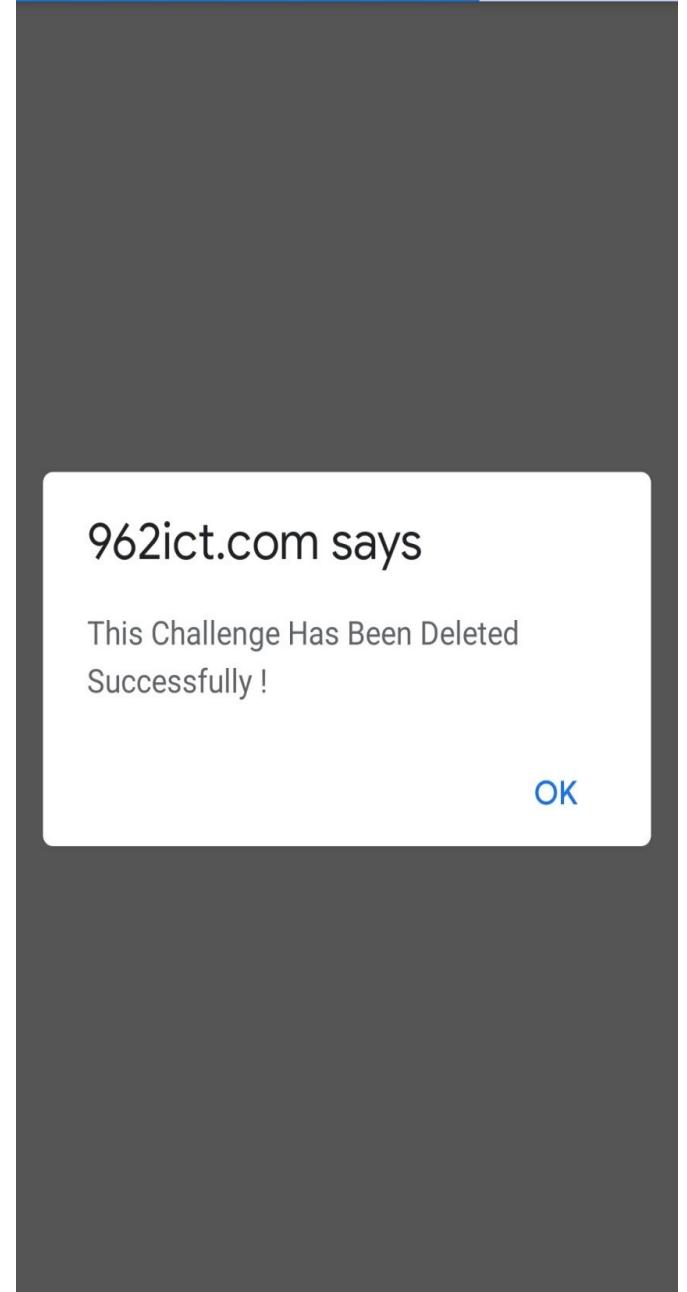
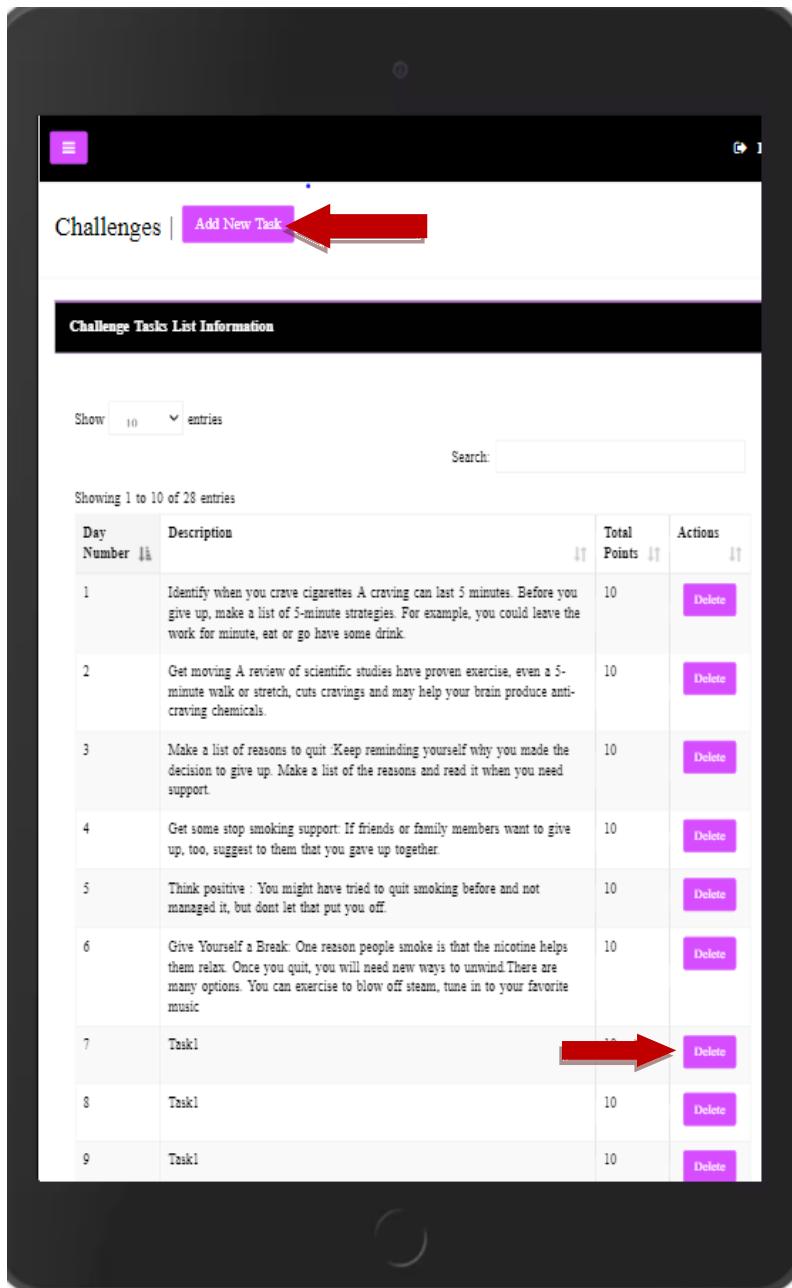


Figure 52:| Delete Challenge Successfully|



Challenges | Add New Task

**Challenge Tasks List Information**

Show 10 entries Search:

Showing 1 to 10 of 28 entries

Day Number	Description	Total Points	Actions
1	Identify when you crave cigarettes A craving can last 5 minutes. Before you give up, make a list of 5-minute strategies. For example, you could leave the work for minute, eat or go have some drink.	10	<button>Delete</button>
2	Get moving A review of scientific studies have proven exercise, even a 5-minute walk or stretch, cuts cravings and may help your brain produce anti-craving chemicals.	10	<button>Delete</button>
3	Make a list of reasons to quit Keep reminding yourself why you made the decision to give up. Make a list of the reasons and read it when you need support.	10	<button>Delete</button>
4	Get some stop smoking support If friends or family members want to give up, too, suggest a them that you gave up together.	10	<button>Delete</button>
5	Think positive You might have tried to quit smoking before and not managed it, but don't let that put you off.	10	<button>Delete</button>
6	Give Yourself a Break One reason people smoke is that the nicotine helps them relax. Once you quit, you will need new ways to unwind. There are many options. You can exercise to blow off steam, tune in to your favorite music	10	<button>Delete</button>
7	Task1	10	<button>Delete</button>
8	Task1	10	<button>Delete</button>
9	Task1	10	<button>Delete</button>

