



Cairo University  
Faculty of Computers and Artificial Intelligence  
Information Systems Department



**Prepared by:-**

Abdelrahman Mohamed	20170148	IS - DS
Amr Osama	20170185	IS - DS
Omar Sami	20170176	IS - DS
Omar Adel	20170179	IS - DS
Mark Ehab	20170205	IS - DS

Supervised by

**Dr. Noha Nagy**

**TA. Marwa Hussien**

**Graduation Projects  
July 2021**



## **Faculty of Computers and Artificial Intelligence**

# **AMANA**

Supervised by

**Dr. Noha Nagy**

**TA. Marwa Hussien**

**2021 Graduation projects**

**Committee: 5  
Team: 1**

**Implemented by**

Abdelrahman Mohamed	20170148
Amr Osama	20170185
Omar Sami	20170176
Omar Adel	20170179
Mark Ehab	20170205

# TABLE OF CONTENTS

<b>Chapter 1 : Introduction .....</b>	
1.1. Background .....	
1.2. Motivation .....	
1.3. Problem Statement .....	
1.4. Project Objectives .....	
1.5. Project scope .....	
1.6. Target user .....	
1.7. Related works .....	
1.8. Limitations.....	
1.9. Project work plan .....	
<b>Chapter 2 : System Analysis .....</b>	
2.1. Functional requirement.....	
2.2. Non-functional requirement.....	
2.3. Stakeholders.....	
2.4. Profiles & Personas.....	
2.5. Methodologies .....	
2.6. System models .....	
<b>Chapter 3 : System Design .....</b>	
3.1. System Design's Diagrams.....	
3.2. Entity relationship diagram .....	
3.3. Task Prioritization.....	
3.4. Design strategy.....	
<b>Chapter 4 : System Implementation .....</b>	
4.1. Used Technologies .....	
4.2. Used Tools .....	
4.3. Major Tasks.....	
4.4. GUI Specification.....	
<b>Chapter 5 : Testing.....</b>	
5.1. Test cases & Debugging .....	
<b>Chapter 6 : Evaluation .....</b>	
6.1. Achievements done in Amana.....	
6.2. Benefits of Amana .....	
6.3. Lessons learned from Amana .....	
6.4. Future work .....	
6.5. References & Resources.....	



## CHAPTER 1 : Introduction

In this chapter we will discuss the purpose of the project and the purpose of the document, and provide a brief talking about Amana App.

### **1.1 Background (abstract)**

Many people nowadays have problems in finding their lost things, they tried to get the help from police departments, reporting their missing and they have a small probability to find the missing item, so Amana comes here to increase the efficiency of finding the lost things with collaboration with police departments.

### **1.2 Motivation**

According to many surveys and data gathering, we've recorded that only 25.9% of missing items were found using many reasons like missing it in any place, forgetting about last visit place, and many other reasons, so we want to increase the efficiency of finding the items up to 45%.

### **1.3 Problem Statement**

When a user loses something in the street, he goes directly to the nearest police station to report about the missing item. The police department will process too long for procedures, so our system will cut the edge in this process and reduce the time for users to report about the item's missing.

### **1.4 Project Objectives (suggested solutions)**

AMANA system targets to manage all reports coming from loser and finder in documented way, mining the most lost items, location of loss, time of losing thing in systematic way helps in:

- Help users to find their lost items easily
- Warning people from places that have many missing items
- Collaboration with Police Departments to find the lost items faster
- Ease of use for making reports and posts about missing things with detailed description

Motivate User ethics to help each other.



## 1.5 Project Scope

### Main Scope

Amana will be a Control Management System for controlling user's lost items and control interactions between the finder and loser, The System targets daily regular users who always go away outdoors, Amana will include categories of search.

- Devices (Mobiles, smart watches, electronic devices, ....etc)
- Accessories (Wristwatch, Ring, Chain, ...etc)
- Bags (wallets, back bag, travel bag, ....etc )
- Personal belongings (Cards, papers, ...etc)

### Out of Scope

Users do not actively make some movement outside home like old people.

## 1.6 Target User

Any **person who found something** and wants to deliver it to its owner, **while its owner lost it** and want to search for his stuff, Amana will bridge the gap between the **two users**. Also it's not a condition that the user be losing nor found something, he can browse the posts on the application, so we have 2 main targeted users, and 1 more is not a main.

- 1- Losing >> who lost his Item.
- 2- Found >> who found an unidentified ownership item.
- 3- Surfer >> who can surf the platform and see the posts, and he is Neither losing nor found something.



## 1.7 Related Works

### Clustering Data and Notify users

- Amana provides the user with statistics about the locations where the items are lost the most, the items that lost from users probably in daily routine days, this will be done by clustering out data from posts, analyze the data and plot the results in charts like (bar charts and scatter plot) notify the user with some results in each time frame, this feature is exclusive to our application.

### Cross-Platform Application

- Amana works on both platforms (iOS and android) unlike some of other applications, which will provide a wide range of users, it will be reachable to almost all users, unlike the other lost apps which is restricted to only one platform

### Spam Reports Detector

- Nowadays, large number of social Network pages have been constructed to help people to find their lost items, but these pages have a lot of disadvantages because there are many spam posts (posts of old date and the content of the post may be already existing) Amana will provide a secure restriction to all posts coming from user, that will have a timely manner until the report will be discarded as a spam report, users can interact to this post and report that post if they see any false information provided



## UX compatibility

- Amana provide an easy interface to show all aspects of reports with easily controls to make user experience great, easily communication between users with simple number of clicks, most other applications discards the UX and apply app with.

## Examples of projects with similar idea

- This idea is found in some other projects, **but they are not supported in Egypt** and almost they are not allowed for the most Arabian countries.  
We had a look on the play store we have found some apps having similar idea and goal that we aim to but not specifically same. the will discuss the most popular that are in the same level of Amana, and they are :
  - 1- Lost & Found
  - 2- PAYYA
  - 3- LOFO

## The Comparison between them

Point of Comparison	AMANA	Lost & Found	PAYYA	LOFO
Pricing	Free	Free	Free	Pay for premium
Cross platform	Yes	No	No	No
Categories	Yes	No	Yes	yes
Registration	Yes	No	Yes	Yes
Style	Very simple & elegant	Old simple	Simple	Elegant but not simple
Available in Egypt	Yes	No	No	No
Reporting spam	Yes	No	No	Yes
Reward	Yes	No	no	yes
Comments	Yes	No	No	Yes
filter	Yes	No	Yes	Yes
Search	Yes	No	No	Yes
Type of share	Post	List	List in categories	Post
Upload image	Yes	Yes	Yes	Yes
Location	Yes	Yes	Yes	Yes
Notification	Yes	No	No	Yes
Post Matching	Text recognition	Not used	Not used	Text mining
Secure and private	Yes	No	No	Yes