Figure 53: |Challenges Tasks List Information|

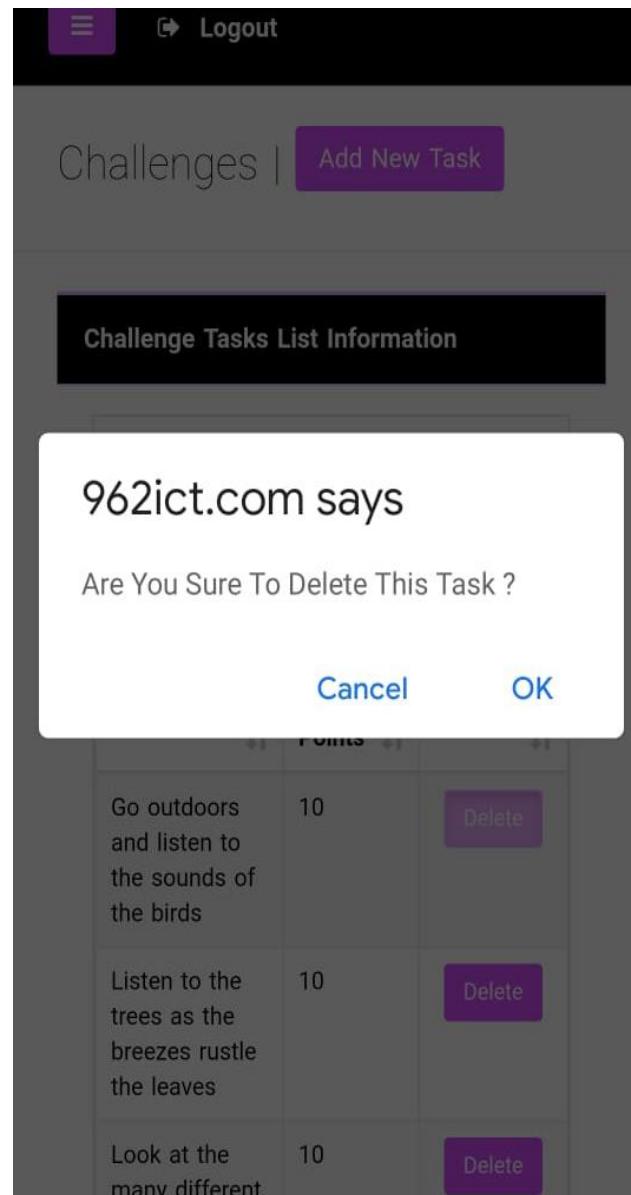


Figure 54: |Verify Delete Task|

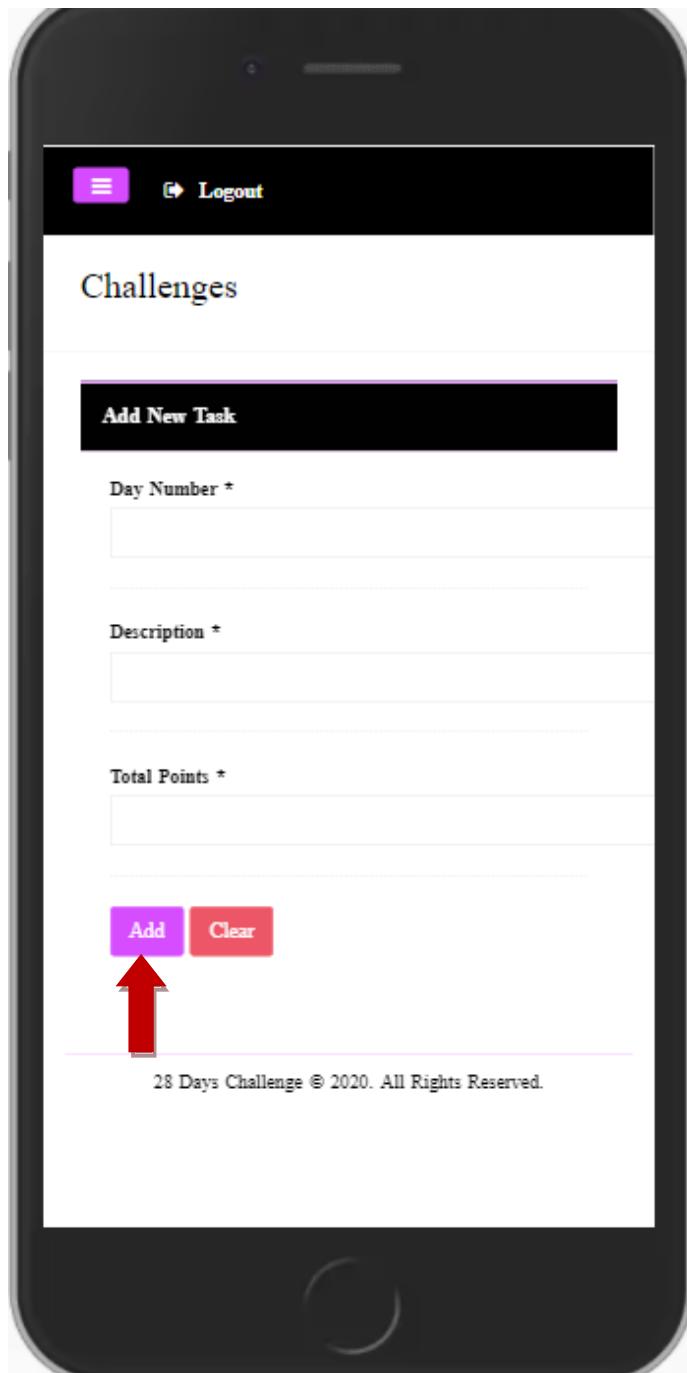


Figure 55: | Add New Task Screen |

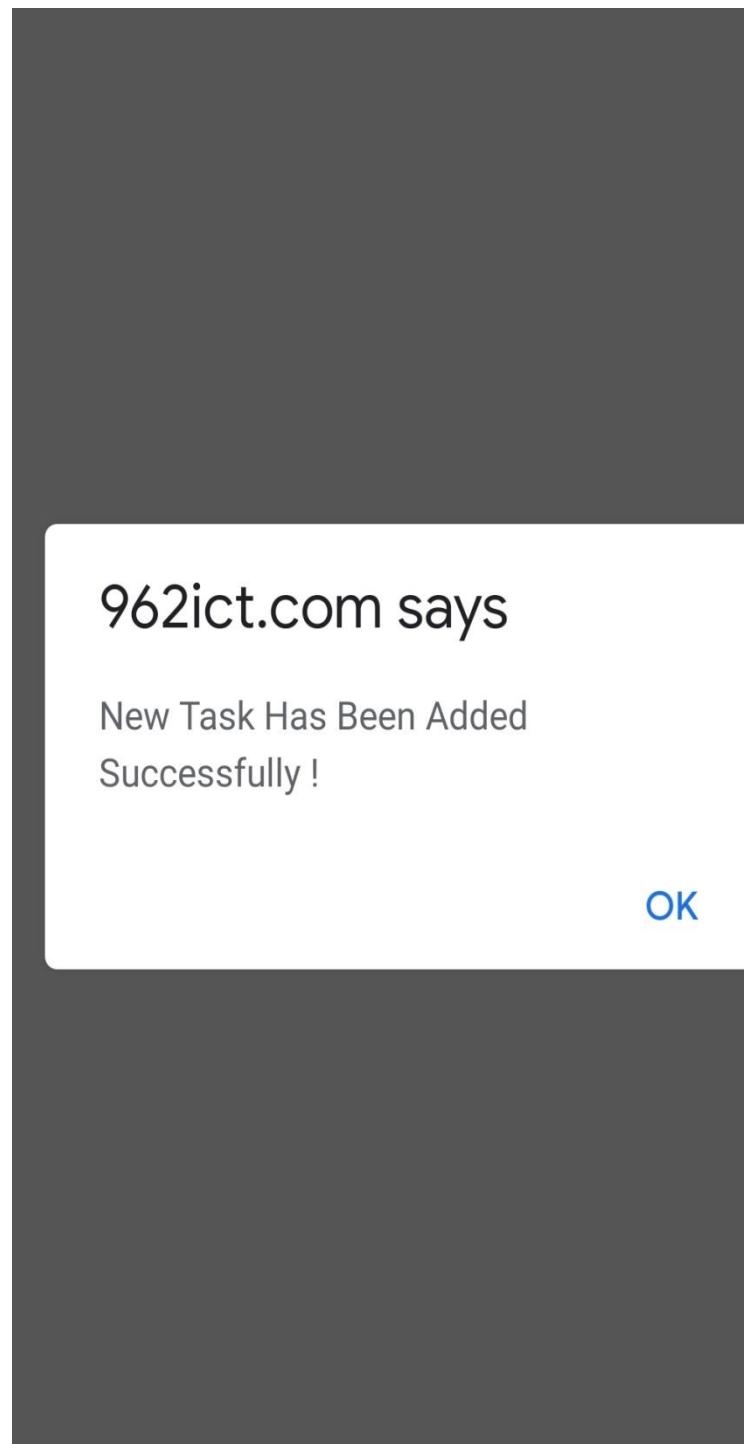


Figure 56: | New Task Added Message |

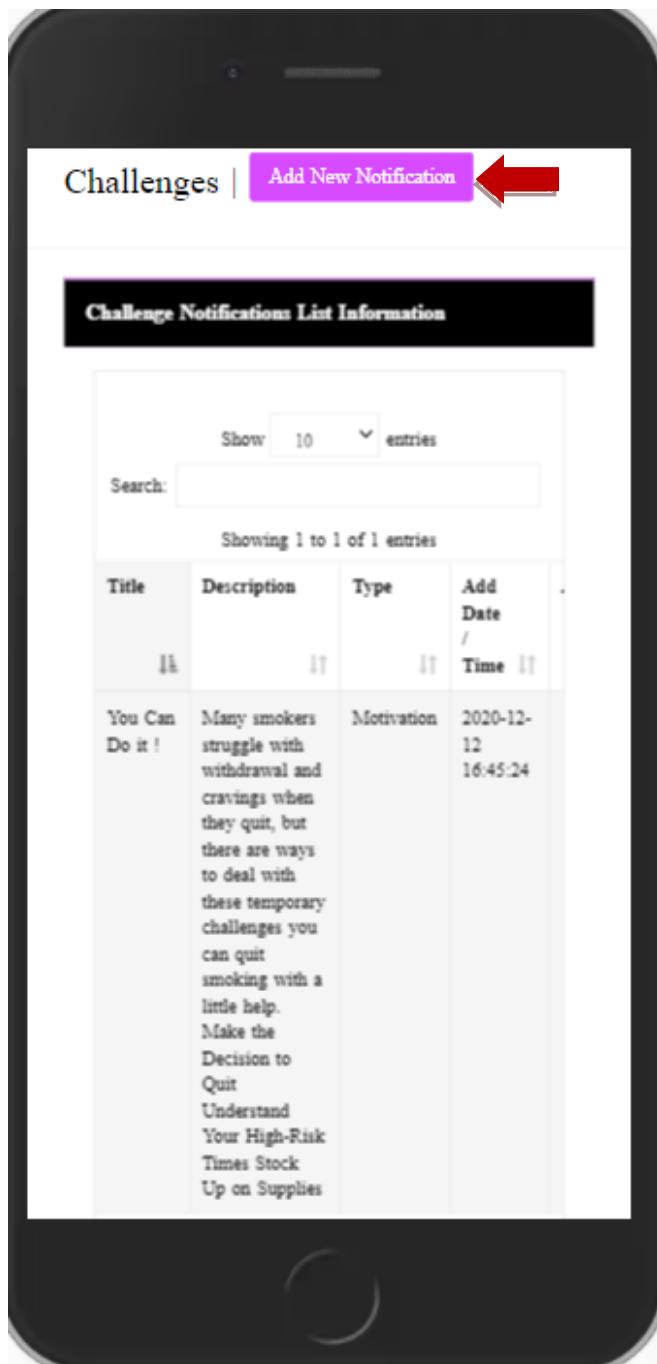


Figure 57:| Challenge Notification list Screen |

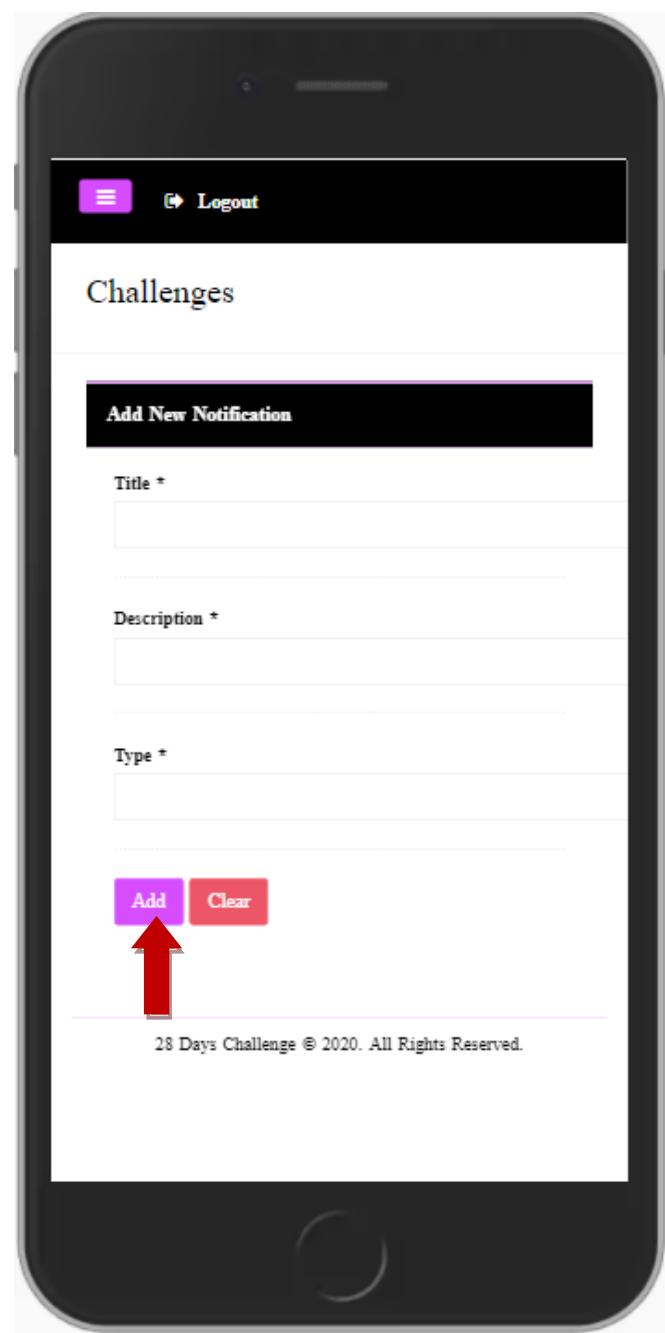


Figure 58:| Add New Notification Screen |

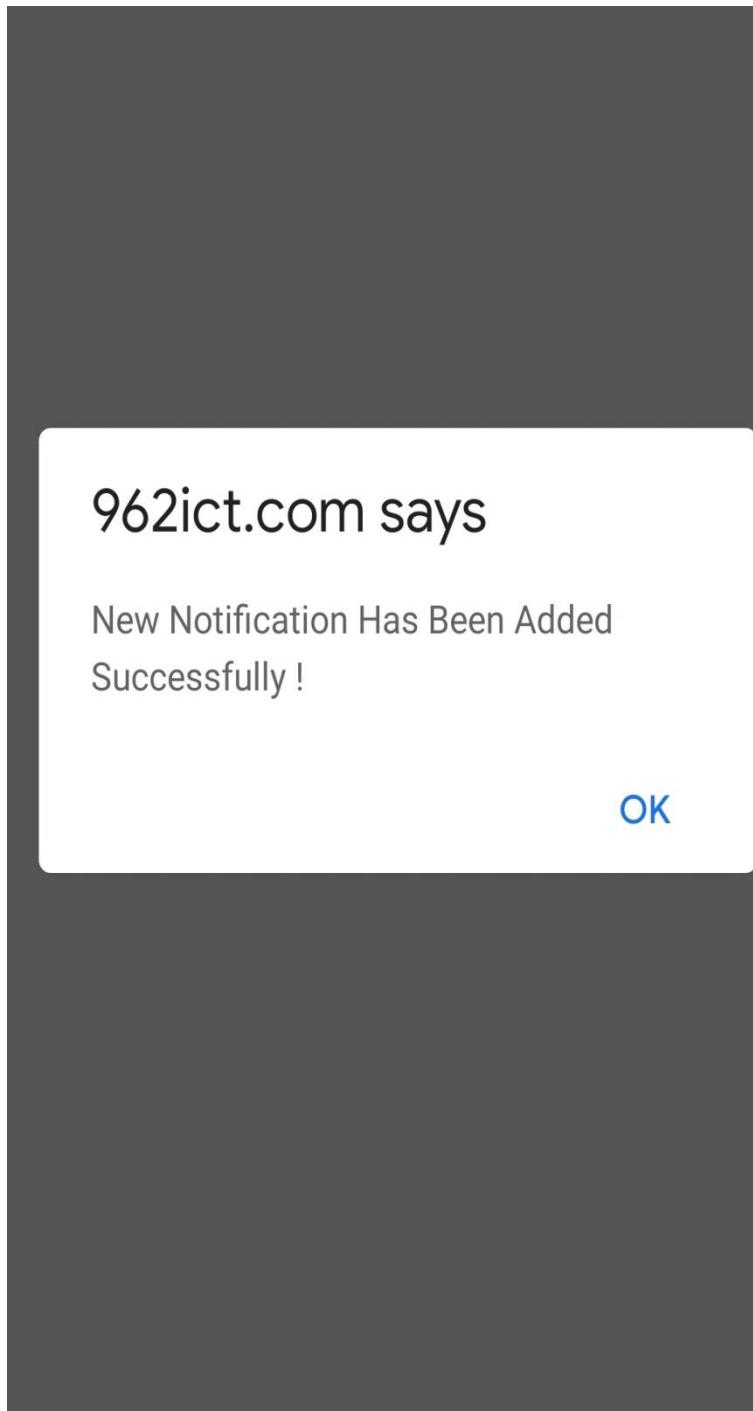


Figure 59:| Added Notification Message|

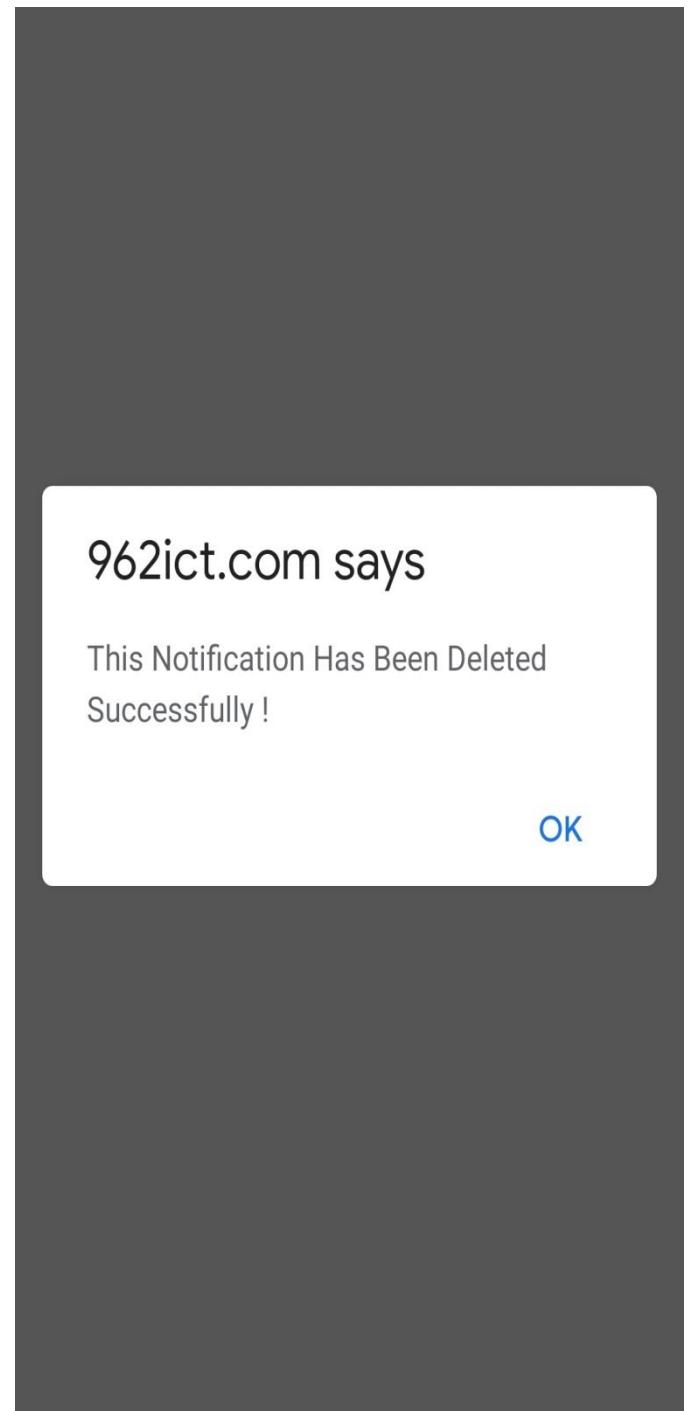


Figure 60:| Successfully added notification Message |

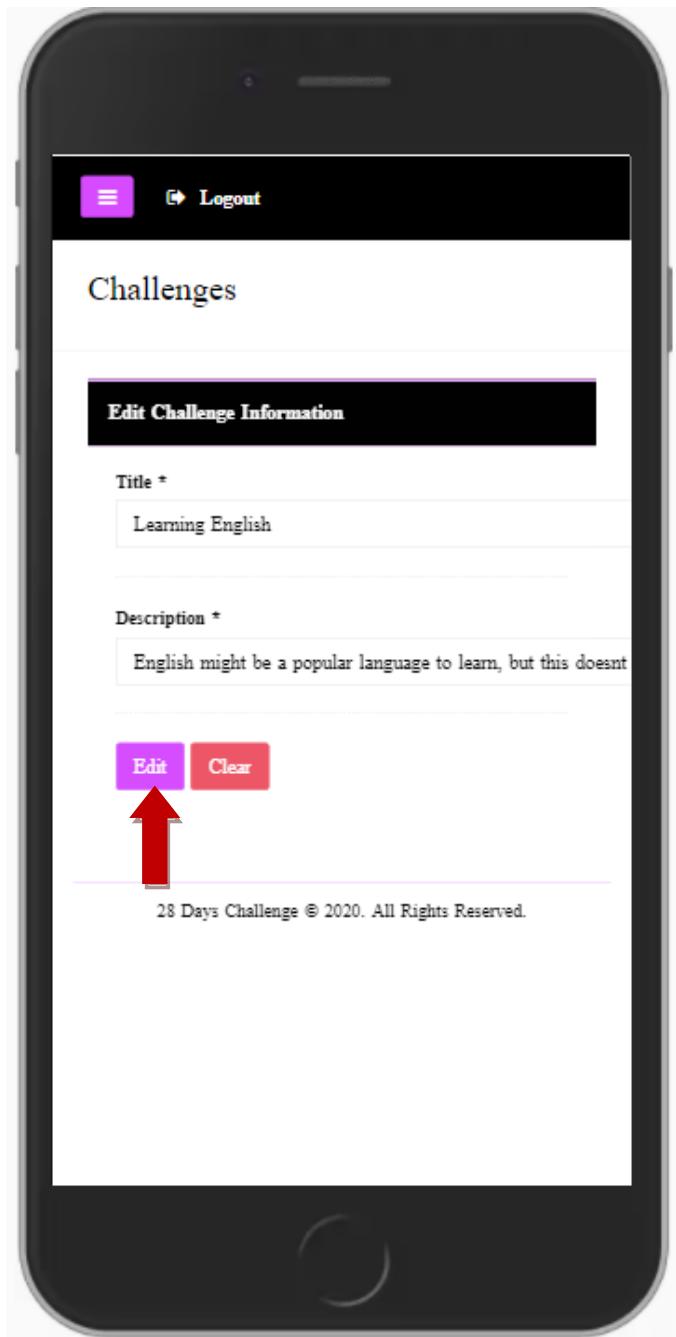


Figure 61: |Edit Challenge Screen|

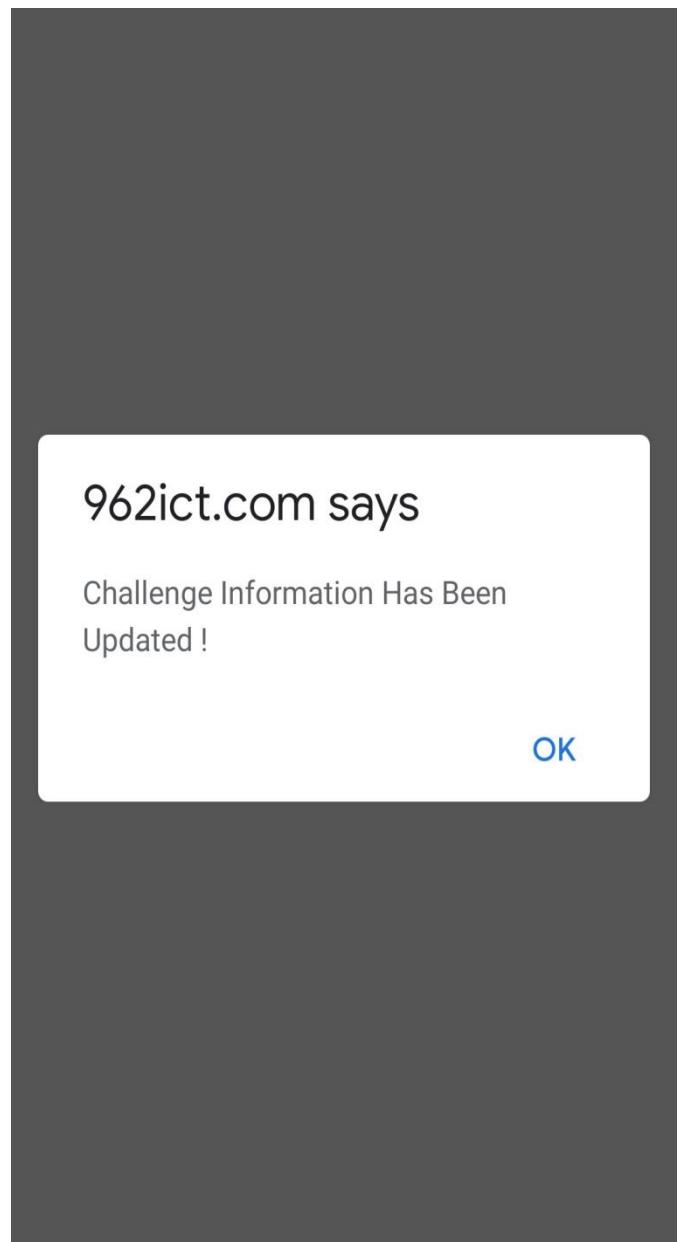


Figure 62: | Successfully edited challenge |

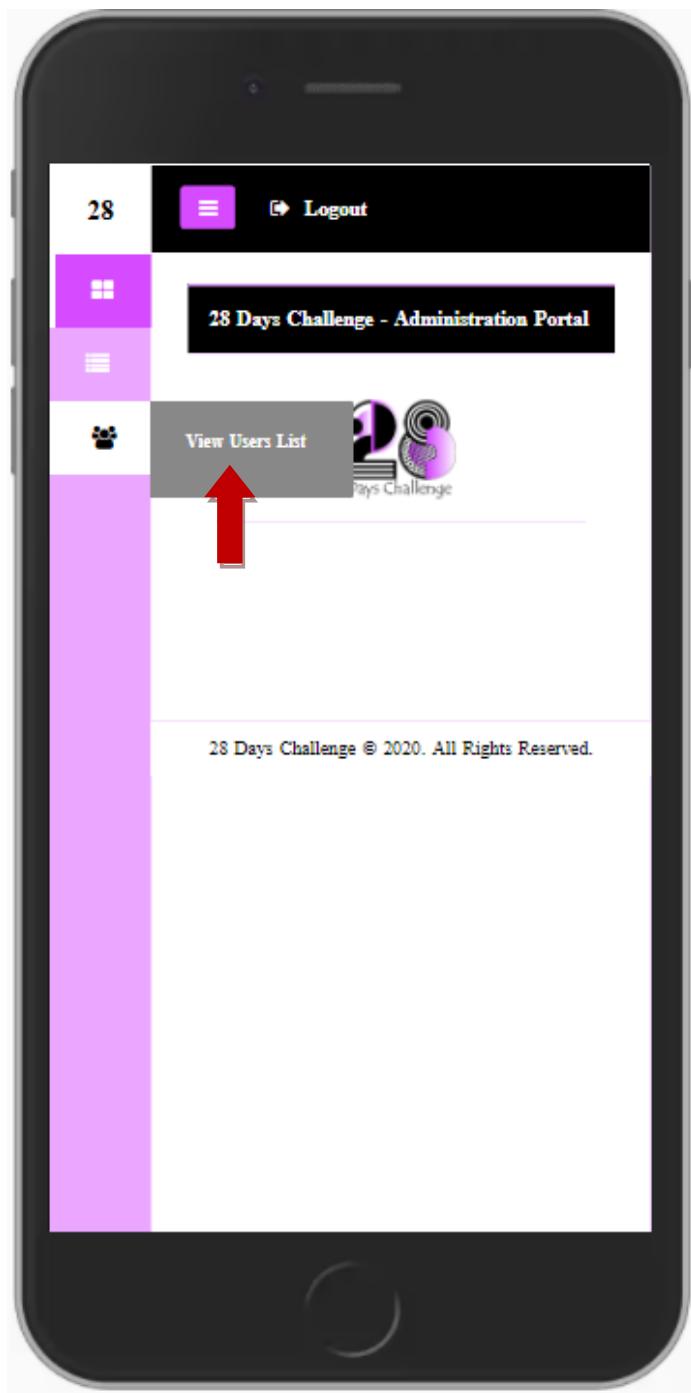


Figure 63:| View User List Option |

Full Name	DOB	Email Address	Total Points	Status	Add Date / Time	Actions
Ahmed mahmoud	2000-05-06	Ahmed20@gmail.com	0	Active	2020-12-12 17:04:00	<a href="#">View User Challenges List</a> <a href="#">Edit</a> <a href="#">Delete</a>
Dana Odeh	1998-02-21	Dana_nn@yahoo.com	0	Active	2020-12-12 17:03:46	<a href="#">View User Challenges List</a> <a href="#">Edit</a> <a href="#">Delete</a>
Hadeel Daraghmeh	1980-05-06	Hadeel22@gmail.com	0	Active	2020-12-12 17:03:32	<a href="#">View User Challenges List</a> <a href="#">Edit</a> <a href="#">Delete</a>
Hussein adam	1996-09-08	Huss20@gmail.com	0	Active	2020-12-12 17:04:23	<a href="#">View User Challenges List</a> <a href="#">Edit</a> <a href="#">Delete</a>
Layan ismail	1989-05-01	layan22@hotmail.com	0	Active	2020-12-12 17:03:17	<a href="#">View User Challenges List</a> <a href="#">Edit</a> <a href="#">Delete</a>

Figure 64:| View User List Screen |

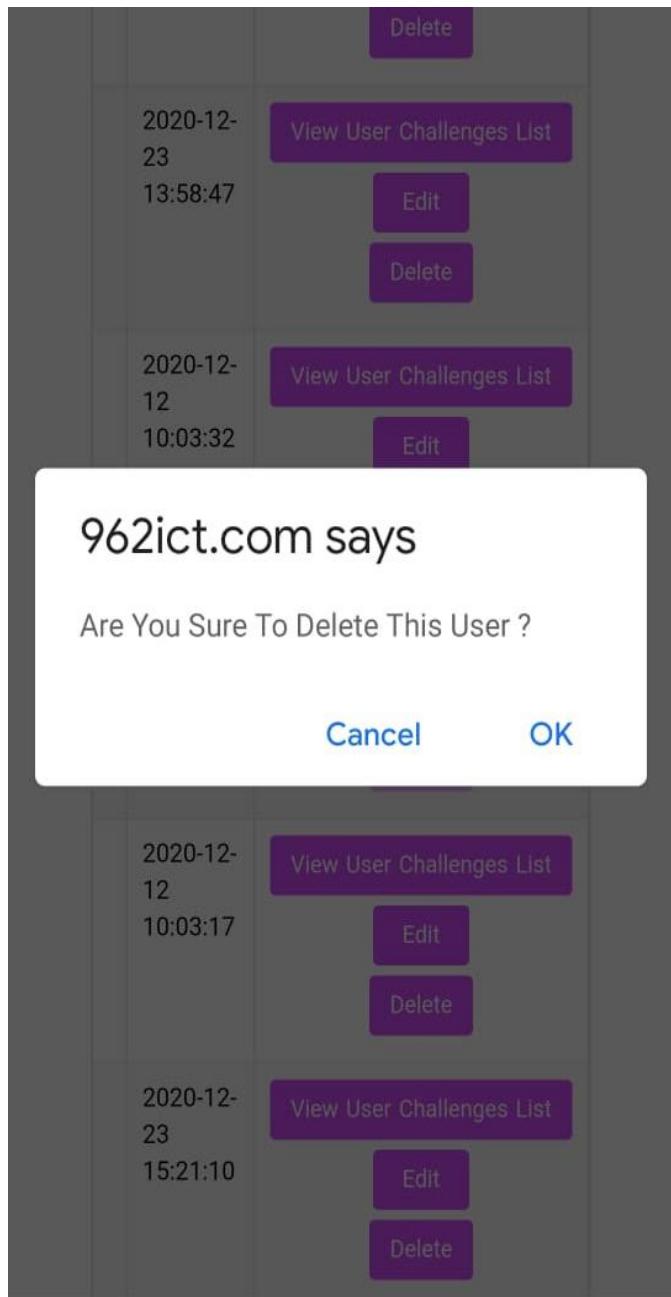


Figure 65:|Verify Delete User|

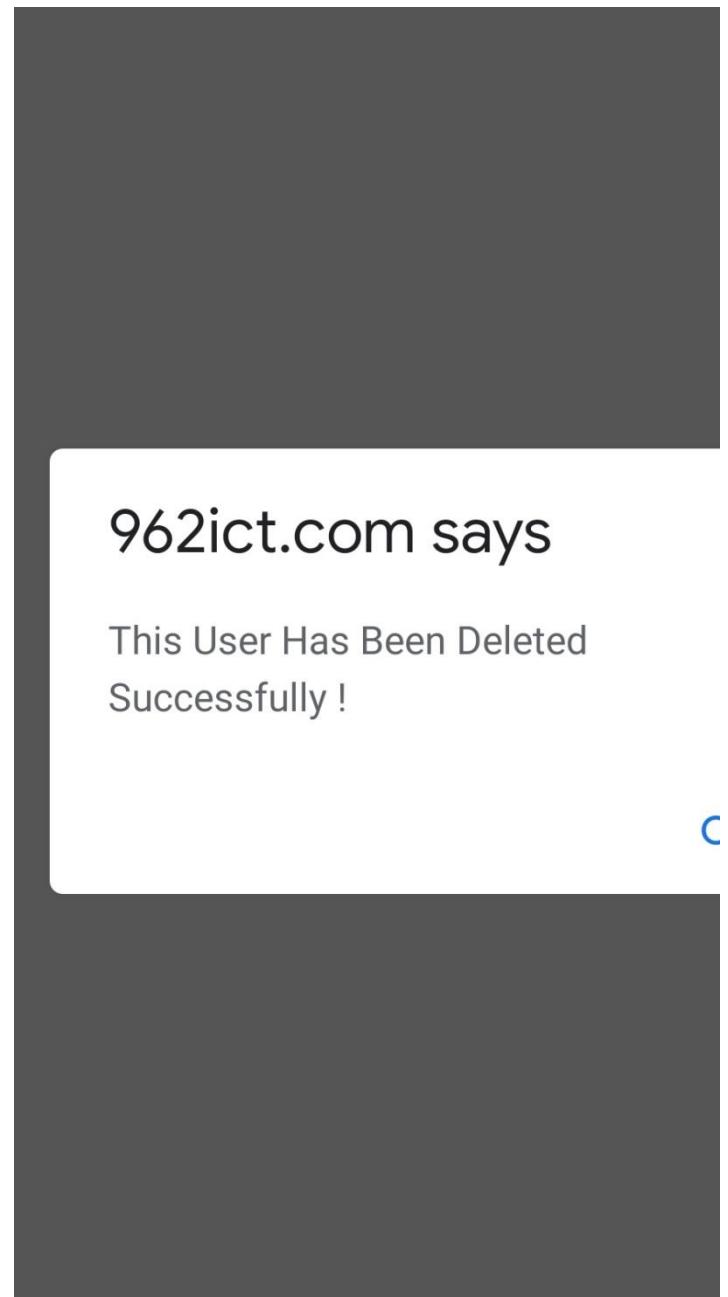


Figure 66:|User Deleted Message|

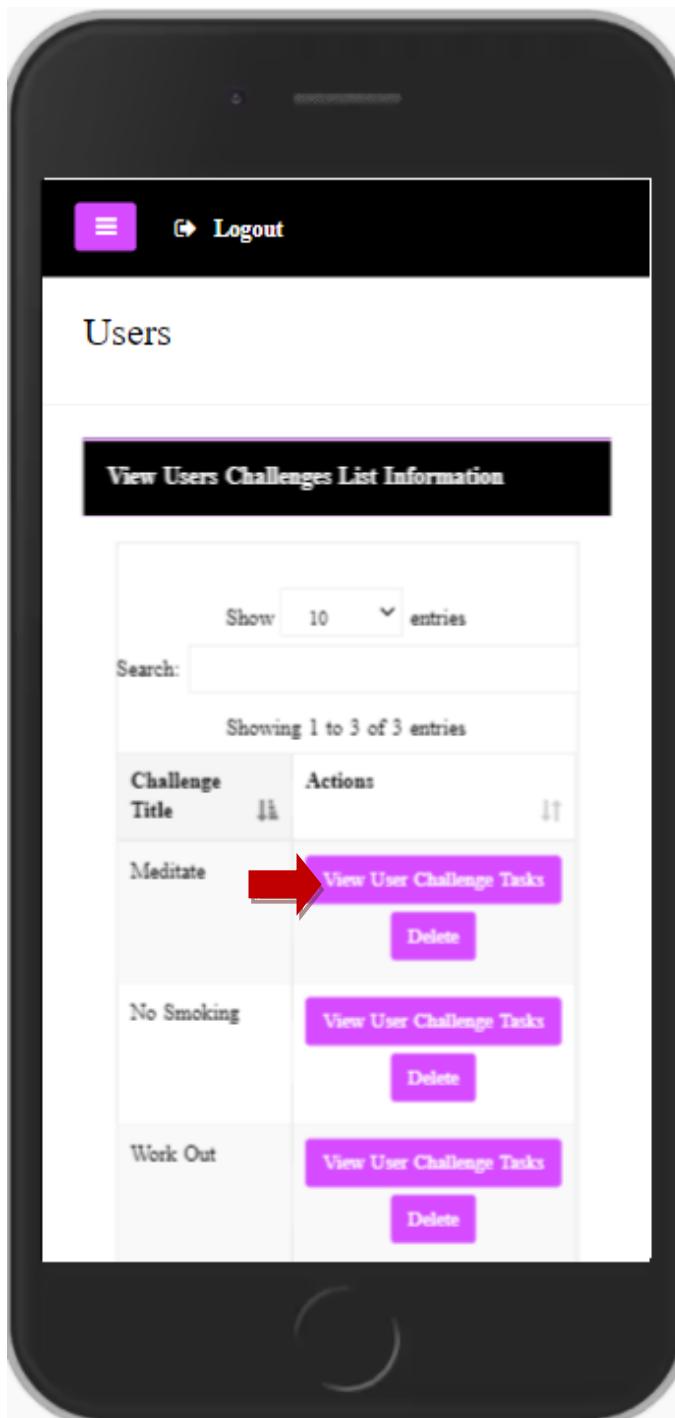


Figure 67:| View User Challenges Screen |

Day Number	Description	Total Points	Actions
1	Identify when you crave cigarettes A craving can last 5 minutes. Before you give up, make a list of 5-minute strategies. For example, you could leave the work for minute, eat or go have some drink.	10	<a href="#">View User Tasks Records</a>
2	Get moving A review of scientific studies have proven exercise, even a 5-minute walk or stretch, cuts cravings and may help your brain produce anti-craving chemicals.	10	<a href="#">View User Tasks Records</a>
3	Make a list of reasons to quit :Keep reminding yourself why you made the decision to give up. Make a list of the reasons and read it when you need support.	10	<a href="#">View User Tasks Records</a>
4	Get some stop smoking support: If friends or family members want to give up, too, suggest to them that you gave up together.	10	<a href="#">View User Tasks Records</a>
5	Think positive : You might have tried to quit smoking before and not managed it, but don't let that put you off.	10	<a href="#">View User Tasks Records</a>
6	Give Yourself a Break: One reason people smoke is that the nicotine helps them relax. Once you quit, you will need new	10	<a href="#">View User Tasks Records</a>

Figure 68:| Challenge Tasks List Screen |

The screenshot shows a mobile application interface titled "View User Challenge Tasks Records List Information". At the top, there is a navigation bar with a purple square icon and a "Logout" link. Below the title, there is a search bar with a placeholder "Search:" and a dropdown menu showing "Show 10 entries". The main content area displays a table with the following columns: Day Number, Date, Notes, Picture Before, Picture After, Status, Add Date / Time, and Actions. There is one record listed:

Day Number	Date	Notes	Picture Before	Picture After	Status	Add Date / Time	Actions
2	2020-10-11	I have done this task easily			Pending	2020-12-12 16:58:42	<button>Accept</button> <button>Delete</button>

At the bottom of the screen, there are navigation buttons for "Previous", "1", and "Next". The footer contains the text "28 Days Challenge © 2020. All Rights Reserved."

Figure 69 :|View User Records Screen|

The screenshot shows a modal dialog box with the title "Information" at the top. The main content of the dialog is a message from "962ict.com says": "Are You Sure To Accept This Record ?". At the bottom of the dialog are two buttons: "Cancel" on the left and "OK" on the right.

The background of the dialog is dark gray, and the overall interface has a clean, modern look.

Figure 70:| Verify Accept user record|

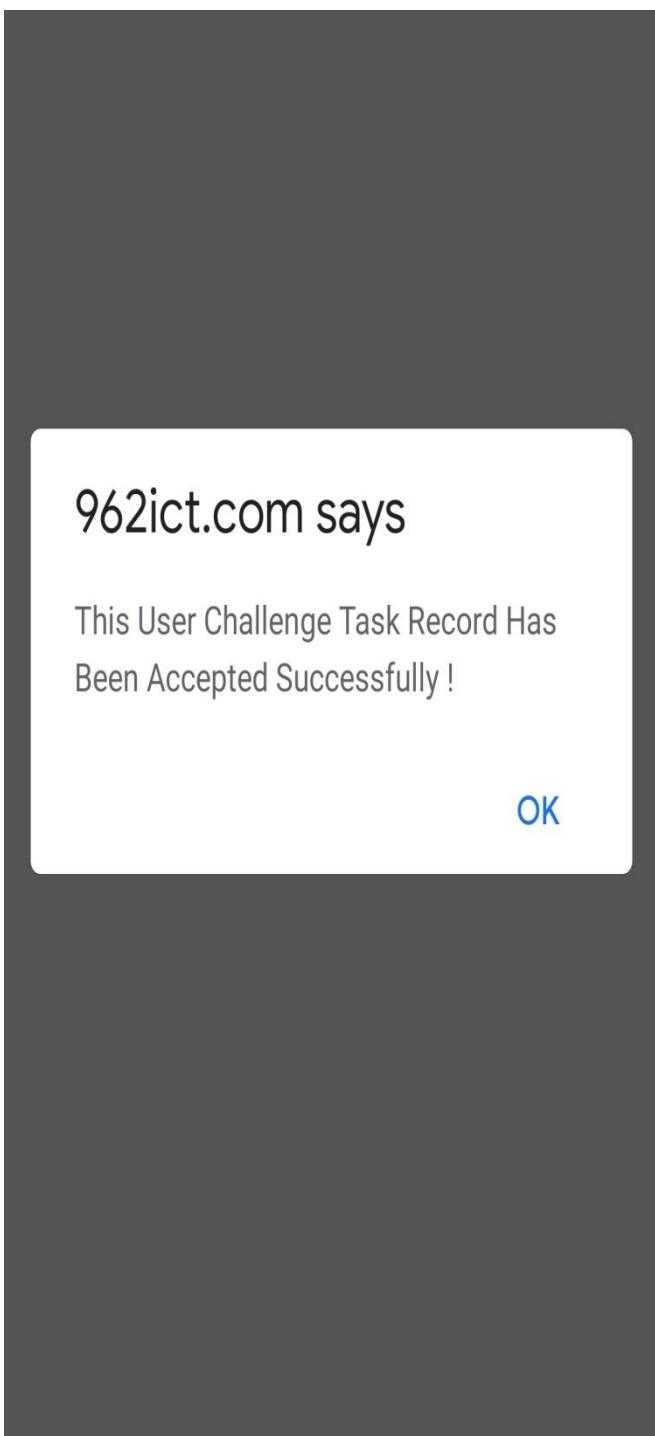


Figure 71: | Record Accepted Message |

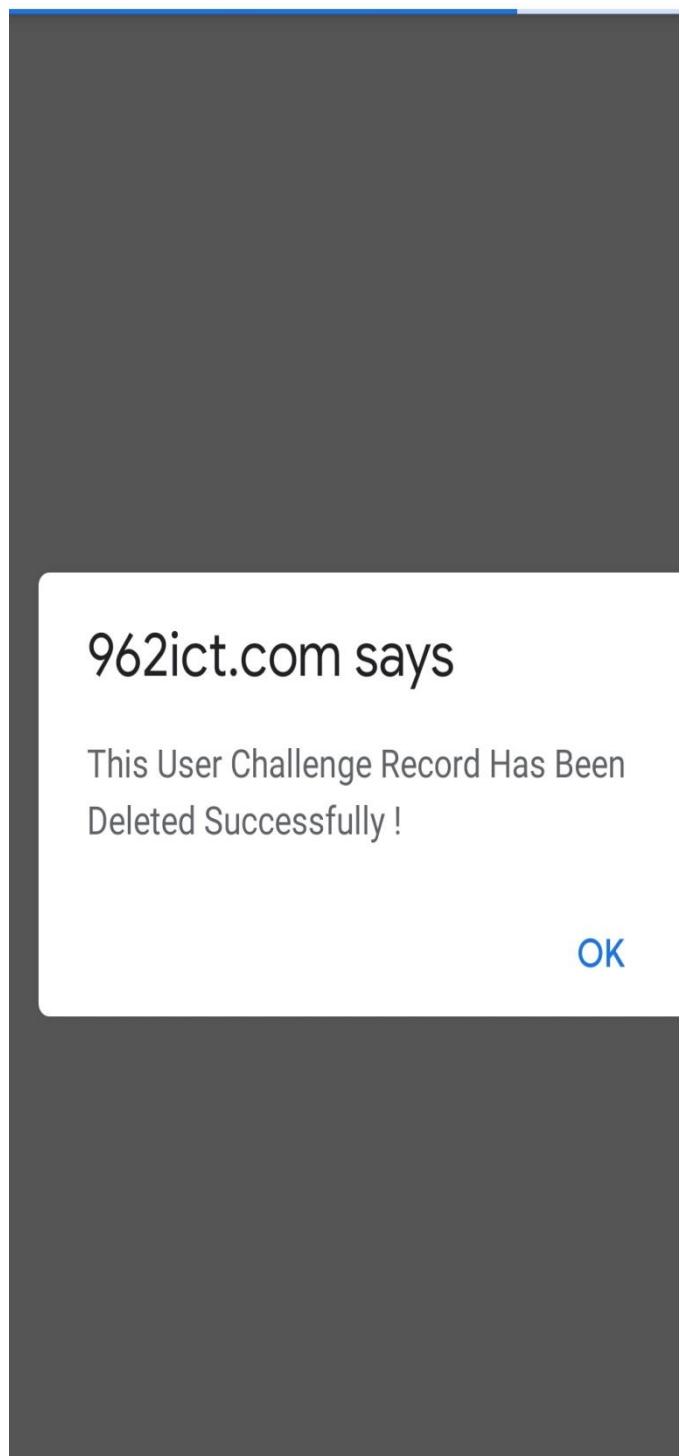


Figure 72: | Record Deleted Message |



Figure 73: |Edit User Information Screen|

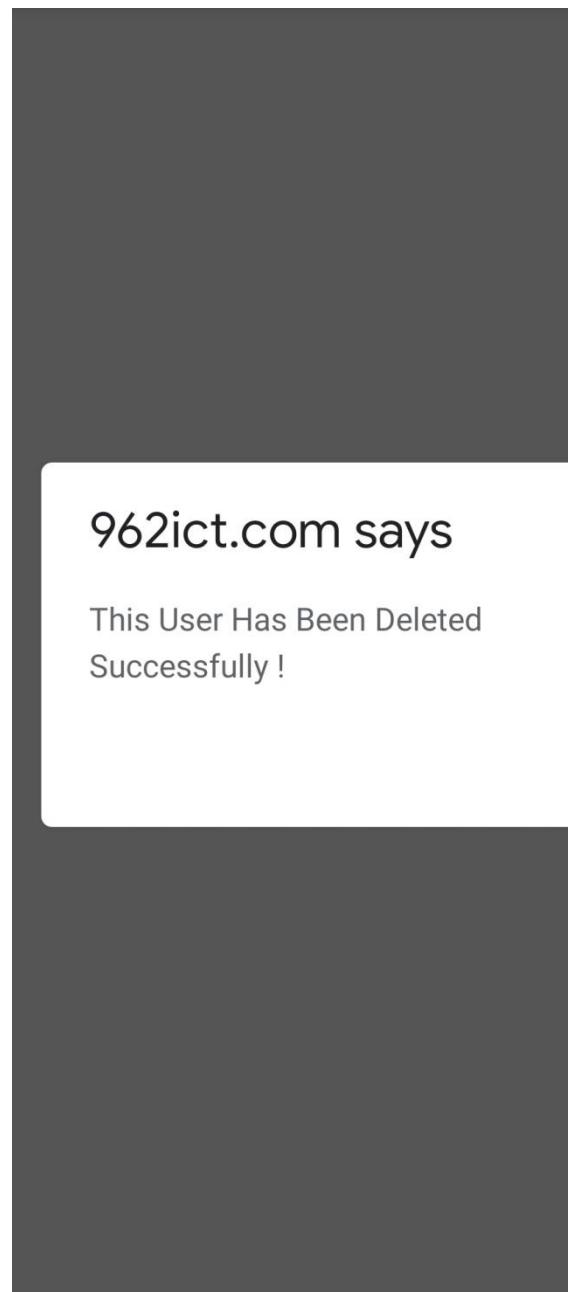


Figure 74: |User Deleted ,Message|

➤ User:

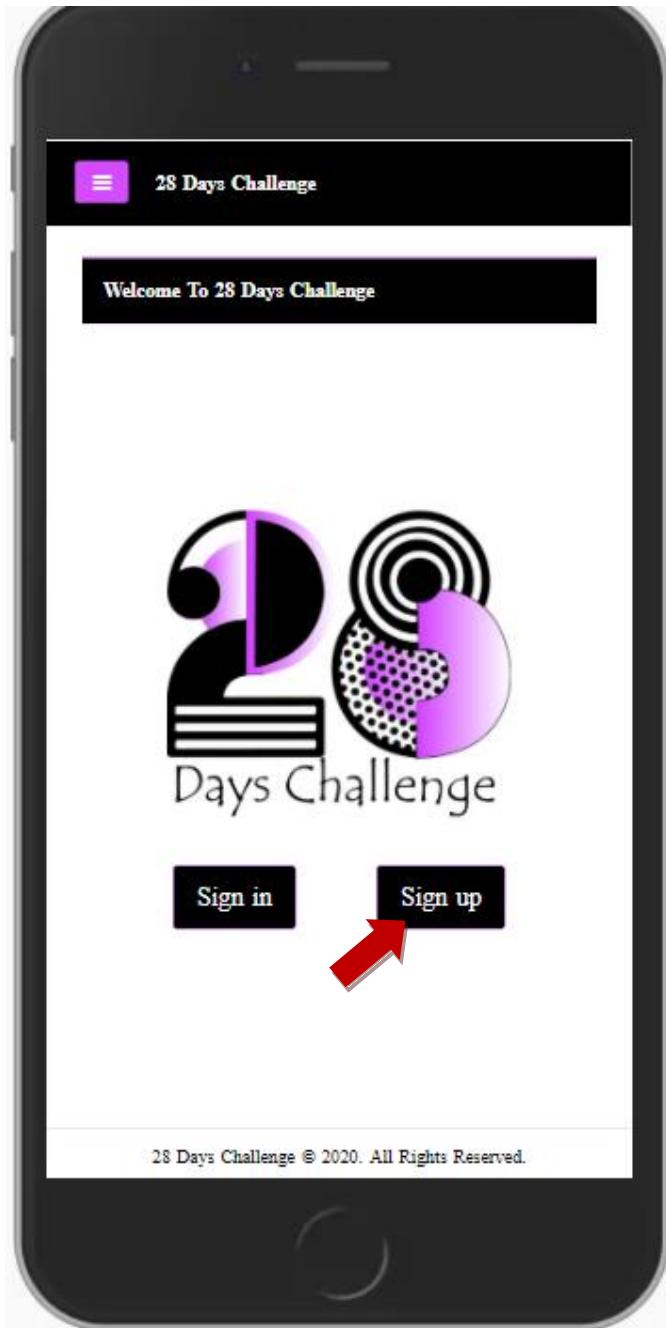


Figure 75: | Main Screen |

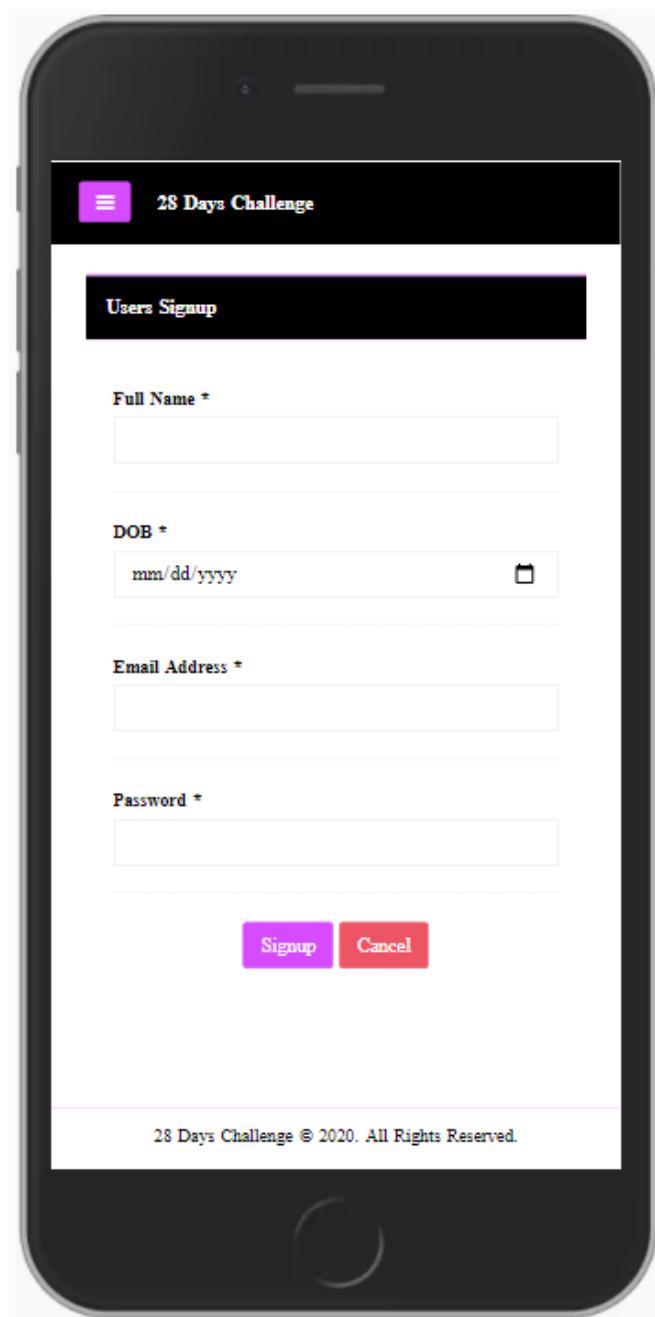


Figure 76: | User Sign up Screen |

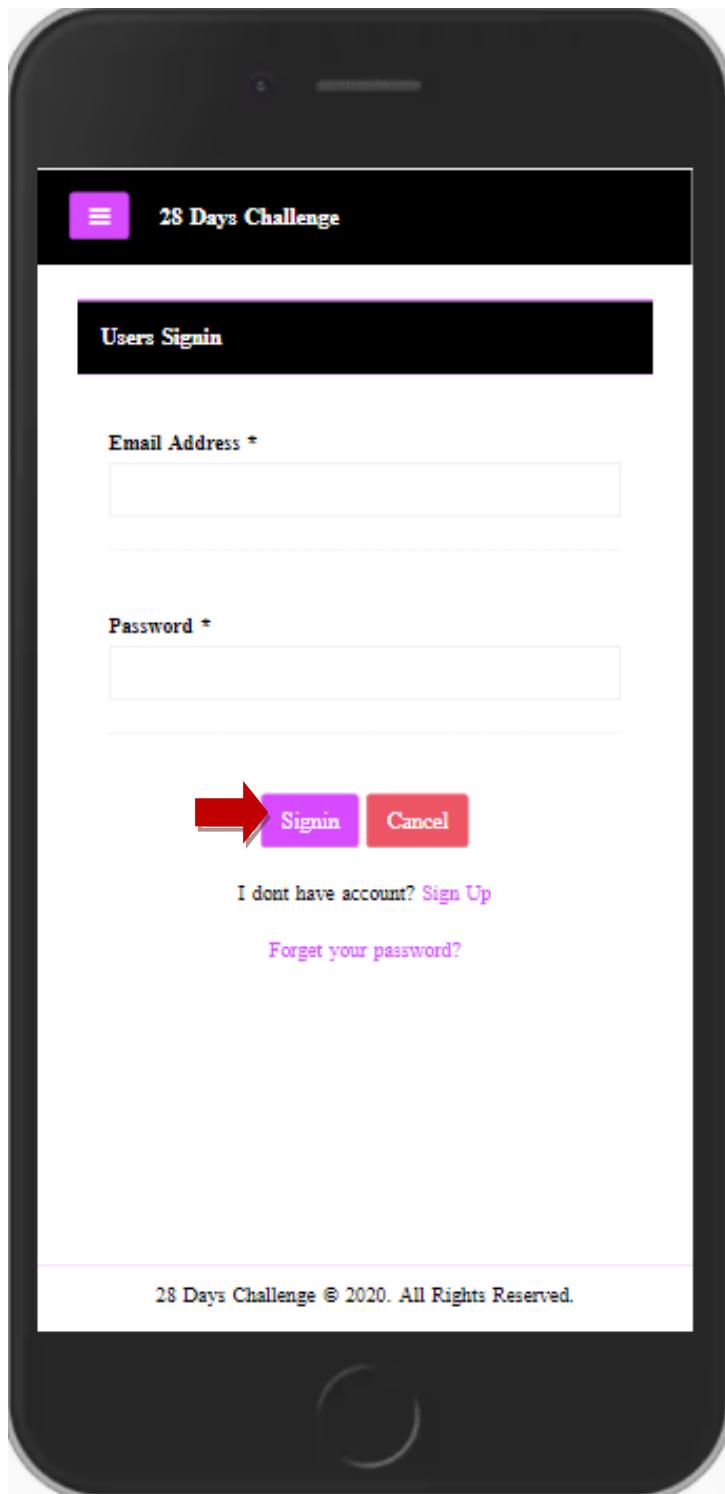


Figure 77:| User Signin Screen |

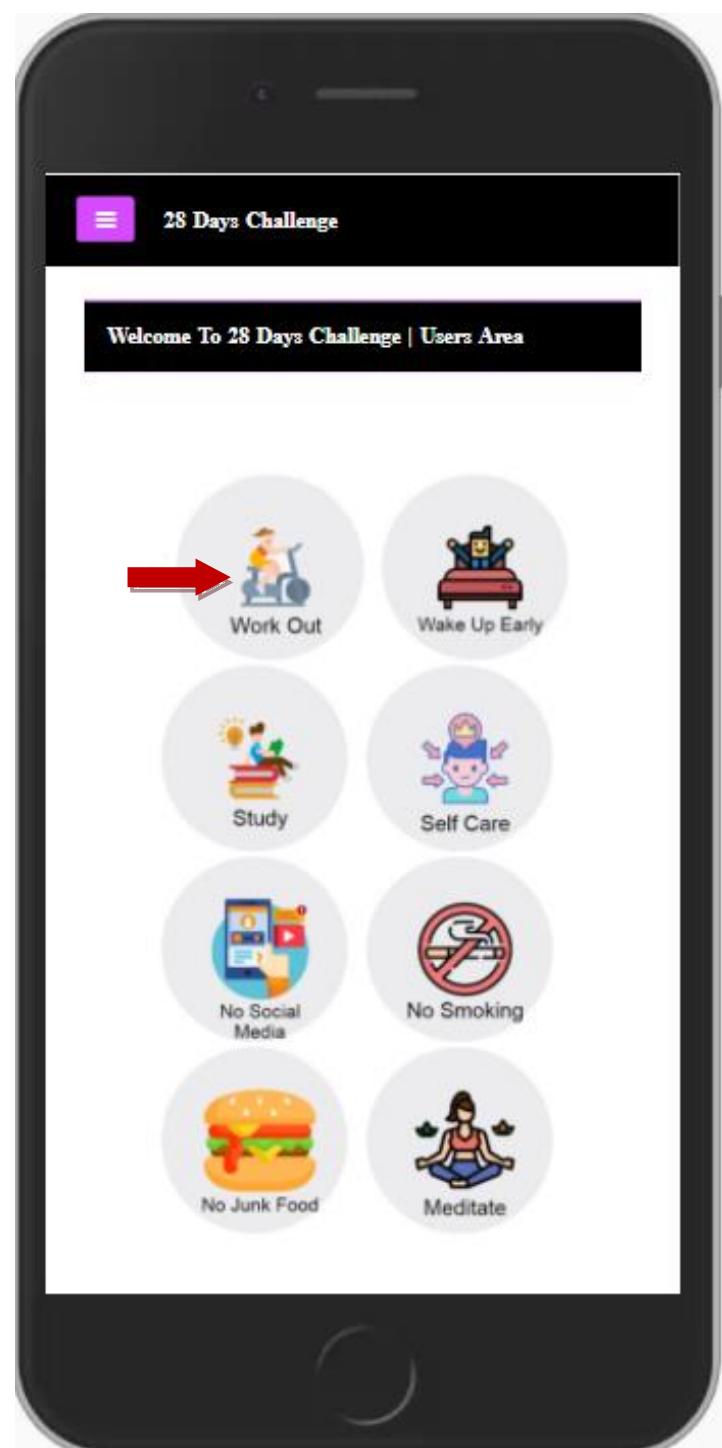


Figure 78 :| Available Challenges in User Area |



Figure 79:| Request Challenge |

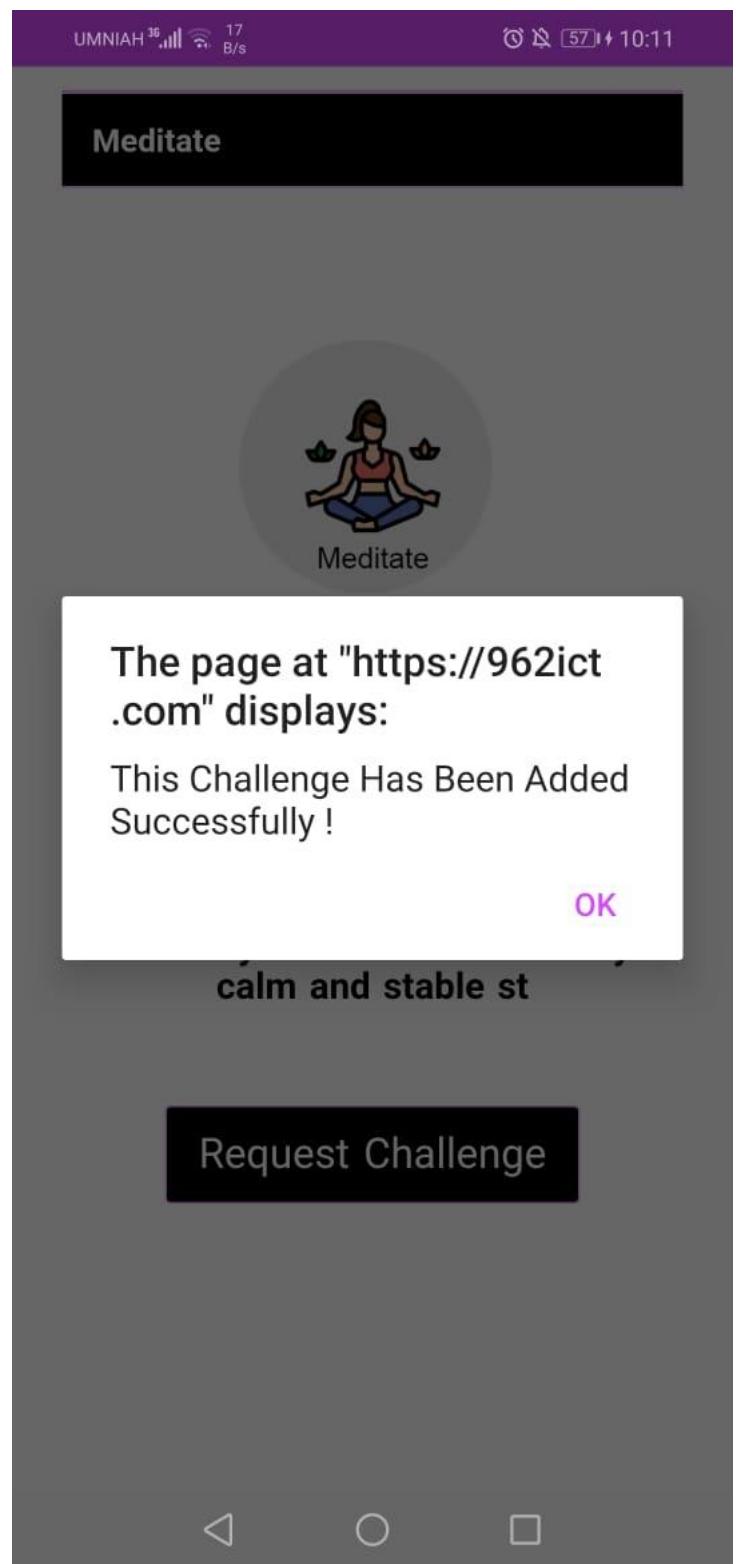


Figure 80:| Successfully Request Challenge Message |

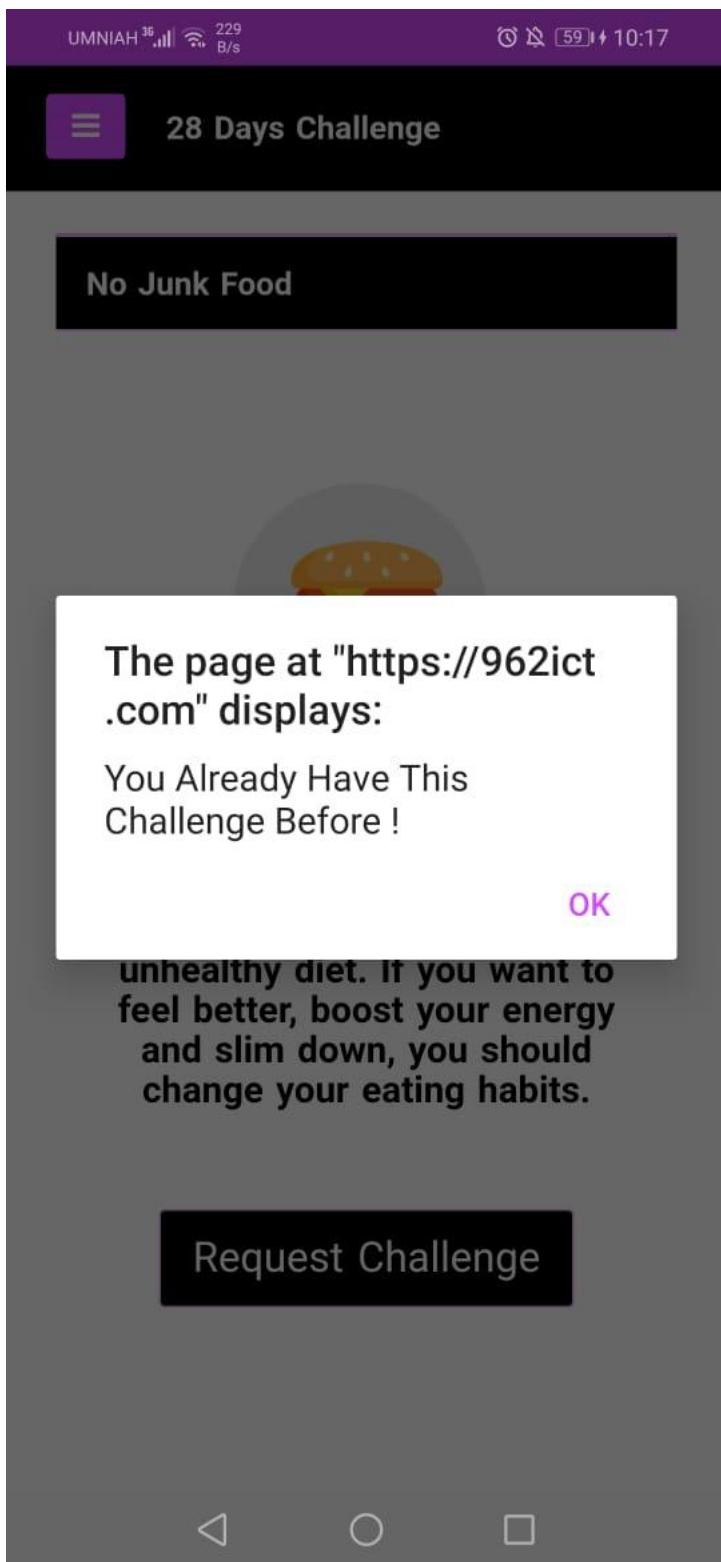