++

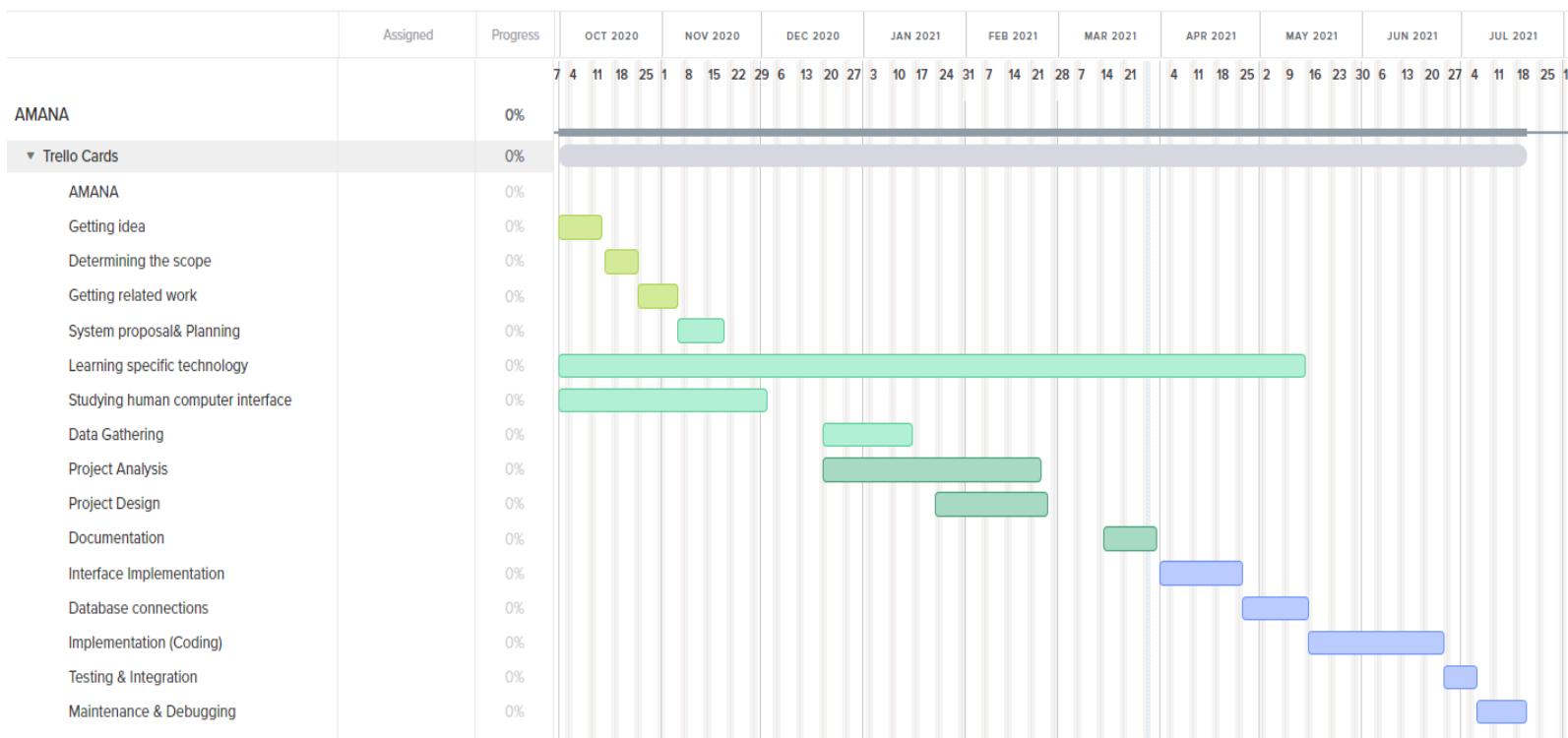


## 1.8 Limitations

- The System will not support chat system between users and each other
- The System will not support a feedback system (rating or chating) between users and administrator as a chat system, it will be done as a form sent to administrator and send response as an email.
- The system will not support image recognition or processing currently.

## 1.9 Project work plan

Gantt chart of project time plan





## Document Organization (summary of the rest of the Document)

In this Document we will take you on a journey to get to know Amana App. You will know how we put its analysis according to certain requirement specifications in the next chapter, and then system design took place for Amana based on some metrics and methodologies. In both chapter we included many diagrams and information about the application users, in addition to some scenarios.

In Chapter 4 System Implementation is done by modern technologies for both front and back ends, beside the used methods and mains tasks Chapter 5 it contains Testing phase and the problems we phased and how we solved it. Also evaluating the application as whole.

At the end we summarize what we done and discuss what we are planning for the future of this application till it become as we dream to be.



## CHAPTER 2: System Analysis

### 2.1 Functional requirement

- The System authenticates the user whenever he/she signs in into the application.
- The System verifies the email whenever a user registers for the first time and sends a confirmation email to the user to confirm his account creation.
- The System provides statistics about the places where things are lost the most.
- The System establish a dashboard between loser and finder to easily communicate with each other
- The System confirms the deletion of the post when the item is found or its been too long published.
- The System will let any user edit the status of his post.
- Account recovery.
- A Feature to filter and organize the posts (Categoriesed) .



## 2.2 Non-functional requirement

- **Usability**

- The System will be user friendly and simple interface to the users to help them find their lost things easily.

- **Reliability**

- The System will be working 24 hours.
- The post request takes no longer than one day to be approved.

- **Security**

- The user data will be encrypted safely in the database.
- The System will delete spam posts that the users detect

- **Scalability**

- The System will be capable of handling a huge number of users without affecting its performance.

- **Performance**

- The System will guarantee the user to have a great experience not affected by any latency issues.

- **Observability**

- Every unsuccessful attempt by a user while creating a post shall be recorded on an audit trail.
- The Inquiries of users will be delivered to the admin panel and responded directly to their mail boxes.



## 2.3 Stakeholders

- **Administrators:**

Admins who manage the application.

- **Users:**

Users of the application (loser or finder or surfer).

- **Executive Managers**

Executive managers such as a CEO or CFO. For example, a CEO may be kept informed about the status of a program or project.



## 2.4 Profiles and Personas

- **User Groups Profiles**

### Main User Groups

The main user groups that will use the app are categorized into three groups

1. Losers
2. Finders
3. Application Administrators

Losers and Finders are the most important in the system and requires more attention.

Characteristic	Losers	Finders	Application Administrators
Gender/ Age	60% Male, of age 16 or above	40% Male, of age 16 or above	80% Male, of age 22 or above
Education	High school or above	High school or above	Technical Education
Language	English and Arabic	English and Arabic	English and Arabic
Android / IOS experience	Low to Medium	Low to Medium	High
Domain Expertise	Low to Medium	Medium	High
Task Knowledge	Initial: Low After 2 days: Medium to High	Initial: Low After one week: Medium to High	High
Expectation	Ease of use Finding their lost things in a short	Ease of use Getting a reward	Robustness Functionality



- Task profiles

Task	Losers	Finders	Application Administrators
Register with a new account	X	X	
Sign in	X	X	
Report a missing something	X		
Report finding something		X	
Edit Post	X	X	X
Offering a reward	X		
Search	X	X	
Communicate	X	X	X
Report Spam	X	X	X
Show Statistical data			X

- Environmental Profiles

Characteristic	Losers	Finders	Application Administrators
Location	Indoors or Outdoors	Indoors or Outdoors	Indoors
Workspace	Home or Work Location	Home or Work Location	Home Office
Lighting	Good	Good	Very Good
Noise	<ul style="list-style-type: none"><li>• Indoors: quite</li><li>• Outdoors: Significant ambient noise</li></ul>	<ul style="list-style-type: none"><li>• Indoors: quite</li><li>• Outdoors: Significant ambient noise</li></ul>	Quite
Hardware	Mobile Phones or IPAD	Mobile Phones or IPAD	Mobile or Computers
Software	Android / IOS	Android / IOS	Android / IOS Flutter

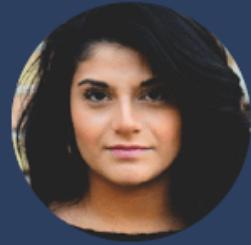


- **Personas**

### Sample Persona 1

## Mervat Nabil

age: 34  
residence: Cairo  
education: Bachelors of Meida  
occupation: Journalist at Al-Ahram newspaper  
marital status: Married



*I take my things whenever I go, when I move from place to another sometimes  
I losing these things*

By the nature of my work, I travel a lot. sometimes I lose my personal belongings and I didn't find them

#### Comfort With Technology

INTERNET



SOFTWARE



MOBILE APPS



SOCIAL NETWORK



#### Criteria For Success:

Don't look back you're not going that way

#### Needs

- Finding her lost personal belongings.
- Easy steps to post a report about lost items.
- Decrease efforts and time to find her lost things.

#### Wants

- keep track for her items
- To be able to return her lost valuable items back
- To focus more than she should

#### Values

- Learning new languages
- High level planning
- Very accurate and practical

#### Fears

- Lose her camera
- Lose her iPhone 12
- Waste a time to search for her lost items



## Sample Persona 2

### Essam Abdeltawab

age: 49  
residence: Giza  
education: High school diploma  
occupation: Security in the Egyptian Museum  
marital status: Married, has 4 children



*Everyday I receive many items with unknown property on the gate during my work , I wait till he come to take it, but nothing happens!*

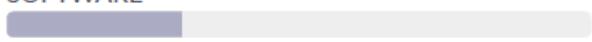
Active, genius and supportive to her friends, He likes to meet new strangers and make worldwide friendships.  
As he is very cheerful and lovable by the all.

#### Comfort With Technology

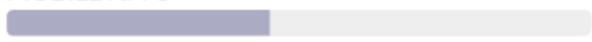
INTERNET



SOFTWARE



MOBILE APPS



SOCIAL NETWORK



#### Criteria For Success:

In God we trust, he has bigger plans for me than I have for myself

#### Needs

- Give his contact to the visitors
- Get along with all of the tourists
- Being loved by all tourists

#### Values

- Speaks more than 7 Languages
- Very kind, Trustworthy and Dedicated
- Helps the people and loves Egypt

#### Wants

- Finding the phone lost for his owner.
- Increase efficiency for finding lost things.
- Easy steps to post a report about lost phone.

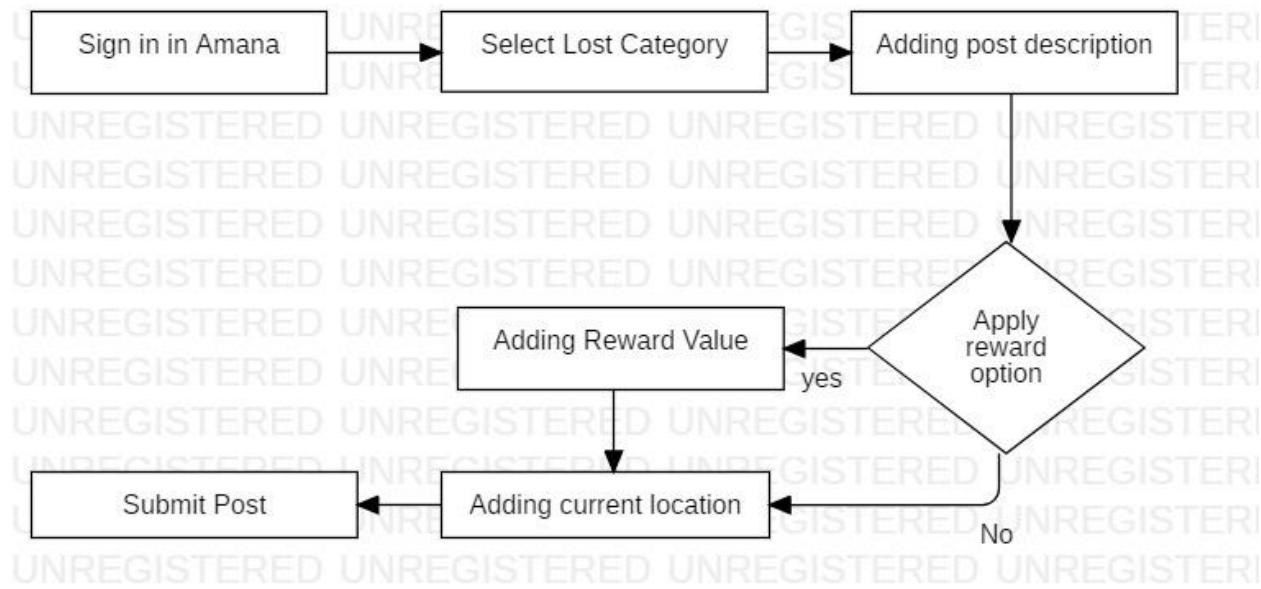
#### Fears

- Not finding the items owners
- Tourist leaves the country unsatisfied
- Visitor search for his items but he can't reach him while he is already looking for its owner.



## User scenarios

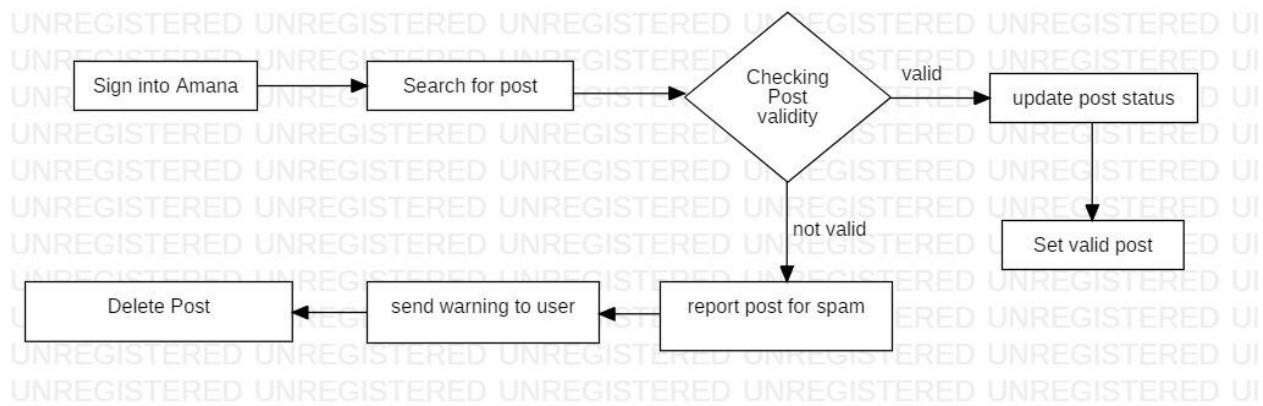
### 1<sup>st</sup> SCENARIO



Omar wants to get back his lost phone one of his family told him to go to AMANA App to report about his lost phone so omar is going to the application of AMANA.com and first he choose from the application “enter as a loser” after that he choose the category of his lost thing which is mobile phone then he fill the description of his phone & also fill his personal information then he press on submit and he will wait for a few days until anything new is happening

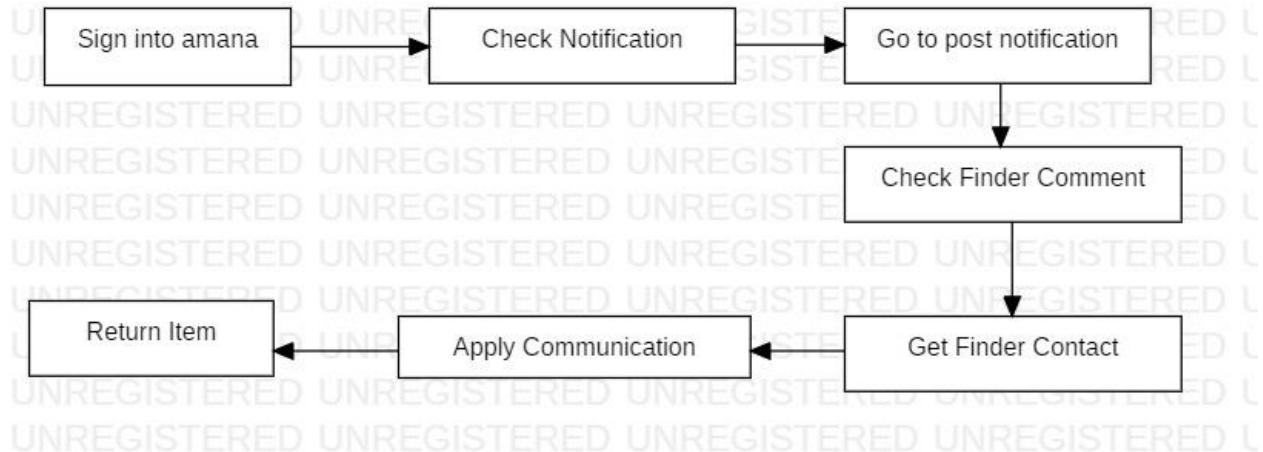


## 2<sup>nd</sup> SCENARIO



Ali is a social-media addict, he loves to track all posts relative to missing things, one day he found a post in AMANA application he already saw it before 1 year ago for lost necklace, he wants to report the application administrator to remove this spam post as he admitted that this thing is returned to its owner, Ali contact one of the administrator to resolve it, the admin check the validity of post with the info inserted by user, he checked that the post is fake so he delete user's post.

## 3<sup>rd</sup> SCENARIO



Khaled reporting a post about missing watch from 3 days ago, he got notified in AMANA application is there's a user who found his lost watch, he direct message him and got his location to meet him and return his item back



## 2.5 Methodologies

### Operational Methodologies

In our application we have four main steps to proceed by user

#### 1. Login and registration views:

The image displays two wireframe mobile phone screens side-by-side, illustrating the login and registration processes for the AMANA application.

**Login Screen (Left):**

- Header: "Welcome to AMANA"
- Text input field: "Username"
- Text input field: "Password" with an eye icon for visibility.
- Checkboxes: "Save Password" and "Remember Me" (partially visible).
- Button: "Login"
- Text: "Don't have an account? < Register"