Figure 81:| Already have Challenge Message|

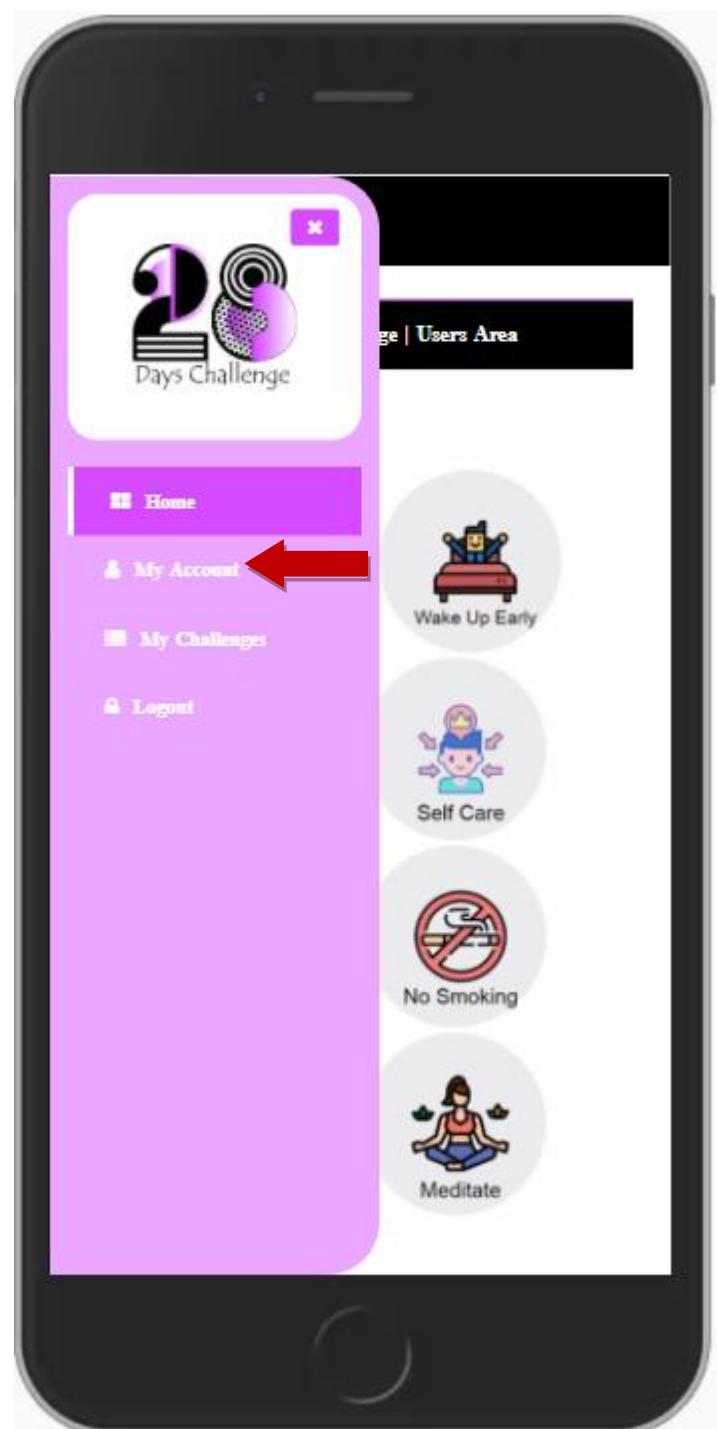


Figure 82:| User Menu Options |

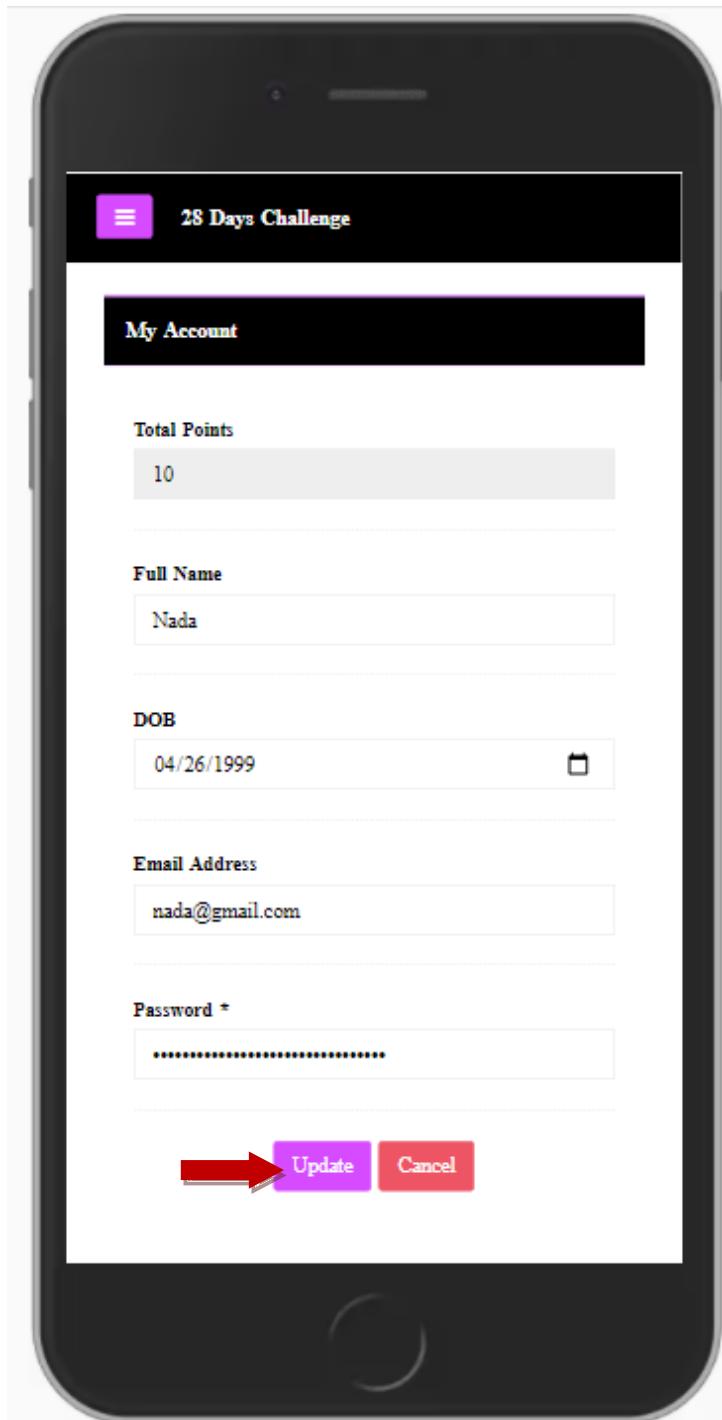


Figure 83: | My Account Screen|

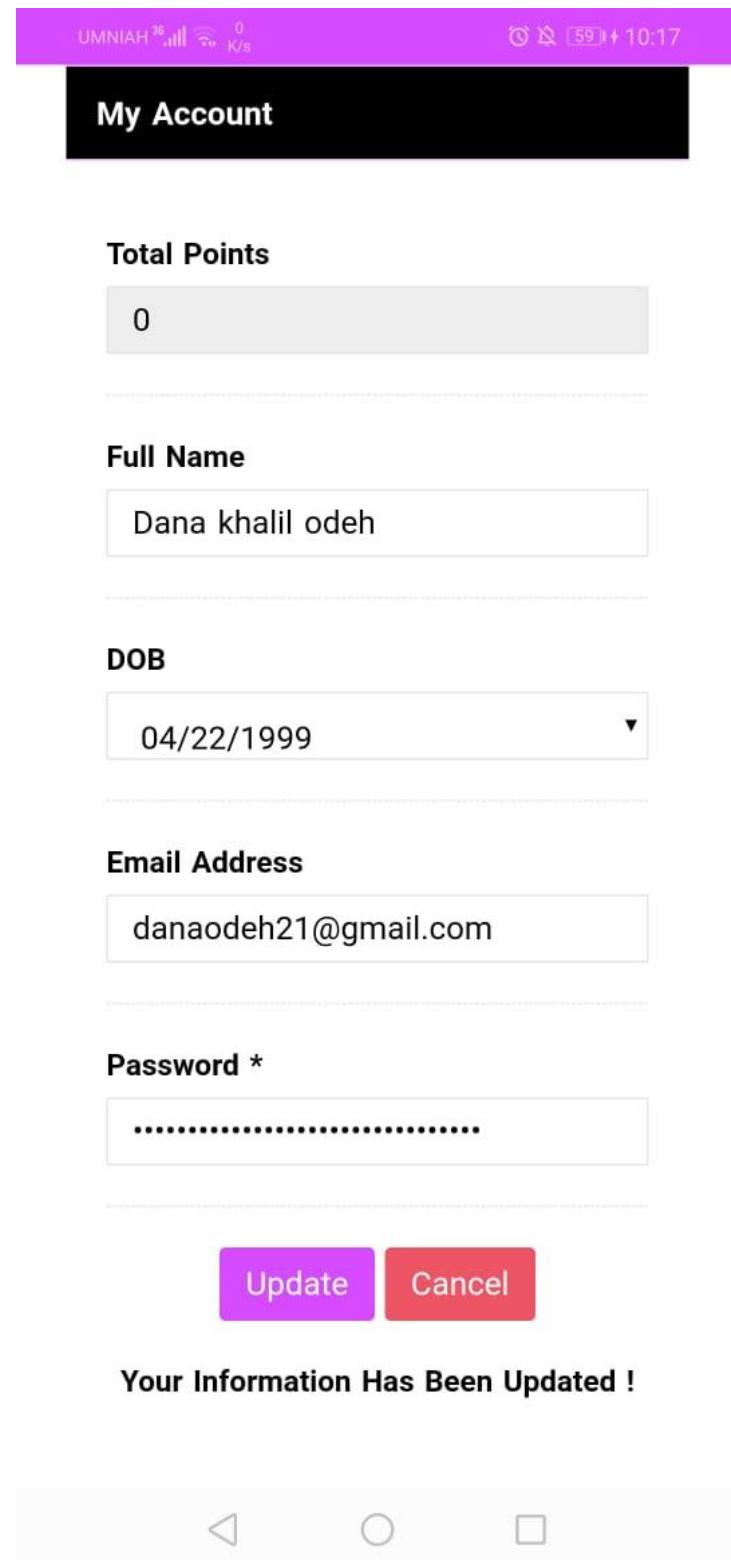


Figure 84: |Successfully updated information Message|

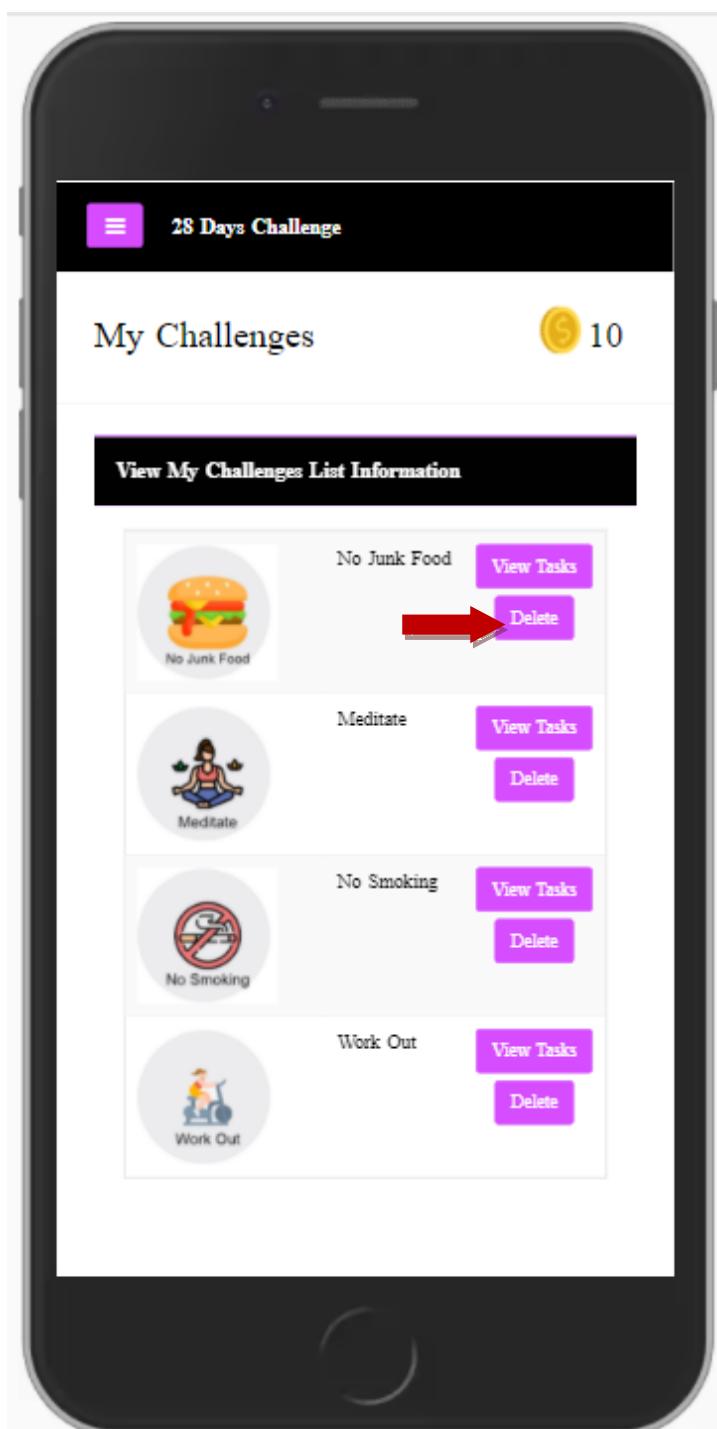
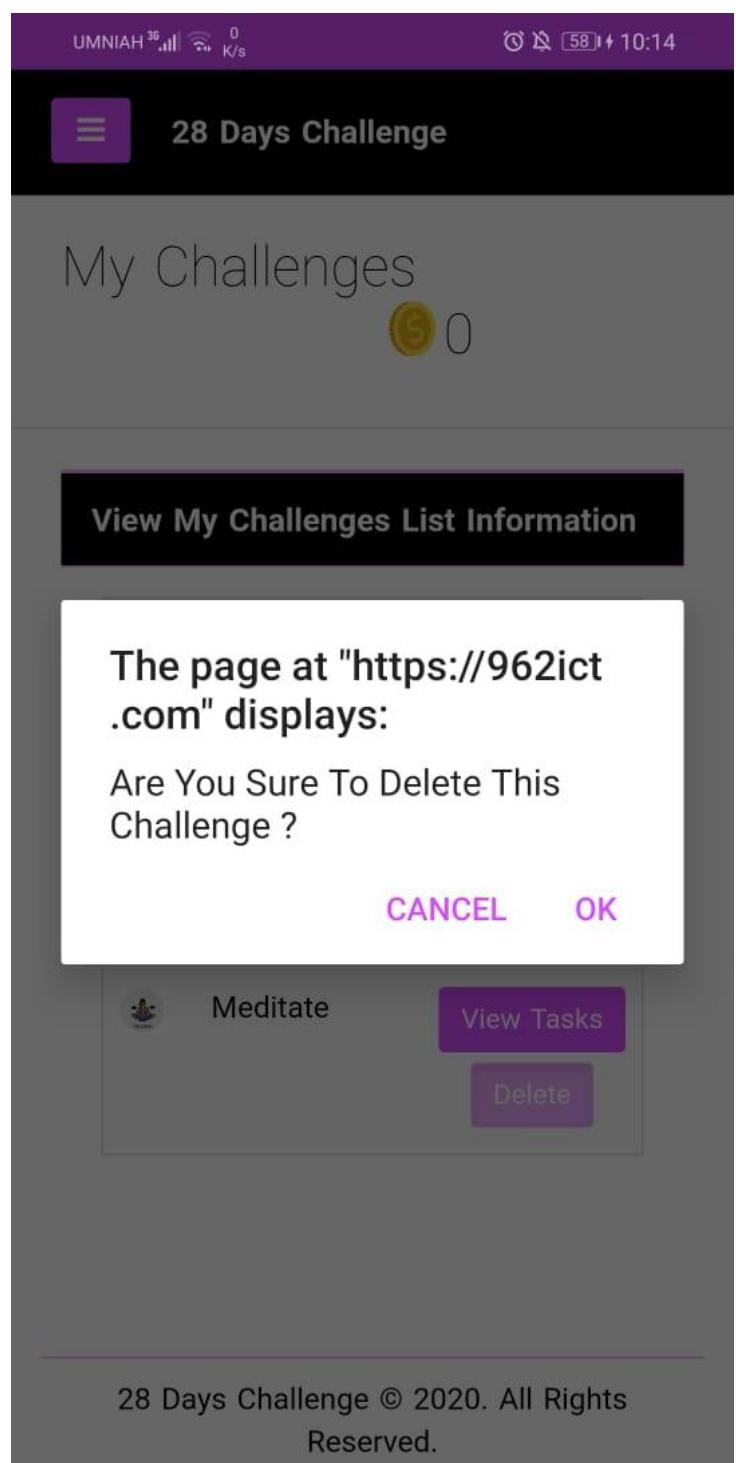


Figure 85: | My Challenges Screen |



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Figure 86: | Verify Delete Challenge Message |