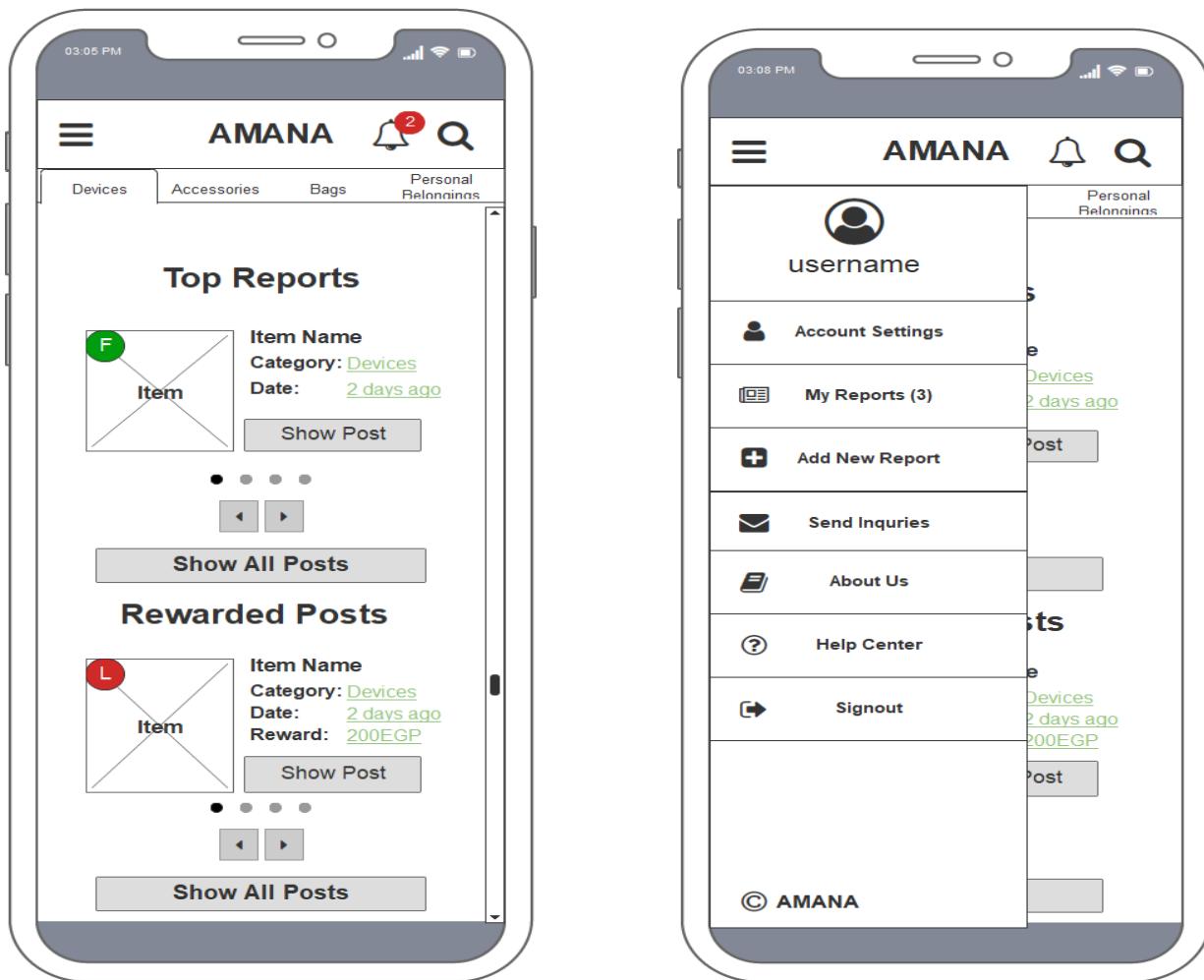
**Registration Screen (Right):**

- Header: "Registration"
- Text input fields: "First Name" and "Last Name".
- Text input field: "Username".
- Text input field: "Email Address".
- Text input field: "Gender" with options "Male" (selected), "Male", and "Female".
- Text: "Next" (with a right-pointing arrow)



## 2. User's News Feeds

Here the user will have the main home page and operations needed by the user to make a report about missing thing or finding something, Search for posts.





### 3. Reporting posts and Manipulate it

The User here begin to state the item in which state if it's lost or found, each category will have a separate form for inserting detailed description about item, as we see in the mockup we find when we selecting device category, we found all data fields needed to describe the device (name, brand, place of lost item, special marks, color, images).

Users can check his history of posts , get into it and edit it for adding or deleting some info, the status of post will be checked if the item is found and will marked as done, posts released from long time and no interactions comes into it will be reported as a spam and cannot be edited in the future

The image displays two wireframe mobile phone screens side-by-side, both showing the 'Add New Post' form for reporting lost items. The left screen shows the initial steps: selecting post status ('Loser') and category ('Devices'). The right screen shows more detailed input fields: lost special marks, location, device description, and reward value.

**Left Screen (Initial Inputs):**

- Select Post Status: Loser (dropdown menu showing Loser, Finder)
- Select Category: Devices (dropdown menu showing Devices, Accessories, Bags, Personal Belongings)

**Right Screen (Detailed Inputs):**

- Enter Lost Special Marks \*
- Enter The Lost Location \*
- Enter Device Description \*
- Enter Reward Value

Both screens include standard mobile UI elements like a top navigation bar with a menu icon, the 'AMANA' logo, a notification bell (with 2 notifications), and a search icon. They also feature a 'Next' button at the bottom of the left screen and 'Previous' and 'Confirm' buttons at the bottom of the right screen.



#### 4. Post Details & communication between loser and finder

Here the user will find the post itself with detailed description, users will interact once they have the same item,

The image displays three mobile phone screens illustrating the Amana app's reporting and communication features:

- Top Screen (Comment Section):** Shows a "Comment Section" screen at 05:50 PM. It features a header with the Amana logo and navigation tabs for Devices, Accessories, Bags, and Personal Belongings. Below the tabs is a notification bell icon with a red "2". The main content area is titled "Comment Section" and contains two comments from "user123": "This is my item, Thanks for your reporting!" Each comment has edit and delete icons.
- Middle Screen (My Reports):** Shows a "My Reports" screen at 04:10 PM. The header includes the Amana logo and a notification bell icon with a red "2". Below the header are navigation tabs for Devices, Accessories, Bags, and Personal Belongings. The main content area lists five reports, each with a small icon (containing letters F, L, or a crossed-out symbol), the item name, date released, and comment count (3). Each report has edit and delete buttons. At the bottom is a pagination bar with pages 1 through 4.
- Bottom Screen (Post Details):** Shows a detailed view of a lost item at 05:24 PM. The header includes the Amana logo and a notification bell icon with a red "2". The main content area shows the item name, date released, and a placeholder "Username". Below this is a map with a green location marker and a yellow line. Further down are fields for Brand (Brand Name), Color (Model Name), SSN (SSN Name), Special Marks (mark1,mark2,mark3), and Description. At the bottom is a button labeled "Leave a comment" with a speech bubble icon.

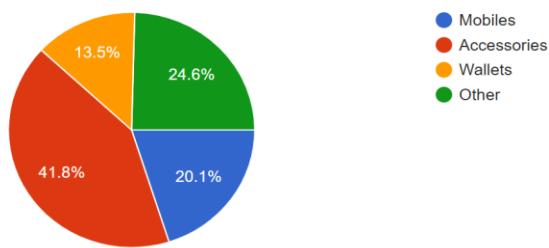


## Research Methodologies

According to the survey here is some statistics for data gathering:

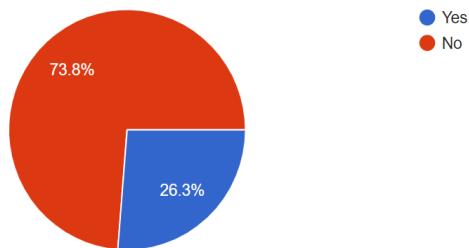
What are the things most likely to be lost?

244 responses



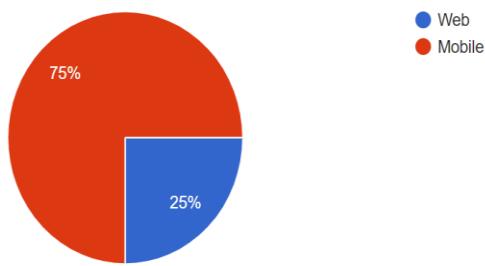
Did you find this lost item ?

240 responses



Which Platform you would like to have the system?

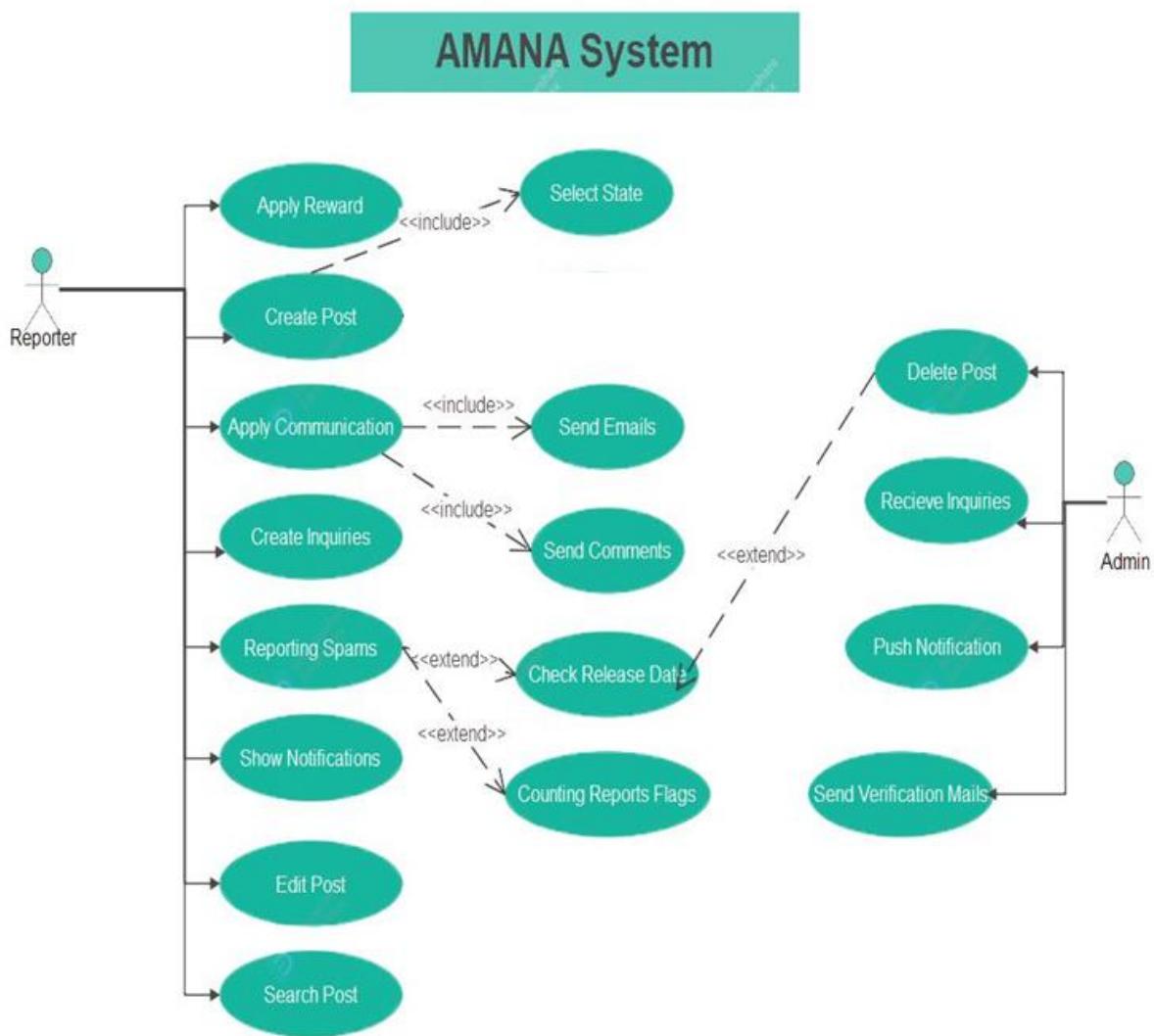
244 responses





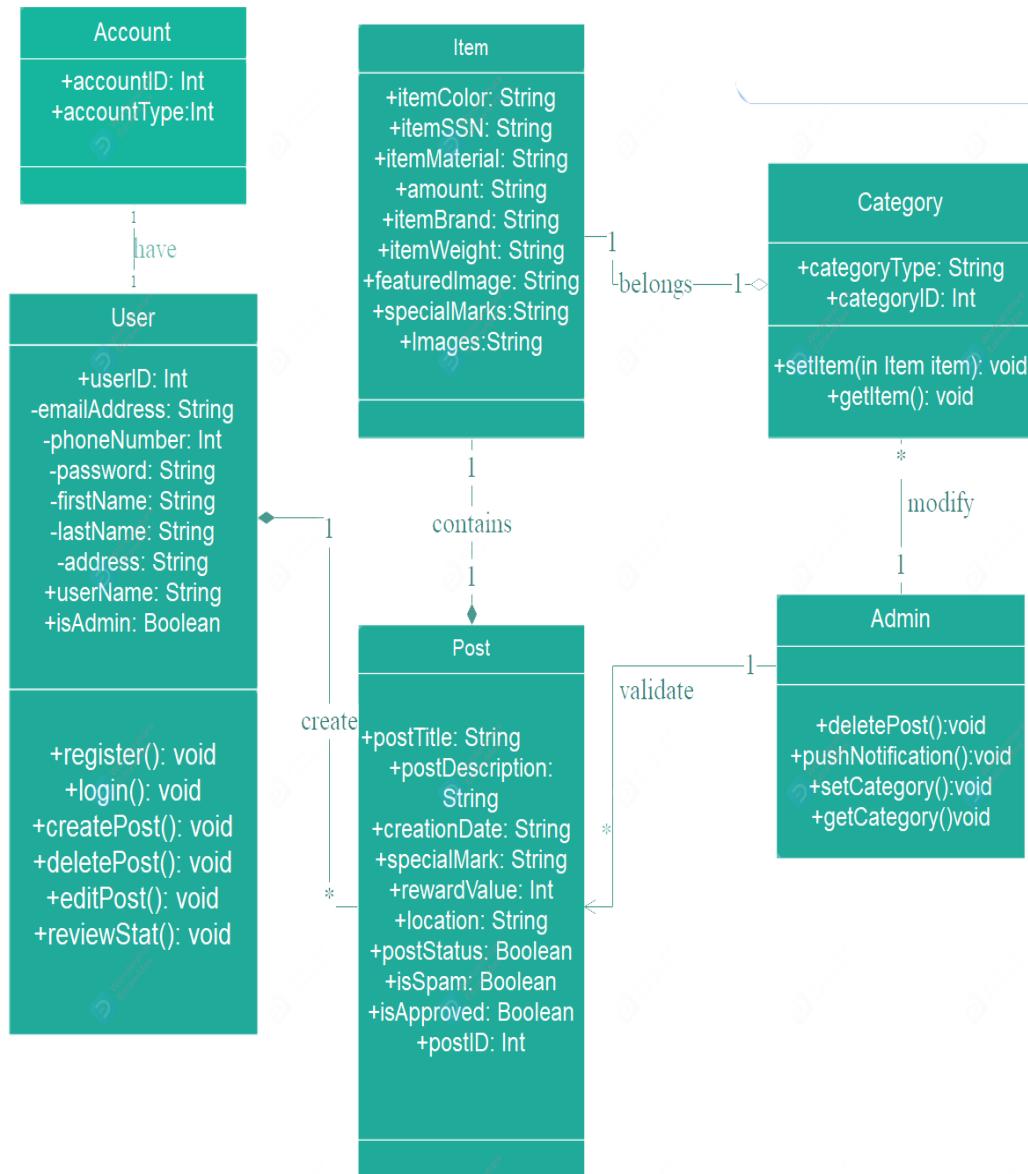
## 2.6 System Models

### ❖ Use case Model





## ❖ Class Diagram Model

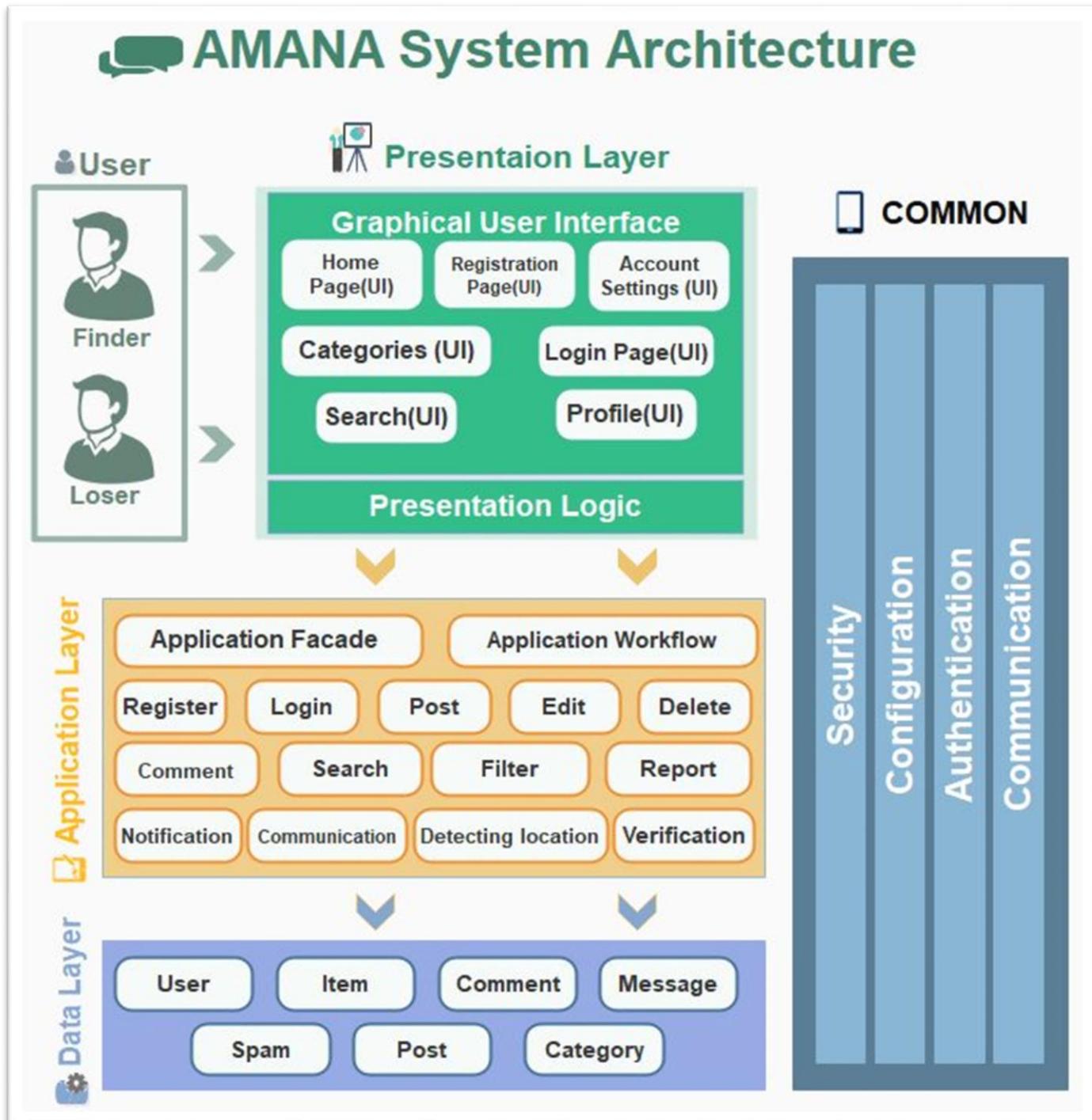




## CHAPTER 3 : System Design

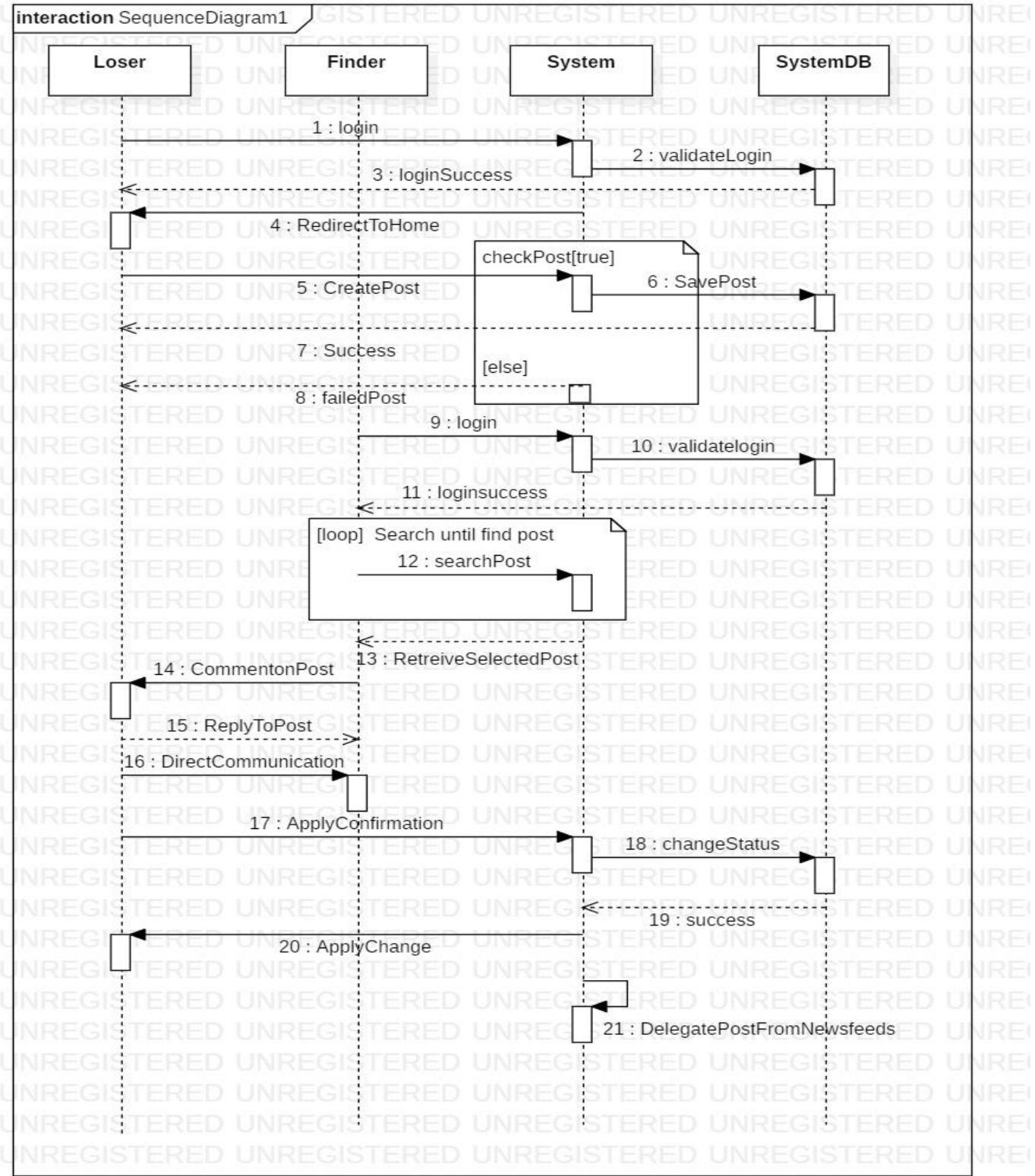
### 3.1 System Design's Diagrams

#### ❖ System Architecture Diagram



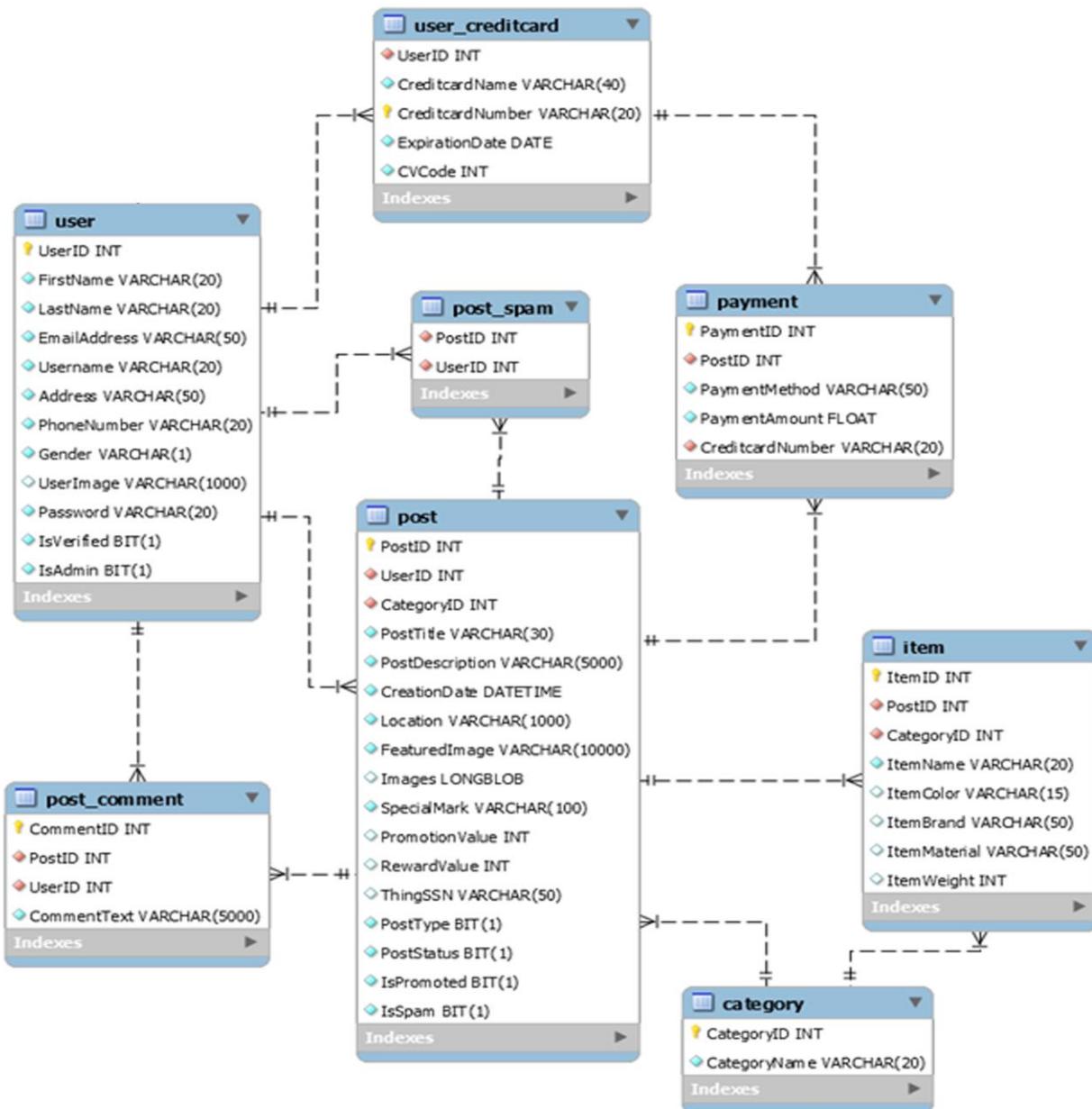


## ❖ Sequence Diagrams





### 3.2 Entity relationship diagram (ERD)



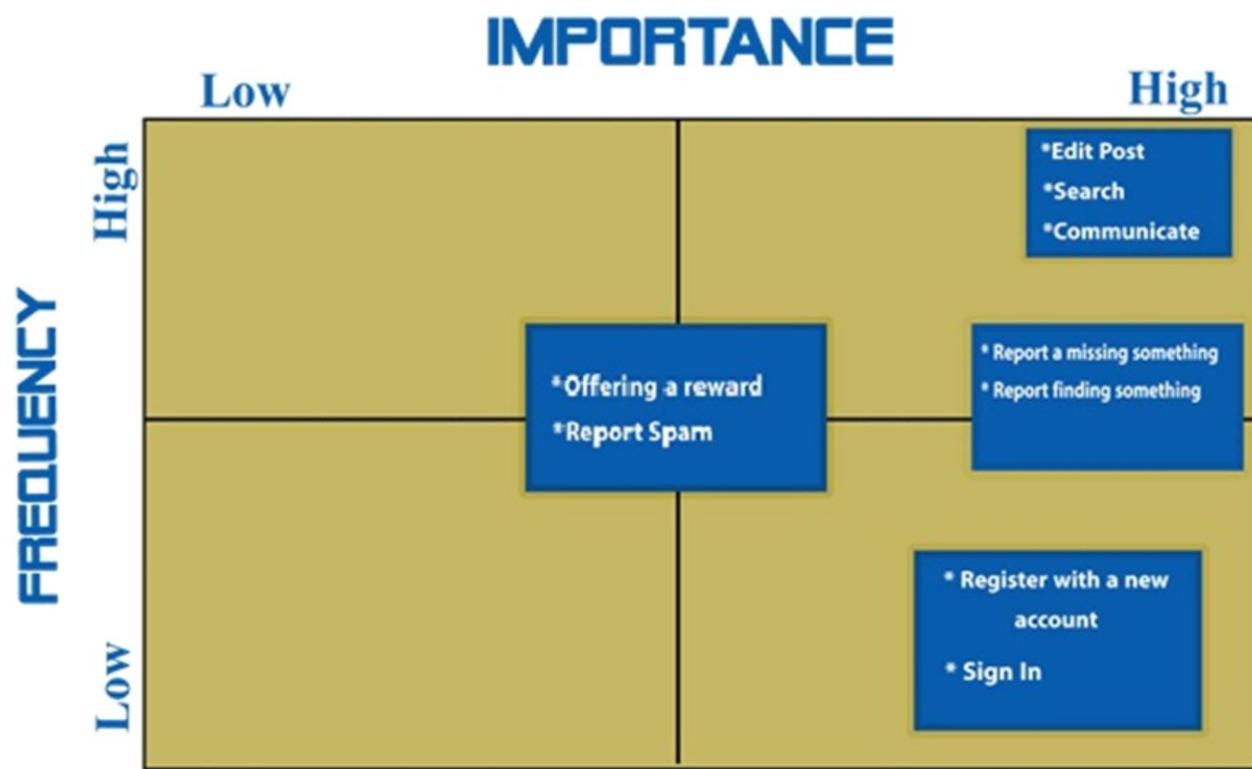


- Modified ER diagram





### 3.3 Task Prioritization





## 3.4 Design Strategy

### Business Goals

- Increase opportunity of finding lost things.
- Reduce spam posts on social media

### General Tasks

- For Losers: Report, Search, Communicate (interact).
- For Finders: Report, Search, Communicate (interact).
- For Surfers : Report, Search, Communicate (interact).

### Technological Constraints

- Android / IOS application.

### Marketing /Branding Goals

- Efficient, Secure, Honesty.

### Critical success factors (CSF)

- It depends on the honesty of people, and if the loser and finder used this app 75% they will communicate and the lost will be back.

### Risks

- Dishonest people who tries to scam using our app and taking things that does not belong to them.



## CHAPTER 4 : System Implementation

### **Code & Text Editors:**

VS Code is a source-code editor developed by Microsoft which works on Windows, Linux and macOS platforms

### **JavaScript Framework:**

React Native as JavaScript framework natively rendering mobile applications for iOS and Android (cross-platform) application

#### **➤ Why We Select React Native as JS Framework:**

- **Code Reuse and Knowledge Sharing**

reusing code across platforms is surprisingly easy with React Native for Android shares a lot of its codebase with the iOS version so it's easily integrated between both.

- **JS Environment**

React Native applications are written using a mixture of JavaScript and XML-esque markup, known as JSX. Then, under the hood, the React Native “bridge” invokes the native rendering APIs in Objective-C (for iOS) or Java (for Android). Thus, we will render using real mobile UI components, not webviews at the end.