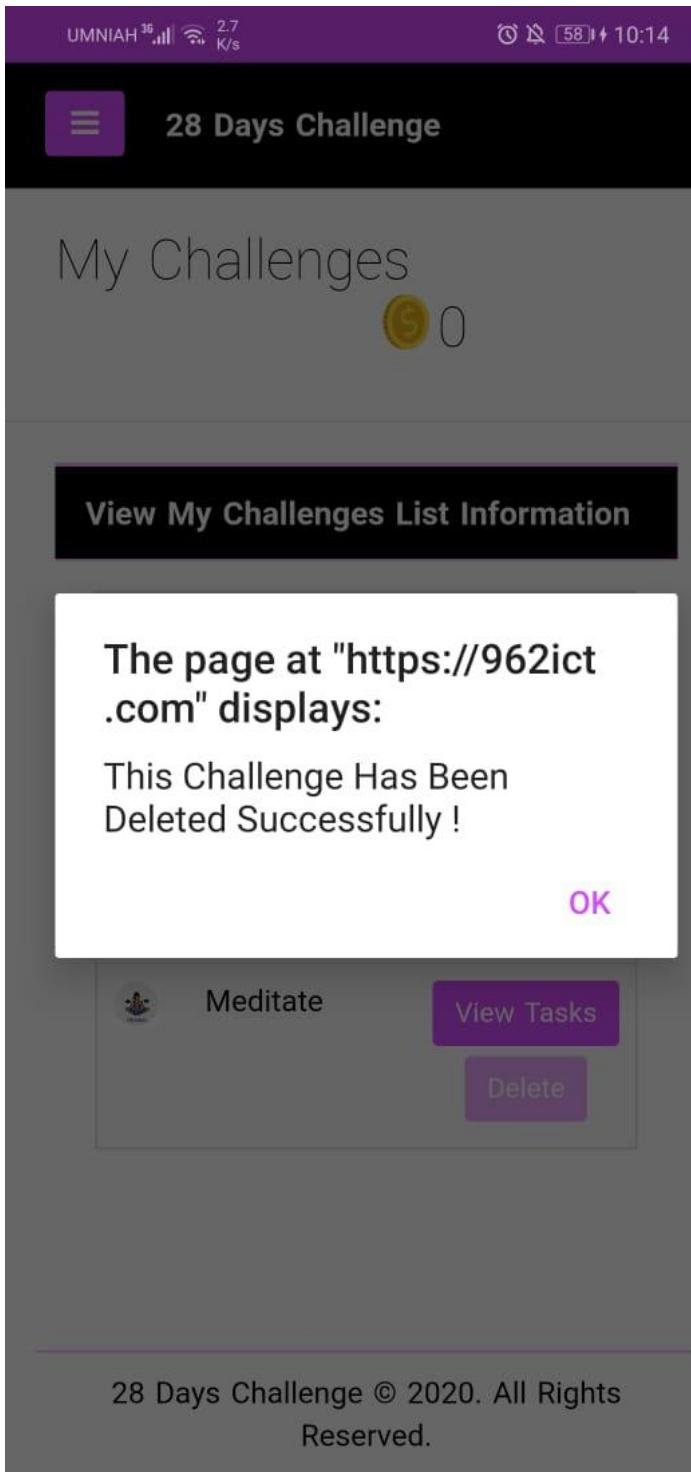


Figure 87:|Successfully Delete Challenge Message|

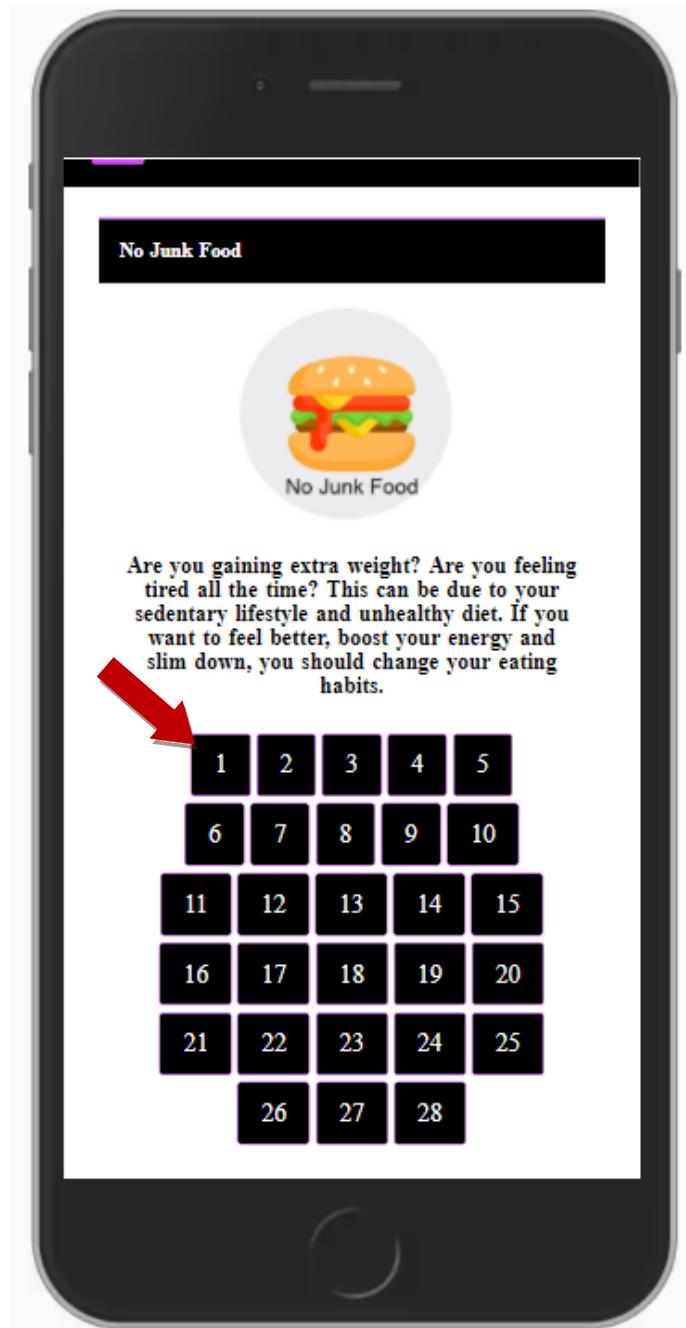


Figure 88:|Challenge Task Screen|

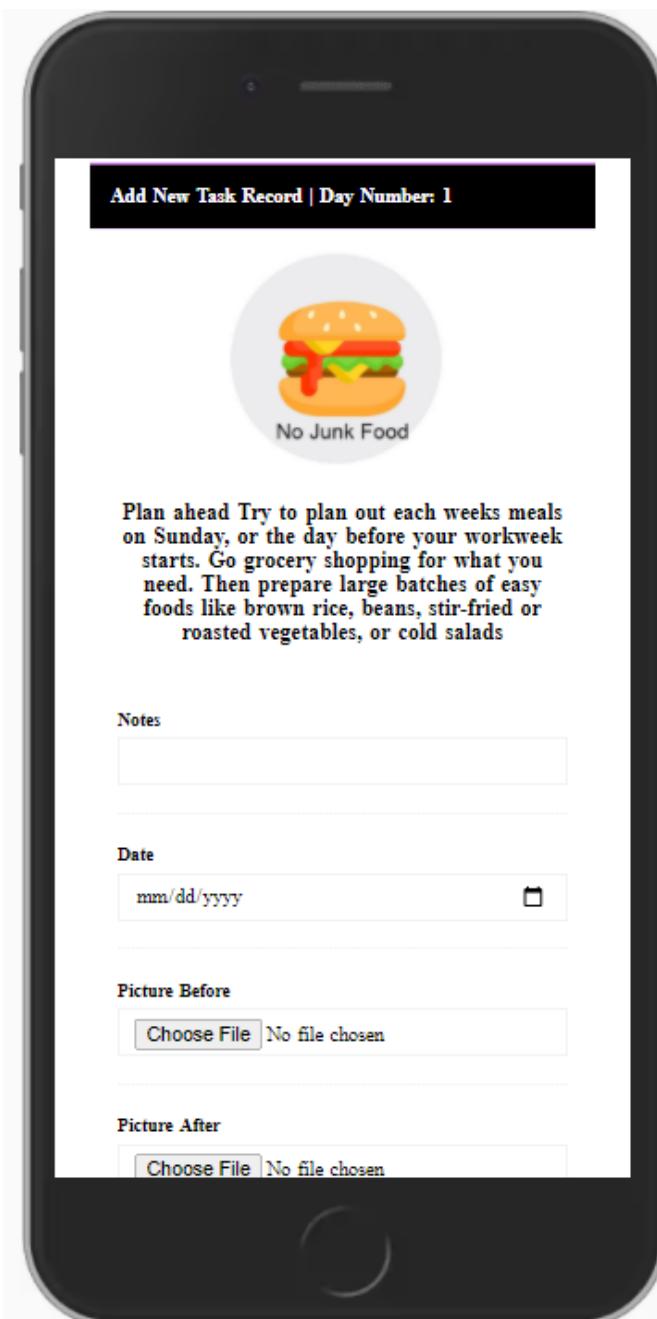


Figure 89:| Day One Task Record Screen|

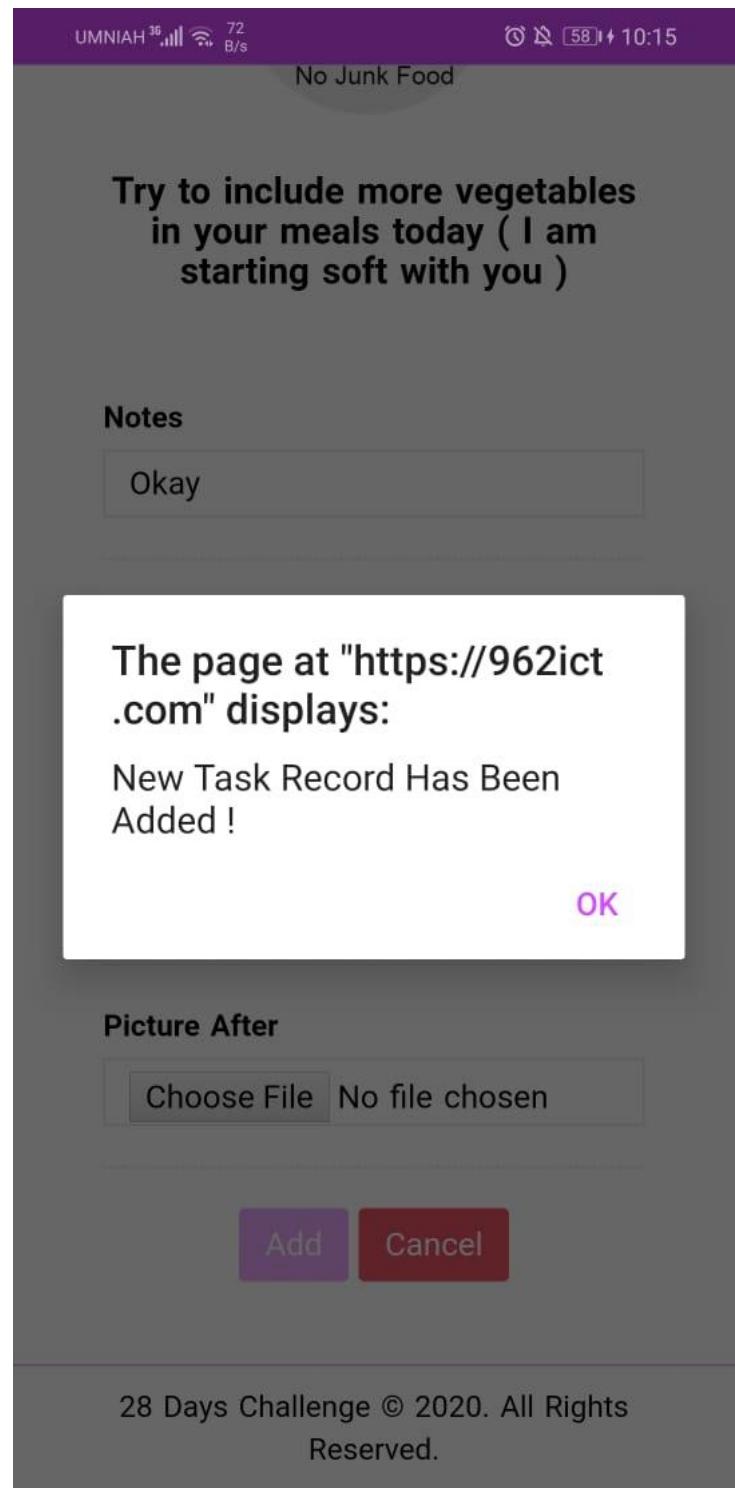


Figure 90:| Added New Record Message|

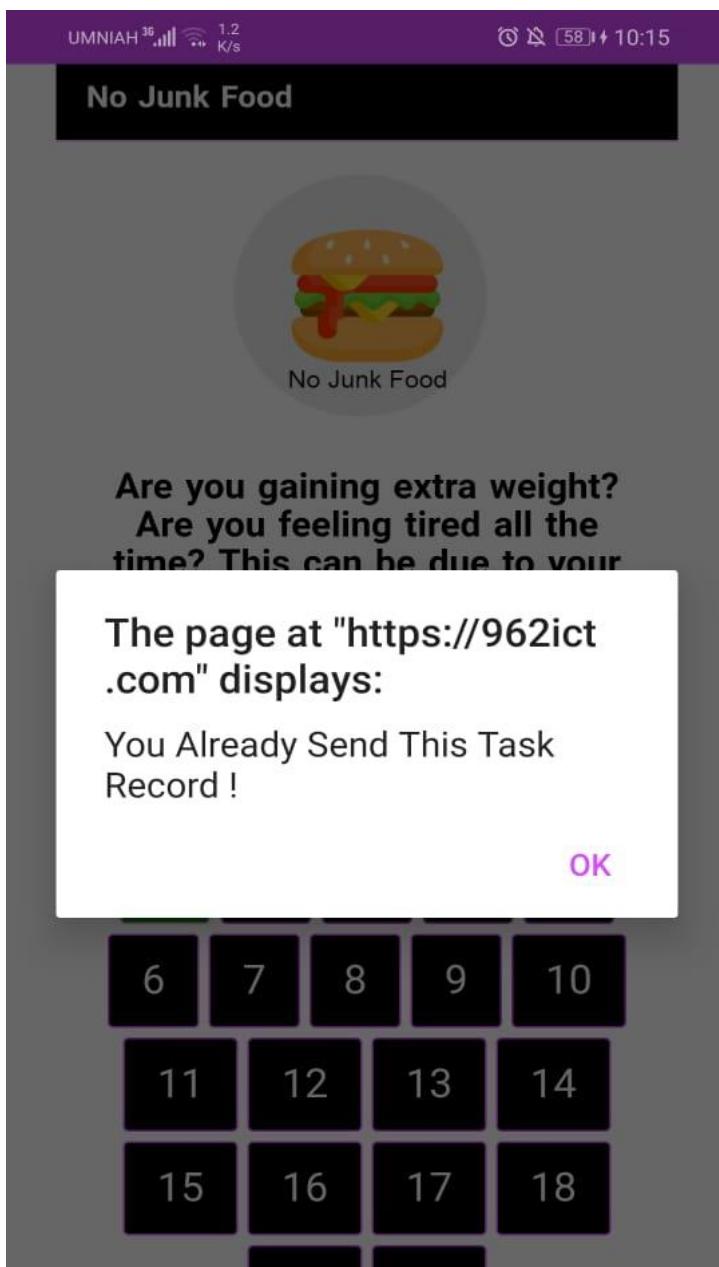


Figure 91:|Already Send Task Message|

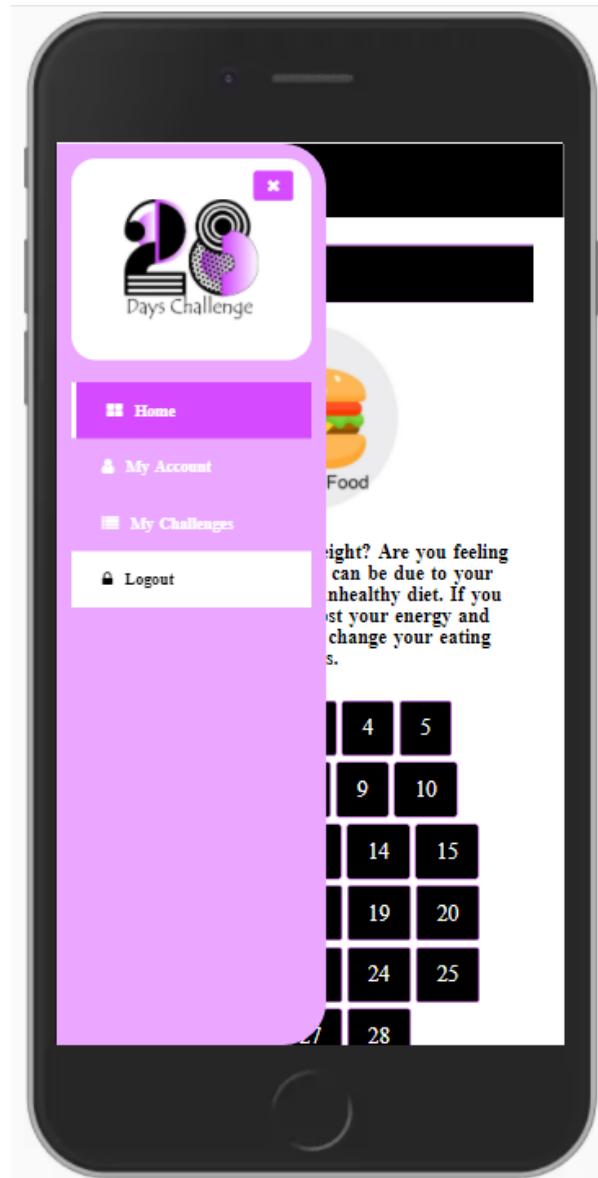


Figure 92:|Logout Screen|

## 5.6 Summary

We discussed the implementation of the system , the database implementation , data dictionary and the GUI implementation.

## 6.0 SYSTEM TESTING AND INSTALLATION

### 6.1 Introduction

System testing is the final stage of the verification process. In this stage, testers see whether or not the collective group of integrated components is performing optimally. The process is crucial for the quality life cycle, it is the process of verifying and validating that an application is working as expected and satisfies both functional and non-functional requirements.

It is divided into various levels including Unit Testing, System Testing and Acceptance Testing; they are all performed during the testing phase. To detect any irregularity between the units of the system, two evaluations will be performed; Heuristic Evaluation: will involve a small set of expert evaluators who examine the interface and assess its compliance with recognized usability principles, and Cooperative Evaluation: End-user will collaborate in evaluation.

Finally, requirements will be tested to see whether the system accomplished them or not.

### 6.2 Heuristics Evaluation

Heuristic evaluation is a process where experts use rules of thumb to measure usability, such as lists, combo box, and database connection and compare it against accepted usability principles. This evaluation was performed on Android application by Three Information Technology (IT) experts who basically examined the interface and judged its compliance with any heuristic techniques that employs a practical method that is not guaranteed to be optimal, perfect, or rational, but is nevertheless sufficient for reaching an immediate, short-term goal or approximation. Kindly find the actual Heuristic Evaluation forms of our application included in Appendix A. Furthermore, the next table lists the heuristics of usability evaluation and their descriptions.

\*Note: the standard tables we will show in appendix B. Table (6.1): List of Heuristics of Usability Evaluation and their Descriptions

Table 15:| List of Heuristics of Usability Evaluation and their Descriptions|

Numbering Scheme	Heuristics	Description
H1	Visibility of system status	The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.
H2	Match between system and the real world	The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.
H3	User control and freedom	Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.
H4	Consistency and standards	Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.
H5	Error prevention	Even better than a good error message is a careful design that prevents a problem from occurring in the first place.
H6	Recognition rather than recall	Make objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.
H7	Flexibility and efficiency of use	Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.
H8	Aesthetic and minimalist design	Dialogues should not contain information that is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.
H9	Help users recognize, diagnose, and recover from errors	Error messages should be expressed in plain language (no codes), precisely indicating the problem, and constructively suggesting a solution.

<b>H10</b>	Help and documentation	Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.
------------	------------------------	--

**Table 16: | Severity Ratings and their Descriptions |**

Severity	Rating Description
<b>0</b>	I don't agree that this is a usability problem at all.
<b>1</b>	Cosmetic problem only: need not be fixed unless extra time is available on project.
<b>2</b>	Minor usability problem: fixing this should be given low priority
<b>3</b>	Major usability problem: important to fix, so should be given high priority.
<b>4</b>	Usability catastrophe: imperative to fix this before product can be released.

**Table 17: | Summary of Violations by Heuristics |**

Heuristic Numbering Scheme	Frequency	Ratio (%)
<b>H1</b>	5	7.69
<b>H2</b>	5	7.69
<b>H3</b>	5	7.69
<b>H4</b>	10	15.38
<b>H5</b>	6	9.23
<b>H6</b>	6	9.23
<b>H7</b>	8	12.30
<b>H8</b>	5	7.69
<b>H9</b>	5	7.69
<b>H10</b>	10	15.38
<b>Total:</b>	<b>65</b>	<b>100%</b>

➤ Summary of Violations by Severity Rating for Participant 1 (Noor)

Table 18: |Summary of Violations by Severity Rating for Participant 1 (Student Noor) |

Severity Rating	Frequency	Ratio (%)
0	15	23.1
1	9	13.8
2	13	20
3	10	15.4
4	18	27.7
<b>Total</b>	<b>65</b>	<b>100%</b>

➤ Summary of Violations by Severity Rating for Participant 2 (Rawand)

Table 19: |Summary of Violations by Severity Rating for Participant 1 (Student Rawand) |

Severity Rating	Frequency	Ratio (%)
0	23	35.38
1	14	21.53
2	11	16.92
3	5	7.69
4	12	18.46
<b>Total</b>	<b>65</b>	<b>100%</b>

➤ **Summary of Violations by Severity Rating for Participant 3 (Maram)**

**Table 20:| Summary of Violations by Severity Rating for Participant 1 (Student Maram) |**

Severity Rating	Frequency	Ratio (%)
<b>0</b>	19	29.2
<b>1</b>	15	23.1
<b>2</b>	14	21.5
<b>3</b>	10	15.4
<b>4</b>	7	10.8
<b>Total</b>	65	100%

### 6.3 Cooperative Evaluation

Cooperative Evaluation involves the user as an active participant in the assessment process, detecting as many potential exhaustive problems as possible is not the objective of this evaluation. Rather, it is to help designers identify the most important improvements to consider with the minimum time and effort.

To conduct the Cooperative Evaluation for App three participants were selected randomly, and all participants were graduated from King Abdullah II School for Information Technology (KASIT) at the University of Jordan.

Table (11): shows further details about these participants Details about the participation.

Table 21: | Details about the participations. |

	Participant 1	Participant 2	Participant 3
Name	Noor	Rawand	Maram
Age	22	23	22
Gender	Female	Female	Female
Educational Level	BSc	BSc	BSc

### 6.3.1 Pre-Evaluation Procedures

Before the collaborative evaluation begins, the following procedures must be performed.

1. Under the consensus of all team members, the collaborative evaluation form and post-test questionnaire should be carefully prepared.
2. Find participants by contacting them and asking them to join the cooperative Evaluation.
3. Before the evaluation started, the participants were briefly introduced to the application.
4. Provide participants with a brief description of the description and evaluation procedure

### 6.3.2 Evaluation Procedures

During the evaluation session, participants were accompanied to help them when they face problems in performing a specific task.

The table below shows the Cooperative Evaluation tasks that are tested by the participants. As a user and admin. However, the actual testing forms are included in Appendix C.

Table 22: | Cooperative Evaluation Tasks for user |

Task #	Task	Time	Comment(s)
1	Sign up	40 sec	
2	Log in	10 sec	
3	Forget a password	5 sec	
4	Manage Account	10 sec	
5	Display challenges	3 sec	
6	User's Challenges ( as view , delete ,add new record )	10 sec	
7	Logout	2 sec	

**Table 23: | Cooperative Evaluation Tasks for Admin |**

<b>Task #</b>	<b>Task</b>	<b>Time</b>	<b>Comment(s)</b>
<b>1</b>	Log in	10 sec	
<b>2</b>	Manage Users (Edit, Delete and Display):-	4 sec	
<b>3</b>	Manage Challenges (Add, Edit, Delete and Display):-	4 sec	
<b>4</b>	Logout	1 sec	
<b>5</b>	System Report	3 sec	

The next table includes results of the Cooperative Evaluation showing task completion times for participants compared against the default time allocated for each task.

Table 24: |Task Completion Times in Minutes and Seconds as User|

Task No.	Default Time	Participation Noor	Participation Rawand	Participation Maram
as a user				
1	40 sec	45 sec	1 min ,10 sec	45 sec
2	10 sec	11 sec	15 sec	11 sec
3	5 sec	5 sec	10 sec	11 sec
4	10 sec	12 sec	11 sec	13 sec
5	3 sec	3 sec	4 sec	3 sec
6	10 sec	15 sec	12 sec	18 sec
7	2 sec	4 sec	3 sec	5 sec
<b>Total Completion Time</b>	1.20	1.35	1.65	.146

Table 25: |Task Completion Times in Minutes and Seconds as admin|

Task No.	Default Time as a user	Participation Noor	Participation Rawand	Participation Maram
1	10 sec	15sec	40 sec	11 sec
2	4 sec	5 sec	20 sec	10 sec
3	4 sec	9sec	10 sec	15 sec
4	1 sec	3sec	5 sec	6 sec
5	3 sec	6 sec	9 sec	13sec
<b>Total Completion Time</b>	22 sec	38 sec	1.24	55sec

### 6.3.3 Post-Evaluation Procedures

After completing all tasks specified in the Cooperative Evaluation Test, participants were asked to fill a post-test questionnaire. This questionnaire aims to know their thoughts and opinions regarding this experience. This table presents the participants' responses to this post-test questionnaire.