- **Native Components**

provides the essential elements to develop an app, namely, UI rendering capabilities and device API access. For other functionalities, all the tools needed in one package.

- **Great Community**

As react native is older community than other platforms so it's developer contributes more active



## **Application Framework:**

Node.js as a platform for building the applications which are server-side event-driven and made using JavaScript. With usage of **Express.js** as framework based on Node.js

### **Why We Select Node.js as our Server Side platform**

- **Using of NoSQL key-value schema with MongoDB**

According to our database schema we think that using of nosql will be more convenient than using relational database, as in our scenario, each category will contain different type of data to handle, so dealing with JSON objects with node.js will be convenient

- **All in one language**

front-end and the back-end of the app using a single programming language – JavaScript.

- **High Scalable**

Node.js Environment is great scalable as it can handle many requests in limited resources, as our application will handle many reports from user at same time.

## **Package Managers:**

NPM is the default package manager for the JavaScript runtime environment NodeJS. Especially will be used for Sass.

## **Git Clients:**

Github Desktop Built by GitHub, it's a tool that allows you to interact with GitHub from the desktop. It's got a rich interface that allows you to manage code without the command window.



## 4.1 Used Technologies

**Front- end Technologies =>** React native

**Back-end Technologies =>** Node JS - Express

**Database =>** Mongo DB (No SQL Data base)

## 4.2 The used tools in this project

1. Visual Studio Code
2. Android Studio
3. Expo
4. MongoDB campus
5. Atlas
6. Git & Github
7. Postman
8. StarUML
9. Draw.io
10. WonderShare EdrawMax
11. Adobe Photoshop & Adobe illustrator & Windows Paint (Logo Design)
12. Microsoft office 365 ( Word – Excel – PowerPoint )

### Used in team communication:-

1. Remot desk
2. Anydesk
3. Discord
4. Zoom meetings
5. Trello
6. E-mail
7. Whatsapp



## 4.3 Major Tasks

### ❖ Main Functions

- Login
- Signout
- Edit account
- Forgot password (reset password)
- Add post
- Edit post
- Delete post
- View User's post
- Search posts
- Add Comment
- Delete Comment
- Flag / Unflag (Reporting spam)
- Offer reward
- View Categories
- View post details
- Notification (View/Delete)

Task	User group	Importance
Report something missing	Finder / Loser / Admin	High
Report something found	Finder / Loser / Admin	High
Edit post	Finder / Loser	Low
Delete post	Finder / Loser / Admin	Medium
Match post	Finder / Loser / Admin	High
Add Reward	Finder / Loser	Medium
Search	Finder / Loser	High
comment	Finder / Loser	High
Report spam	Finder / Loser / Admin	Medium
Upload photo	Finder / Loser	Medium
Update info	Finder / Loser	Low
Verify	Admin	High
Notify	Admin	High
Block	Admin	Medium
Communicate	Finder / Loser / Admin	High



## ❖ Features

- Post Matching (text mining using Cosine similarity)
- Aggregate statistical functions
- Statical charts

## ❖ Security and Privacy

### • Registration & login

Validation for the entered data, it must follow some rules like

- 1- User must enter a valid Mail.
- 2- Egyptian phone number formed from 11 number and starts with “01”.
- 3- Password should be mixed and it contain at least from 6 numbers.
- 4- User must enter his Location with its area, it must to be used in the application processes and posts data analysis.
- 5- Security question feature if he forgot password and wanted to rested it, This to check and make sure that the real account owner who is trying to reset the password. This may happen in the future, this done using MD5 hashing
- 6- **Password :** Hashing is done by MD5 hashing using library “ bcrypt”, it encrypts the password as the admins themselves cant know the users passwords.

### • Post

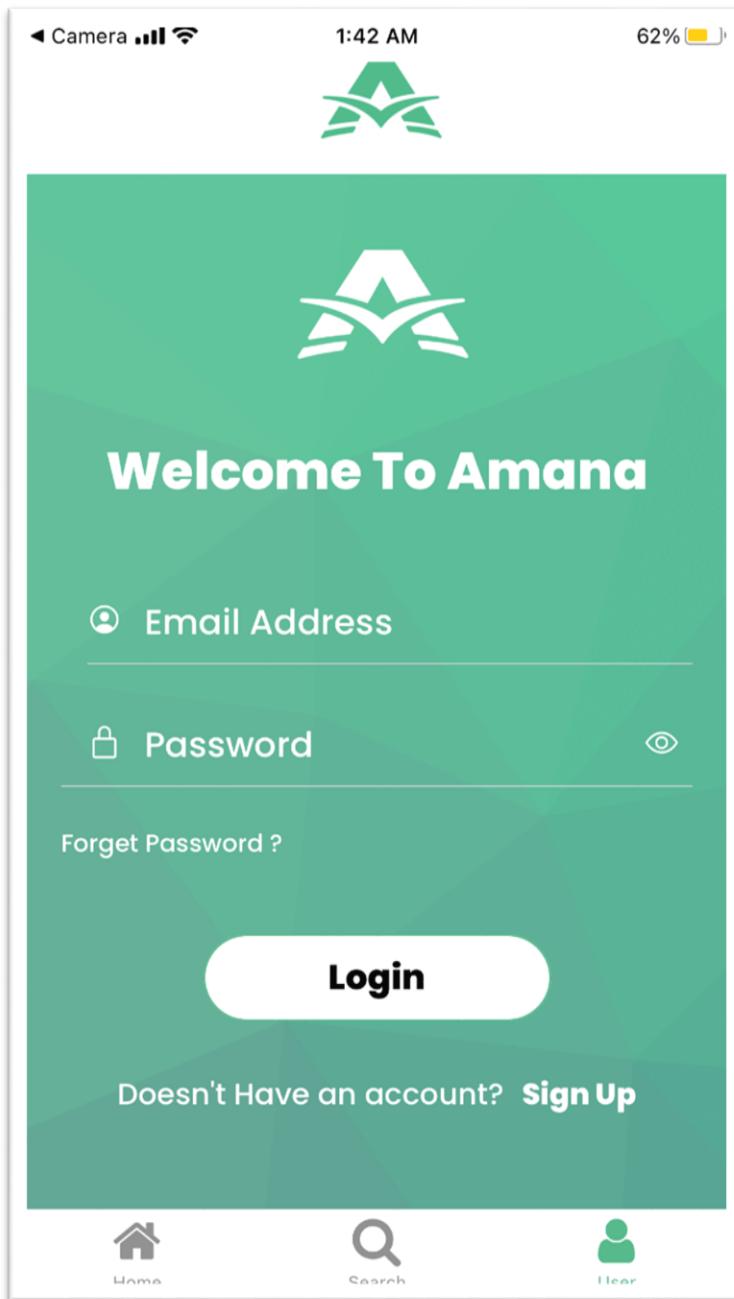
The user is required to enter all required fields in adding or editing post, Once the user post, his post appears in the admin panels (pending) to take its approval if it satisfy the community standards and has a fine data, if it approved the user will receive a notification with this approval, else if its rejected the notification will sent with the reason of rejection (against community standards)