**Table 26: | Participants Responses to the Post-Test Questionnaire |**

#	Question	Participant 1 (Noor)	Participant 2 (Rawand)	Participant 3 (Maram)
1	<b>Do you like the application's design?</b>	Yes	No	Yes
2	<b>Did our app help solve your problem/achieve your goal?</b>	Yes	Yes	Yes
3	<b>Would you recommend this app to your friends?</b>	Yes	Yes	No
4	<b>It is easy to understand the Functionality of the Application without prior experience?</b>	Yes	Yes	Yes
5	<b>Were the buttons and options easy to find?</b>	No	Yes	Yes
6	<b>Are there any features you expected to find but didn't?</b>	No	Yes	No
7	<b>Is 28DaysChallenges an enjoyable app?</b>	No	No	Yes
8	<b>Is the application easy to use?</b>	Yes	Yes	Yes
9	<b>Is 28DaysChallenges is an complete application ?</b>	Yes	Yes	Yes

## 6.4 System Installation

To use our application, you need to download it from the play store on your device:

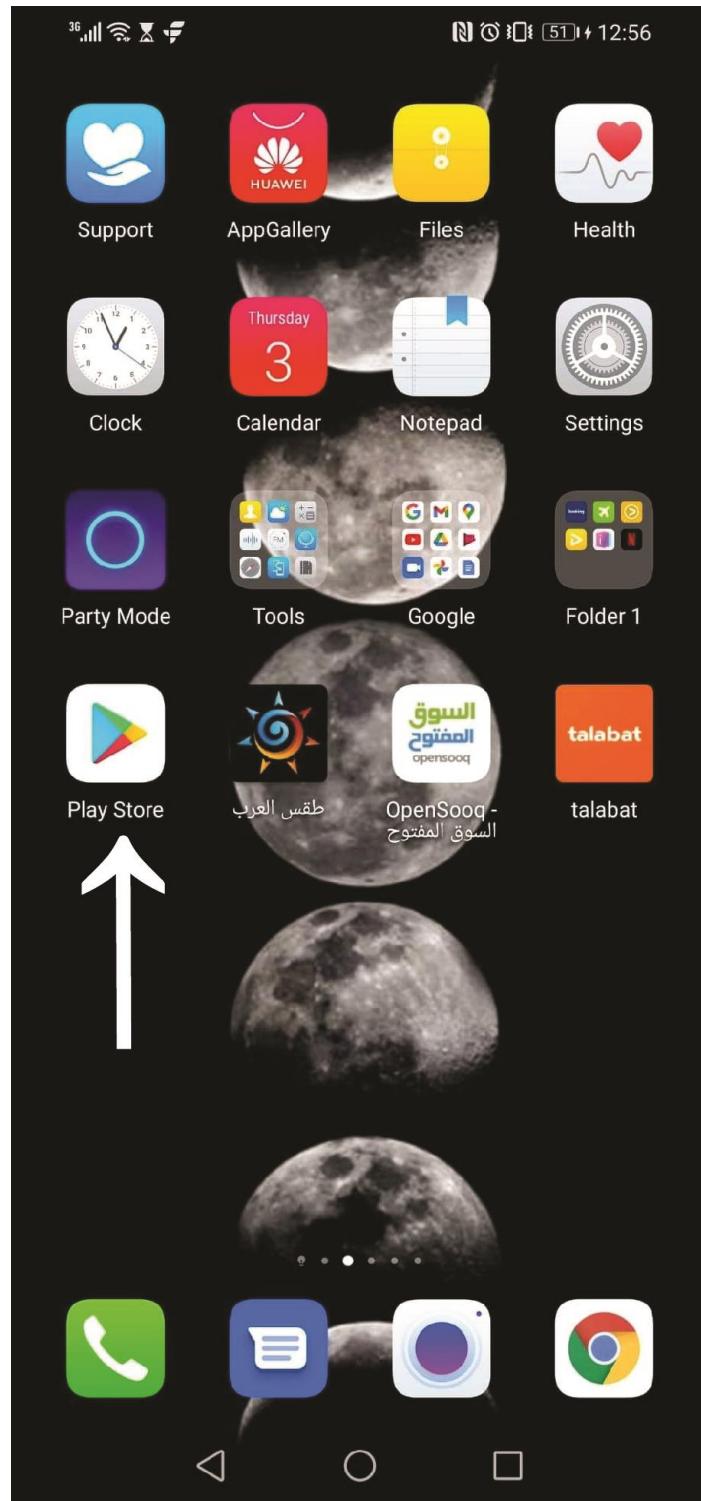


Figure 93: Play Store |

Then you should write our application's name “28 Days Challenge “in search place:

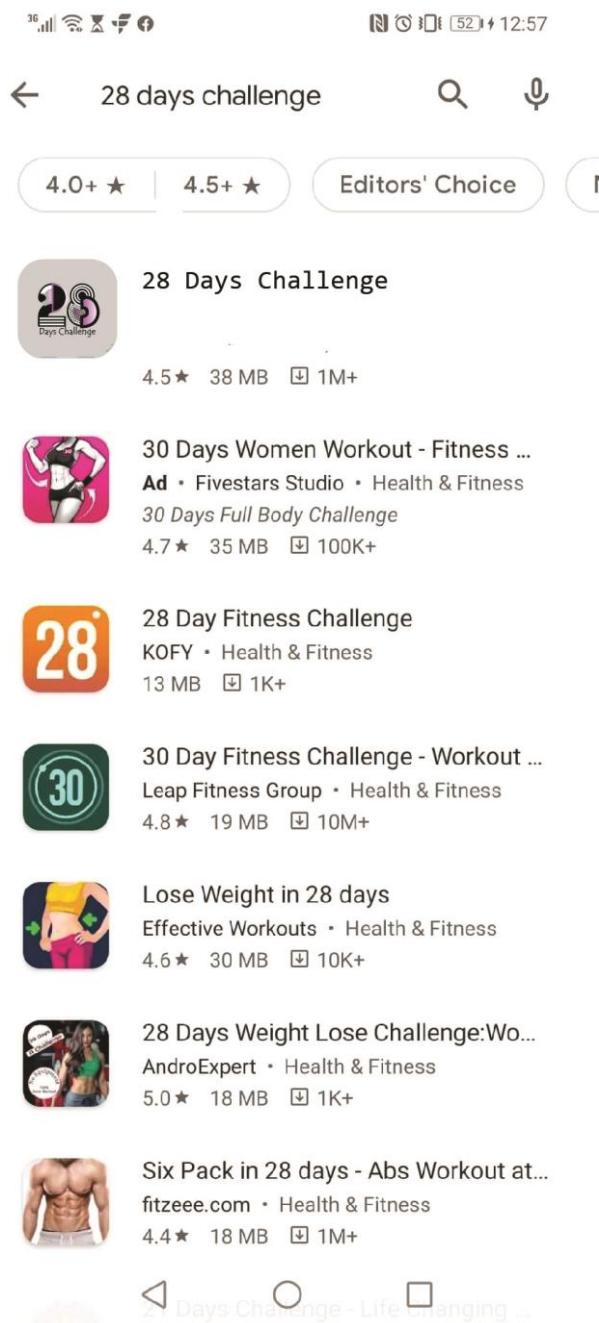


Figure 94: | Search on app |

Then you will find it on your main screen!

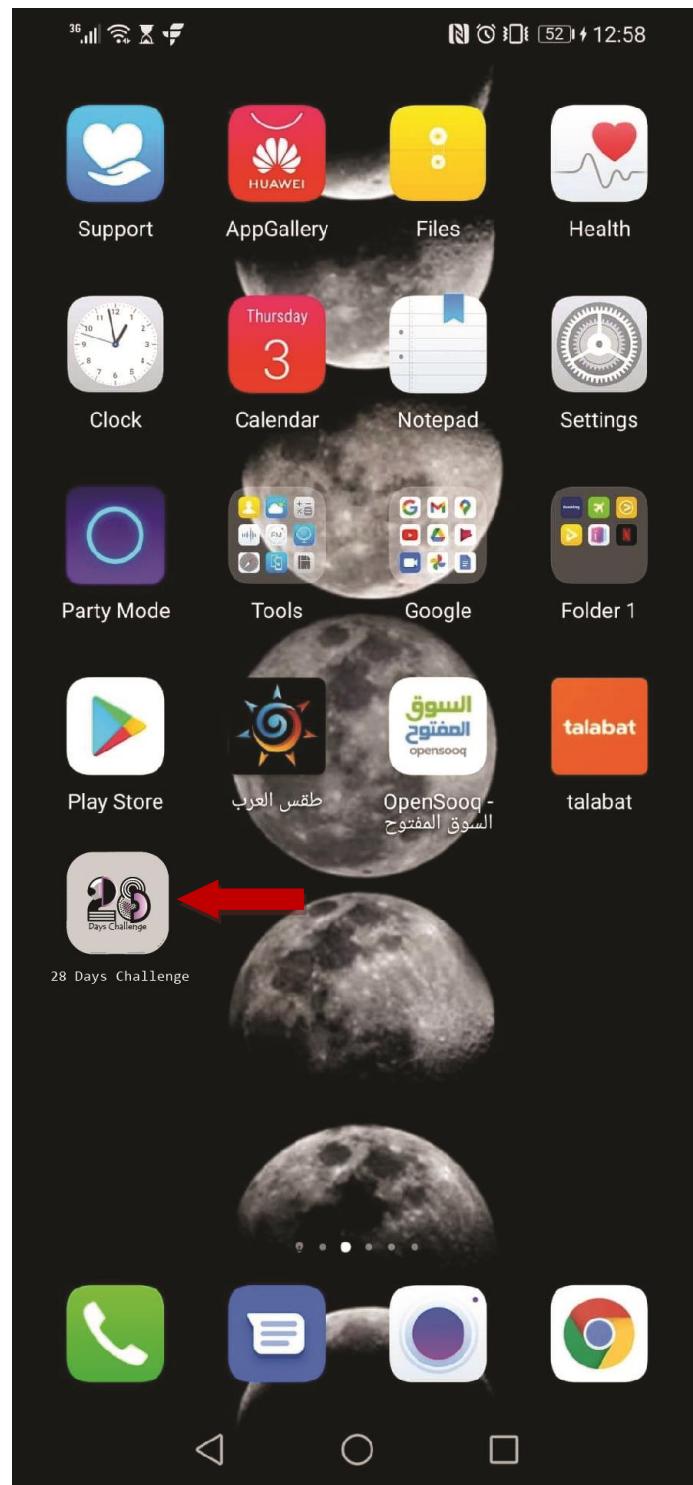


Figure 95: |The Application In Main Screen|

## 6.5 Summary

Heuristic and Cooperative Evaluations were applied to the application each of these evaluations has its method in assessing the overall usability of the application. The heuristic for example is done by professional IT experts who examine the user Interface design by comparing it with some standard principles, while cooperative evaluation is done by targeted users through documenting the time needed for previously defined tasks to be completed.

After performing both evaluations, results were represented in tables as shown earlier, some issues were taken into account and fixed requirements validation and completeness were also accomplished to ensure that all functional requirements are implemented properly in our application.

## 7.0 PROJECT CONCLUSION AND FUTURE WORK

### 7.1 Introduction

Each project is made for a specific goal, and each goal needs several stages to be completed.

The purpose of “ 28 days challenges “, Adopting healthy habits, transforming lifestyle wellness, No social media, meditation, etc, and making challenges available online allowing the users to access them at any day and time. Also, it's free. So, we decided to develop a social and economic application like our application that collect the admin and user's data and view it on a homepage.

### 7.2 Overall Weaknesses

- 1- When you want to use the application you must connect to the internet.
- 2- The user can't communicate with the admin.

### 7.3 Overall Strength

- 1- This project can use it anywhere in the world.
- 2- Collect all features from the separate applications in one application and add new features.
- 3- Design and develop a Friendly GUI.
- 4- The system does not have specific type of users, it's available for all ages and genders, either system administrator, or user.
- 5- Increased the interesting and enthusiasm for the participating people by adding challenges because human loves competition.

#### 7.4 Future Work

We have some plans in our project that contain:

- Develop our project in the IOS system.
- Exclusive tips for user.
- To increase the number of employees so they include a life coach expert.
- The notification will be sent automatically to users.
- Rewards when finishing the specific challenge.
- A Chat bot :

So the users can ask questions through the chat bot so it helps them if he faced any problem and communicate with the admin, and the chat bot will allow them to exchange comments and feedback and share opinions to let others have feedback about the challenges.

#### 7.5 Summary

In this chapter, we have written the weaknesses, strengths of our project and the features that we hope to add and improve in the future.

**REFERENCES****Appendix A****Table 27: |Table Of Noor Test |**

# of H	# of 0s	# of 1s	# of 2s	# of 3s	# of 4s
<b>H1</b>	1	1	2	-	<b>4</b>
<b>H2</b>	0	1	1	1	<b>2</b>
<b>H3</b>	1	1	1	1	<b>1</b>
<b>H4</b>	3	2	-	1	<b>4</b>
<b>H5</b>	1	1	1	-	<b>3</b>
<b>H6</b>	2	1	1	-	<b>2</b>
<b>H7</b>	2	1	2	2	<b>1</b>
<b>H8</b>	-	3	1	-	<b>1</b>
<b>H9</b>	-	-	1	2	<b>2</b>
<b>H10</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>1</b>

Table 28: | Table Of Rawand Test |

# of H	# of 0s	# of 1s	# of 2s	# of 3s	# of 4s
<b>H1</b>	2	1	-	1	1
<b>H2</b>	2	-	2	1	-
<b>H3</b>	3	1	-	-	1
<b>H4</b>	4	1	2	1	2
<b>H5</b>	2	2	-	-	2
<b>H6</b>	2	2	1	-	1
<b>H7</b>	2	2	1	1	2
<b>H8</b>	1	1	2	-	1
<b>H9</b>	1	3	-	-	1
<b>H10</b>	4	1	3	1	1

Table 29: |Table Of Maram Test |

	# of 0s	# of 1s	# of 2s	# of 3s	# of 4s
<b>H1</b>	3	1	1	-	-
<b>H2</b>	1	2	-	1	1
<b>H3</b>	2	1	1	-	1
<b>H4</b>	3	3	1	1	2
<b>H5</b>	2	-	1	2	1
<b>H6</b>	1	1	2	1	1
<b>H7</b>	2	1	2	2	1
<b>H8</b>	1	2	2	-	-
<b>H9</b>	1	1	2	1	-
<b>H10</b>	3	3	2	2	-

## Appendix B

### ➤ Done By Noor

#### H1. Visibility of System Status

#	Review Checklist	0 1 2 3 4	Comments
1.1	Does every display begin with a title or header that describes screen contents?	( ) ( ) ( ) ( ) (*)	
1.2	Do menu instructions, prompts, and error messages appear in the same place(s) on each menu?	( ) ( * ) ( ) ( ) ( )	
1.3	Is there some form of system feedback for every operator action?	( ) ( ) ( * ) ( ) ( )	
1.4	Are responses times appropriate to the users cognitive processing?	( ) ( ) ( * ) ( ) ( )	
1.5	Is there visual feedback in menus or dialog boxes about which choices are selectable?	( * ) ( ) ( ) ( ) ( )	

#### H2. Match Between System and the Real World

#	Review Checklist	0 1 2 3 4	Comments
2.1	Are icons concrete and familiar?	( ) ( ) ( ) ( ) ( * )	
2.2	Are menu choices ordered in the most logical way, given the user, the item names, and the task variables?	( ) ( ) ( * ) ( ) ( )	
2.3	Do related and interdependent fields appear on the same screen?	( ) ( ) ( ) ( ) ( * )	
2.4	When prompts imply a necessary action, are the words in the message consistent with that action?	( ) ( * ) ( ) ( ) ( )	
2.5	On data entry screens, are tasks described in terminology familiar to users?	( ) ( ) ( ) ( * ) ( )	

### H3. User Control and Freedom

#	Review Checklist	0 1 2 3 4	Comments
3.1	When a user's task is complete, does the system wait for a signal from the user before processing?	( ) ( ) ( ) ( ) ( * )	
3.2	Are users prompted to confirm commands that have drastic, destructive consequences?	( ) ( ) ( ) ( * ) ( )	
3.3	Are character edits allowed in data entry fields?	( ) ( ) ( * ) ( ) ( )	
3.4	If menu lists are long (more than seven items), can users select an item either by moving the cursor or by typing a mnemonic code?	( ) ( * ) ( ) ( ) ( )	
3.5	If the system uses a pointing device, do users have the option of either clicking on menu items or using a keyboard shortcut?	( * ) ( ) ( ) ( ) ( )	

### H4. Consistency and Standards

#	Review Checklist	0 1 2 3 4	Comments
4.1	Has a heavy use of all uppercase letters on a screen been avoided?	( ) ( * ) ( ) ( ) ( )	
4.2	Are icons labeled?	( ) ( ) ( ) ( * )	
4.3	Are there no more than twelve to twenty icon types?	( * ) ( ) ( ) ( ) ( )	
4.4	Does each window have a title?	( ) ( ) ( ) ( ) ( * )	
4.5	Is vertical and horizontal scrolling possible in each window?	( ) ( ) ( ) ( ) ( * )	
4.6	Are menu choice lists presented vertically?	( ) ( ) ( ) ( * ) ( )	
4.7	Are menu titles either centered or left-justified?	( * ) ( ) ( ) ( ) ( )	
4.8	Are menu items left-justified, with the item number or mnemonic preceding the name?	( * ) ( ) ( ) ( ) ( )	
4.9	Do embedded field-level prompts appear to the right of the field label?	( * ) ( ) ( ) ( ) ( )	
4.10	Are attention-getting techniques used with care?	( ) ( ) ( ) ( ) ( * )	

## H5. Help Users Recognize, Diagnose, and Recover From Errors

#	Review Checklist	0	1	2	3	4	Comments
<b>5.1</b>	Is sound used to signal an error?	( )	( )	( * )	( )	( )	
<b>5.2</b>	Are error messages worded so that the system, not the user, takes the blame?	( )	( * )	( )	( )	( )	
<b>5.3</b>	Do error messages suggest the cause of the problem?	( )	( )	( )	( )	( * )	
<b>5.4</b>	Do error messages indicate what action the user needs to take to correct the error?	( )	( )	( )	( )	( * )	
<b>5.5</b>	If the system supports both novice and expert users, are multiple levels of error-message detail available?	( * )	( )	( )	( )	( )	
<b>5.6</b>	If an error is detected in a data entry field, does the system place the cursor in that field or highlight the error?	( )	( )	( )	( )	( * )	

## H6. Error Prevention

#	Review Checklist	0	1	2	3	4	Comments
<b>6.1</b>	Are menu choices logical, distinctive, and mutually exclusive?	( )	( )	( )	( )	( * )	
<b>6.2</b>	Are data inputs case-blind whenever possible?	( * )	( )	( )	( )	( )	
<b>6.3</b>	Does the system prevent users from making errors whenever possible?	( )	( * )	( )	( )	( )	
<b>6.4</b>	Does the system warn users if they are about to make a potentially serious error?	( )	( )	( * )	( )	( )	
<b>6.5</b>	Do data entry screens and dialog boxes indicate the number of character spaces available in a field?	( )	( )	( )	( )	( * )	
<b>6.6</b>	Do fields in data entry screens and dialog boxes contain default values when appropriate?	( * )	( )	( )	( )	( )	

## H7. Recognition Rather Than Recall

#	Review Checklist	0	1	2	3	4	Comments
7.1	For question and answer interfaces, are visual cues and white space used to distinguish questions, prompts, instructions, and user input?	(*)	( )	( )	( )	( )	
7.2	Are inactive menu items grayed out or omitted?	( )	( *)	( )	( )	( )	
7.3	Do data entry screens and dialog boxes indicate when fields are optional?	( )	( )	( *)	( )	( )	
7.4	Are prompts, cues, and messages placed where the eye is likely to be looking on the screen?	( *)	( )	( )	( )	( )	
7.5	Are field labels close to fields, but separated by at least one space?	( )	( )	( )	( *)	( )	
7.6	Have items been grouped into logical zones, and have headings been used to distinguish between zones?	( )	( )	( )	( *)	( )	
7.7	Are borders used to identify meaningful groups?	( )	( )	( *)	( )	( )	
7.8	Is color coding consistent throughout the system?	( )	( )	( )	( )	( *)	

## H8. Flexibility and Minimalist Design

#	Review Checklist	0	1	2	3	4	Comments
8.1	If menu lists are short (seven items or fewer), can users select an item by moving the cursor?	( )	( *)	( )	( )	( )	
8.2	If the system uses a pointing device, do users have the option of either clicking on fields or using a keyboard shortcut?	( )	( *)	( )	( )	( )	
8.3	On data entry screens, do users have the option of either clicking directly on a field or using a keyboard shortcut?	( )	( )	( *)	( )	( )	
8.4	On menus, do users have the option of either clicking directly on a menu item or using a keyboard shortcut?	( )	( )	( )	( )	( *)	
8.5	In dialog boxes, do users have the option of either clicking directly on a dialog box option or using a keyboard shortcut?	( )	( *)	( )	( )	( )	

## H9. Aesthetic and Minimalist Design

#	Review Checklist	0	1	2	3	4	Comments
9.1	Are all icons in a set visually and conceptually distinct?	( )	( )	( )	( )	( * )	
9.2	Does each icon stand out from its background?	( )	( )	( )	( * )	( )	
9.3	Does each data entry screen have a short, simple, clear, distinctive title?	( )	( )	( )	( )	( * )	
9.4	Are field labels brief, familiar, and descriptive?	( )	( )	( )	( * )	( )	
9.5	Are there pop-up or pull-down menus within data entry fields that have many, but well-defined, entry options?	( )	( )	( * )	( )	( )	

## H10. Help and Documentation

#	Review Checklist	0	1	2	3	4	Comments
10.1	Are on-line instructions visually distinct?	( )	( )	( * )	( )	( )	
10.2	If menu choices are ambiguous, does the system provide additional explanatory information when an item is selected?	( * )	( )	( )	( )	( )	
10.3	Is the help function visible ;for example, a key labeled HELP or a special menu?	( * )	( )	( )	( )	( )	
10.4	Navigation: Is information easy to find?	( )	( )	( )	( * )	( )	
10.5	Presentation: Is the visual layout well designed?	( )	( )	( )	( )	( * )	
10.6	Conversation: Is the information accurate, complete, and understandable?	( )	( )	( )	( * )	( )	
10.7	Is the information relevant?	( )	( )	( )	( * )	( )	
10.8	Can users easily switch between help and their work?	( )	( )	( * )	( )	( )	
10.9	Is it easy to access and return from the help system?	( )	( )	( * )	( )	( )	
10.10	Can users resume work where they left off after accessing help?	( )	( * )	( )	( )	( )	

➤ Done by Rawand

## H1. Visibility of System Status

#	Review Checklist	0 1 2 3 4	Comments
1.1	Does every display begin with a title or header that describes screen contents?	( *) ( ) ( ) ( ) ( )	
1.2	Do menu instructions, prompts, and error messages appear in the same place(s) on each menu?	( ) ( * ) ( ) ( ) ( )	
1.3	Is there some form of system feedback for every operator action?	( * ) ( ) ( ) ( ) ( )	
1.4	Are responses times appropriate to the users cognitive processing?	( ) ( ) ( ) ( * ) ( )	
1.5	Is there visual feedback in menus or dialog boxes about which choices are selectable?	( ) ( ) ( ) ( ) ( * )	

## H2. Match Between System and the Real World

#	Review Checklist	0 1 2 3 4	Comments
2.1	Are icons concrete and familiar?	( ) ( ) ( * ) ( ) ( )	
2.2	Are menu choices ordered in the most logical way, given the user, the item names, and the task variables?	( ) ( ) ( ) ( * ) ( )	
2.3	Do related and interdependent fields appear on the same screen?	( ) ( ) ( * ) ( ) ( )	
2.4	When prompts imply a necessary action, are the words in the message consistent with that action?	( * ) ( ) ( ) ( ) ( )	
2.5	On data entry screens, are tasks described in terminology familiar to users?	( * ) ( ) ( ) ( ) ( )	

### H3. User Control and Freedom

#	Review Checklist	0 1 2 3 4	Comments
3.1	When a user's task is complete, does the system wait for a signal from the user before processing?	( ) ( ) ( ) ( ) (*)	
3.2	Are users prompted to confirm commands that have drastic, destructive consequences?	( * ) ( ) ( ) ( ) ( )	
3.3	Are character edits allowed in data entry fields?	( * ) ( ) ( ) ( ) ( )	
3.4	If menu lists are long (more than seven items), can users select an item either by moving the cursor or by typing a mnemonic code?	( ) ( * ) ( ) ( ) ( )	
3.5	If the system uses a pointing device, do users have the option of either clicking on menu items or using a keyboard shortcut?	( * ) ( ) ( ) ( ) ( )	

### H4. Consistency and Standards

#	Review Checklist	0 1 2 3 4	Comments
4.1	Has a heavy use of all uppercase letters on a screen been avoided?	( * ) ( ) ( ) ( )	
4.2	Are icons labeled?	( ) ( ) ( ) ( * )	
4.3	Are there no more than twelve to twenty icon types?	( * ) ( ) ( ) ( )	
4.4	Does each window have a title?	( ) ( * ) ( ) ( ) ( )	
4.5	Are vertical and horizontal scrolling possible in each window?	( * ) ( ) ( ) ( ) ( )	
4.6	Are menu choice lists presented vertically?	( * ) ( ) ( ) ( ) ( )	
4.7	Are menu titles either centered or left-justified?	( ) ( ) ( * ) ( ) ( )	
4.8	Are menu items left-justified, with the item number or mnemonic preceding the name?	( ) ( ) ( ) ( * ) ( )	
4.9	Do embedded field-level prompts appear to the right of the field label?	( ) ( ) ( ) ( ) ( * )	
4.10	Are attention-getting techniques used with care?	( * ) ( ) ( ) ( )	

## H5. Help Users Recognize, Diagnose, and Recover From Errors

#	Review Checklist	0	1	2	3	4	Comments
5.1	Is sound used to signal an error?	( )	( * )	( )	( )	( )	
5.2	Are error messages worded so that the system, not the user, takes the blame?	( )	( )	( )	( )	( * )	
5.3	Do error messages suggest the cause of the problem?	( * )	( )	( )	( )	( )	
5.4	Do error messages indicate what action the user needs to take to correct the error?	( )	( )	( )	( )	( * )	
5.5	If the system supports both novice and expert users, are multiple levels of error-message detail available?	( * )	( )	( )	( )	( )	
5.6	If an error is detected in a data entry field, does the system place the cursor in that field or highlight the error?	( )	( * )	( )	( )	( )	

## H6. Error Prevention

#	Review Checklist	0	1	2	3	4	Comments
6.1	Are menu choices logical, distinctive, and mutually exclusive?	( )	( )	( * )	( )	( )	
6.2	Are data inputs case-blind whenever possible?	( )	( * )	( )	( )	( )	
6.3	Does the system prevent users from making errors whenever possible?	( * )	( )	( )	( )	( )	
6.4	Does the system warn users if they are about to make a potentially serious error?	( )	( * )	( )	( )	( )	
6.5	Do data entry screens and dialog boxes indicate the number of character spaces available in a field?	( )	( )	( )	( )	( * )	
6.6	Do fields in data entry screens and dialog boxes contain default values when appropriate?	( * )	( )	( )	( )	( )	

## H7. Recognition Rather Than Recall

#	Review Checklist	0	1	2	3	4	Comments
7.1	For question and answer interfaces, are visual cues and white space used to distinguish questions, prompts, instructions, and user input?	( )	( )	( )	( )	( *)	
7.2	Are inactive menu items grayed out or omitted?	( )	( )	( )	( *)	( )	
7.3	Do data entry screens and dialog boxes indicate when fields are optional?	( )	( )	( )	( )	( *)	
7.4	Are prompts, cues, and messages placed where the eye is likely to be looking on the screen?	( *)	( )	( )	( )	( )	
7.5	Are field labels closest to fields, but separated by at least one space?	( *)	( )	( )	( )	( )	
7.6	Have items been grouped into logical zones, and have headings been used to distinguish between zones?	( )	( )	( * )	( )	( )	
7.7	Are borders used to identify meaningful groups?	( )	( * )	( )	( )	( )	
7.8	Is color coding consistent throughout the system?	( )	( * )	( )	( )	( )	

## H8. Flexibility and Minimalist Design

#	Review Checklist	0	1	2	3	4	Comments
8.1	If menu lists are short (seven items or fewer), can users select an item by moving the cursor?	( )	( )	( * )	( )	( )	
8.2	If the system uses a pointing device, do users have the option of either clicking on fields or using a keyboard shortcut?	( )	( )	( * )	( )	( )	
8.3	On data entry screens, do users have the option of either clicking directly on a field or using a keyboard shortcut?	( * )	( )	( )	( )	( )	
8.4	On menus, do users have the option of either clicking directly on a menu item or using a keyboard shortcut?	( )	( )	( )	( )	( * )	
8.5	In dialog boxes, do users have the option of either clicking directly on a dialog box option or using a keyboard shortcut?	( )	( * )	( )	( )	( )	

## H9. Aesthetic and Minimalist Design

#	Review Checklist	0	1	2	3	4	Comments
9.1	Are all icons in a set visually and conceptually distinct?	( )	( * )	( )	( )	( )	
9.2	Does each icon stand out from its background?	( )	( )	( )	( * )	( )	
9.3	Does each data entry screen have a short, simple, clear, distinctive title?	( )	( * )	( )	( )	( )	
9.4	Are field labels brief, familiar, and descriptive?	( )	( * )	( )	( )	( )	
9.5	Are there pop-up or pull-down menus within data entry fields that have many, but well-defined, entry options?	( )	( )	( )	( )	( * )	

## H10. Help and Documentation

#	Review Checklist	0	1	2	3	4	Comments
10.1	Are on-line instructions visually distinct?	( * )	( )	( )	( )	( )	
10.2	If menu choices are ambiguous, does the system provide additional explanatory information when an item is selected?	( )	( )	( * )	( )	( )	
10.3	Is the help function visible; for example, a key labeled HELP or a special menu?	( * )	( )	( )	( )	( )	
10.4	Navigation: Is information easy to find?	( )	( )	( * )	( )	( )	
10.5	Presentation: Is the visual layout well designed?	( )	( )	( )	( * )	( )	
10.6	Conversation: Is the information accurate, complete, and understandable?	( )	( * )	( )	( )	( )	
10.7	Is the information relevant?	( * )	( )	( )	( )	( )	
10.8	Can users easily switch between help and their work?	( * )	( )	( )	( )	( )	
10.9	Is it easy to access and return from the help system?	( )	( )	( * )	( )	( )	
10.10	Can users resume work where they left off after accessing help?	( )	( )	( )	( )	( * )	

➤ **Done By Maram:**

➤ **H1. Visibility of System Status**

#	Review Checklist	0	1	2	3	4	Comments
<b>1.1</b>	Does every display begin with a title or header that describes screen contents?	( )	( )	( )	( )	( * )	
<b>1.2</b>	Do menu instructions, prompts, and error messages appear in the same place(s) on each menu?	( * )	( )	( )	( )	( )	
<b>1.3</b>	Is there some form of system feedback for every operator action?	( * )	( )	( )	( )	( )	
<b>1.4</b>	Are responses times appropriate to the users cognitive processing?	( )	( )	( * )	( )	( )	
<b>1.5</b>	Is there visual feedback in menus or dialog boxes about which choices are selectable?	( * )	( )	( )	( )	( )	

**H2. Match between System and the Real World**

Number	Review Checklist	0	1	2	3	4	Comments
<b>2.1</b>	Are icons concrete and familiar?	( )	( * )	( )	( )	( )	
<b>2.2</b>	Are menu choices ordered in the most logical way, given the user, the item names, and the task variables?	( )	( )	( )	( * )	( )	
<b>2.3</b>	Do related and interdependent fields appear on the same screen?	( )	( )	( )	( )	( * )	
<b>2.4</b>	When prompts imply a necessary action, are the words in the message consistent with that action?	( )	( * )	( )	( )	( )	
<b>2.5</b>	On data entry screens, are tasks described in terminology familiar to users?	( * )	( )	( )	( )	( )	

### H3. User Control and Freedom

Number	Review Checklist	0	1	2	3	4	Comments
3.1	When a user's task is complete, does the system wait for a signal from the user before processing?	( )	( )	( * )	( )	( )	
3.2	Are users prompted to confirm commands that have drastic, destructive consequences?	( * )	( )	( )	( )	( )	
3.3	Are character edits allowed in data entry fields?	( )	( )	( )	( )	( * )	
3.4	If menu lists are long (more than seven items), can users select an item either by moving the cursor or by typing a mnemonic code?	( )	( * )	( )	( )	( )	
3.5	If the system uses a pointing device, do users have the option of either clicking on menu items or using a keyboard shortcut?	( * )	( )	( )	( )	( )	

### H4. Consistency and Standards

Number	Review Checklist	0	1	2	3	4	Comments
4.1	Has a heavy use of all uppercase letters on a screen been avoided?	( )	( * )	( )	( )	( )	
4.2	Are icons labeled?	( )	( )	( )	( )	( * )	
4.3	Are there no more than twelve to twenty icon types?	( * )	( )	( )	( )	( )	
4.4	Does each window have a title?	( )	( )	( * )	( )	( )	
4.5	Is vertical and horizontal scrolling possible in each window?	( )	( * )	( )	( )	( )	
4.6	Are menu choice lists presented vertically?	( )	( )	( )	( * )	( )	
4.7	Are menu titles either centered or left-justified?	( )	( * )	( )	( )	( )	
4.8	Are menu items left-justified, with the item number or mnemonic preceding the name?	( * )	( )	( )	( )	( )	
4.9	Do embedded field-level prompts appear to	( * )	( )	( )	( )	( )	

	the right of the field label?	
<b>4.10</b>	Are attention-getting techniques used with care?	( ) ( ) ( ) ( ) ( * )

## H5. Help Users Recognize, Diagnose, and Recover From Errors

Number	Review Checklist	0    1    2    3    4	Comments
<b>5.1</b>	Is sound used to signal an error?	( * ) ( ) ( ) ( ) ( )	
<b>5.2</b>	Do error messages worded so that the system, not the user, takes the blame?	( ) ( ) ( * ) ( ) ( )	
<b>5.3</b>	Are error messages suggesting the cause of the problem?	( ) ( ) ( ) ( ) ( * )	
<b>5.4</b>	Do error messages indicate what action the user needs to take to correct the error?	( ) ( ) ( ) ( * ) ( )	
<b>5.5</b>	If the system supports both novice and expert users, are multiple levels of error-message detail available?	( * ) ( ) ( ) ( ) ( )	
<b>5.6</b>	If an error is detected in a data entry field, does the system place the cursor in that field or highlight the error?	( ) ( ) ( * ) ( ) ( )	

## H6. Error Prevention

Number	Review Checklist	0	1	2	3	4	Comments
<b>6.1</b>	Are menu choices logical, distinctive, and mutually exclusive?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(* )
<b>6.2</b>	Are data inputs case-blind whenever possible?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>6.3</b>	Does the system prevent users from making errors whenever possible?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>6.4</b>	Does the system warn users if they are about to make a potentially serious error?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>6.5</b>	Do data entry screens and dialog boxes indicate the number of character spaces available in a field?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	()
<b>6.6</b>	Do fields in data entry screens and dialog boxes contain default values when appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

## H7. Recognition Rather Than Recall

Number	Review Checklist	0	1	2	3	4	Comments
7.1	For question and answer interfaces, are visual cues and white space used to distinguish questions, prompts, instructions, and user input?	(*)	( )	( )	( )	( )	
7.2	Are inactive menu items grayed out or omitted?	( )	( *)	( )	( )	( )	
7.3	Do data entry screens and dialog boxes indicate when fields are optional?	( )	( )	( *)	( )	( )	
7.4	Are prompts, cues, and messages placed where the eye is likely to be looking on the screen?	( *)	( )	( )	( )	( )	
7.5	Are field labels close to fields, but separated by at least one space?	( )	( )	( )	( *)	( )	
7.6	Have items been grouped into logical zones, and have headings been used to distinguish between zones?	( )	( )	( )	( *)	( )	
7.7	Are borders used to identify meaningful groups?	( )	( )	( *)	( )	( )	
7.8	Is color coding consistent throughout the system?	( )	( )	( )	( )	( *)	

## H8. Flexibility and Minimalist Design

Number	Review Checklist	0	1	2	3	4	Comments
8.1	If menu lists are short (seven items or fewer), can users select an item by moving the cursor?	( * )	( )	( )	( )	( )	
8.2	If the system uses a pointing device, do users have the option of either clicking on fields or using a keyboard shortcut?	( )	( * )	( )	( )	( )	
8.3	On data entry screens, do users have the option of either clicking directly on a field or using a keyboard shortcut?	( )	( )	( * )	( )	( )	
8.4	On menus, do users have the option of either clicking directly on a menu item or using a keyboard shortcut?	( )	( )	( * )	( )	( )	
8.5	In dialog boxes, do users have the option of either clicking directly on a dialog box option or using a keyboard shortcut?	( )	( * )	( )	( )	( )	

## H9. Aesthetic and Minimalist Design

Number	Review Checklist	0	1	2	3	4	Comments
9.1	Are all icons in a set visually and conceptually distinct?	( )	( )	( )	( * )	( )	
9.2	Does each icon stand out from its background?	( )	( )	( * )	( )	( )	
9.3	Does each data entry screen have a short, simple, clear, distinctive title?	( )	( * )	( )	( )	( )	
9.4	Are field labels brief, familiar, and descriptive?	( * )	( )	( )	( )	( )	
9.5	Are there pop-up or pull-down menus within data entry fields that have many, but well-defined, entry options?	( )	( )	( * )	( )	( )	

## H10. Help and Documentation

Number	Review Checklist	0	1	2	3	4	Comments
10.1	Are on-line instructions visually distinct?	( * )	( )	( )	( )	( )	
10.2	If menu choices are ambiguous, does the system provide additional explanatory information when an item is selected?	( * )	( )	( )	( )	( )	
10.3	Is the help function visible; for example, a key labeled help or a special menu?	( * )	( )	( )	( )	( )	
10.4	Navigation: Is information easy to find?	( )	( )	( )	( * )	( )	
10.5	Presentation: Is the visual layout well designed?	( )	( )	( )	( * )	( )	
10.6	Conversation: Is the information accurate, complete, and understandable?	( )	( * )	( )	( )	( )	
10.7	Is the information relevant?	( )	( * )	( )	( )	( )	
10.8	Can users easily switch between help and their work?	( )	( )	( * )	( )	( )	
10.9	Is it easy to access and return from the help system?	( )	( )	( * )	( )	( )	
10.10	Can users resume work where they left off after accessing help?	( )	( * )	( )	( )	( )	

## **Appendix C**

**Table the First participation (Noor )**

<b>Task #</b>	<b>Task</b>	<b>Time</b>	<b>Comment(s)</b>
<b>1</b>	Sign up	45 sec	
<b>2</b>	Log in	11 sec	
<b>3</b>	Forget a password	5 sec	
<b>4</b>	Manage Account	12 sec	
<b>5</b>	Display challenges	3 sec	
<b>6</b>	User's Challenges ( as view , delete , add new record )	15 sec	
<b>7</b>	Logout	4 sec	

**Table the second participation (Rawand )**

<b>Task #</b>	<b>Task</b>	<b>Time</b>	<b>Comment(s)</b>
<b>1</b>	Sign up	1 min ,10 sec	
<b>2</b>	Log in	15 sec	
<b>3</b>	Forget a password	10 sec	
<b>4</b>	Manage Account	11 sec	
<b>5</b>	Display challenges	4 sec	
<b>6</b>	User's Challenges ( as view , delete , add new record )	12 sec	
<b>7</b>	Logout	3 sec	

**Table the third participation (Maram)**

Task #	Task	Time	Comment(s)
1	Sign up	45 sec	
2	Log in	11 sec	
3	Forget a password	11 sec	
4	Manage Account	13 sec	
5	Display challenges	3 sec	
6	User's Challenges ( as view , delete , add new record )	18 sec	
7	Logout	5 sec	