## 4.4 GUI Specification

### ❖ User View

#### Login page





## Registration page

1:43 AM 62%

◀ Login

Create Your Account

✉ Your Personal Image (Optional)

Upload an Image

Home Search Profile

1:43 AM 62%

◀ Login

✉ Your Personal Image (Optional)

Upload an Image

First Name

Last Name

✉ Email Address

⌚ Username

Home Search Profile

1:43 AM 62%

◀ Login

✉ Email Address

⌚ Username

📞 Phone Number

⌚ Your Area

Haram

🔒 Password

🔓

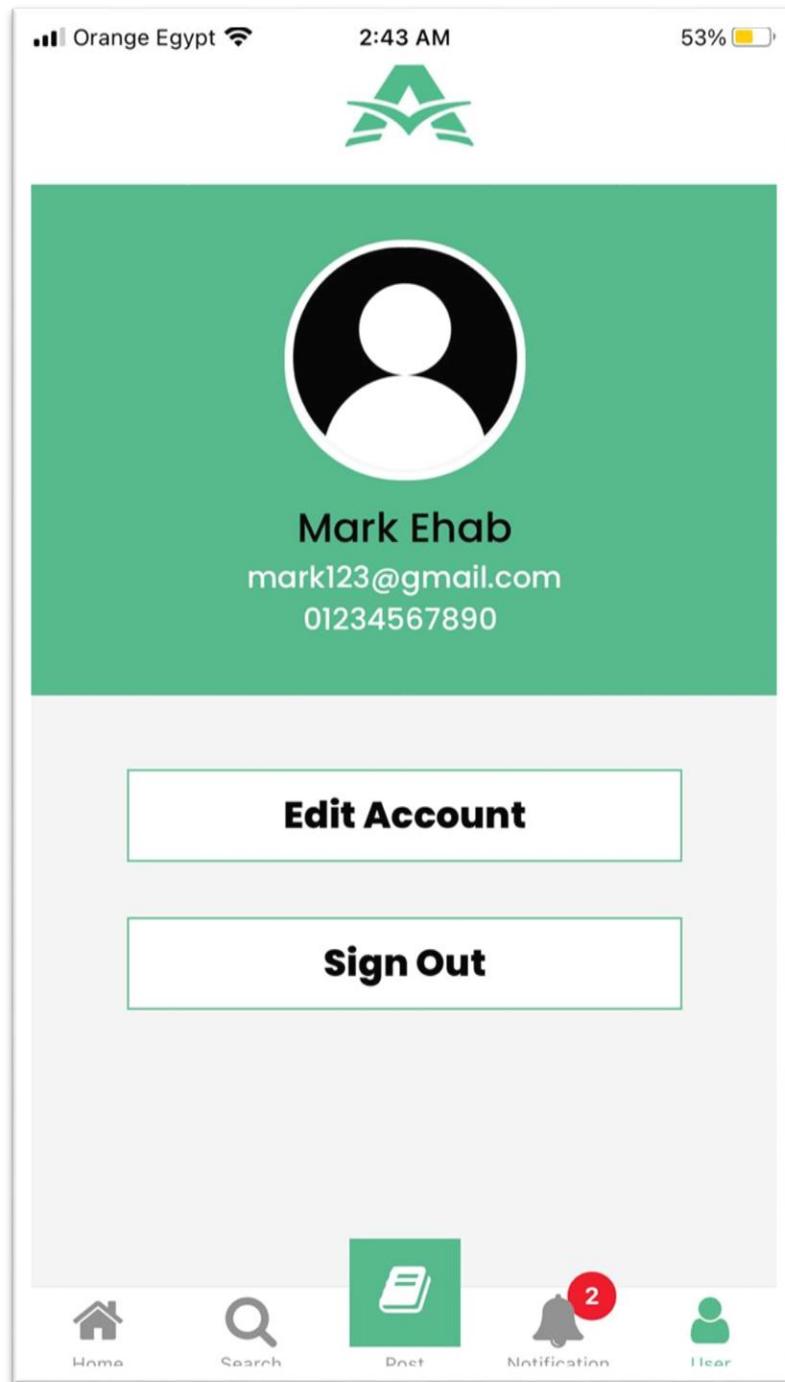
✉ What is Your Best Friend Name ?

Register

Home Search Profile



## Profile



The image shows a mobile application's profile screen. At the top, there is a header bar with the text "Orange Egypt" and signal strength, the time "2:43 AM", and battery level "53%". Below the header is a large green rectangular area containing a black circular placeholder for a profile picture. In the center of this area, the name "Mark Ehab" is displayed in bold black font, followed by the email "mark123@gmail.com" and the phone number "01234567890". Below this green section is a light gray area containing two buttons: "Edit Account" and "Sign Out", both in bold black font. At the bottom of the screen is a navigation bar with five icons: "Home" (house), "Search" (magnifying glass), "Draft" (document), "Notification" (bell with a red circle containing the number "2"), and "User" (person).

Orange Egypt 2:43 AM 53%

Mark Ehab  
mark123@gmail.com  
01234567890

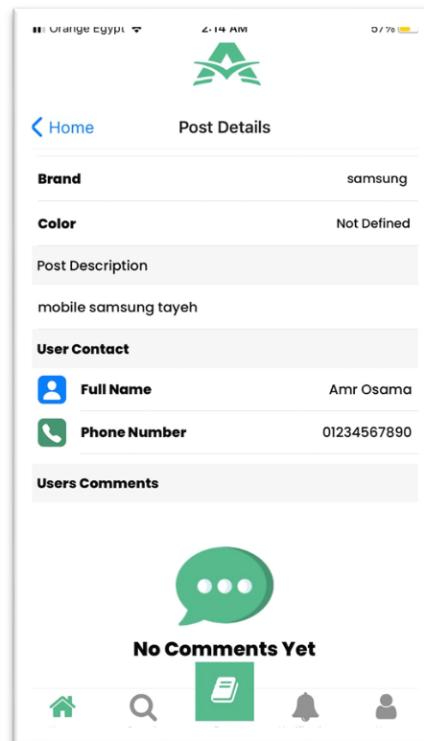
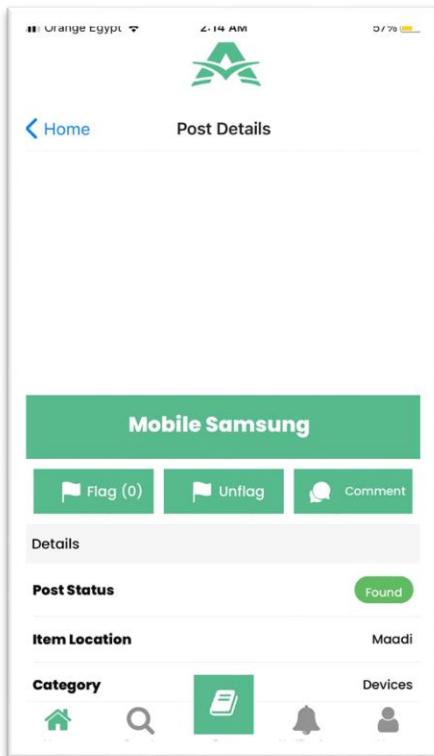
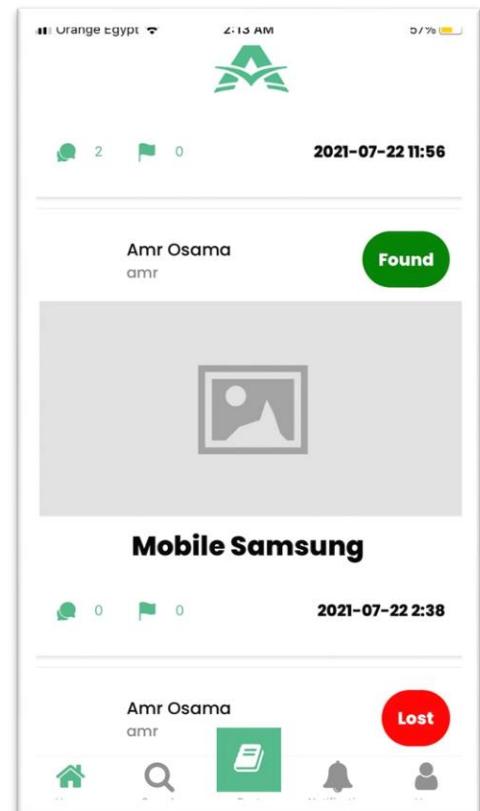
Edit Account

Sign Out

Home Search Draft Notification User

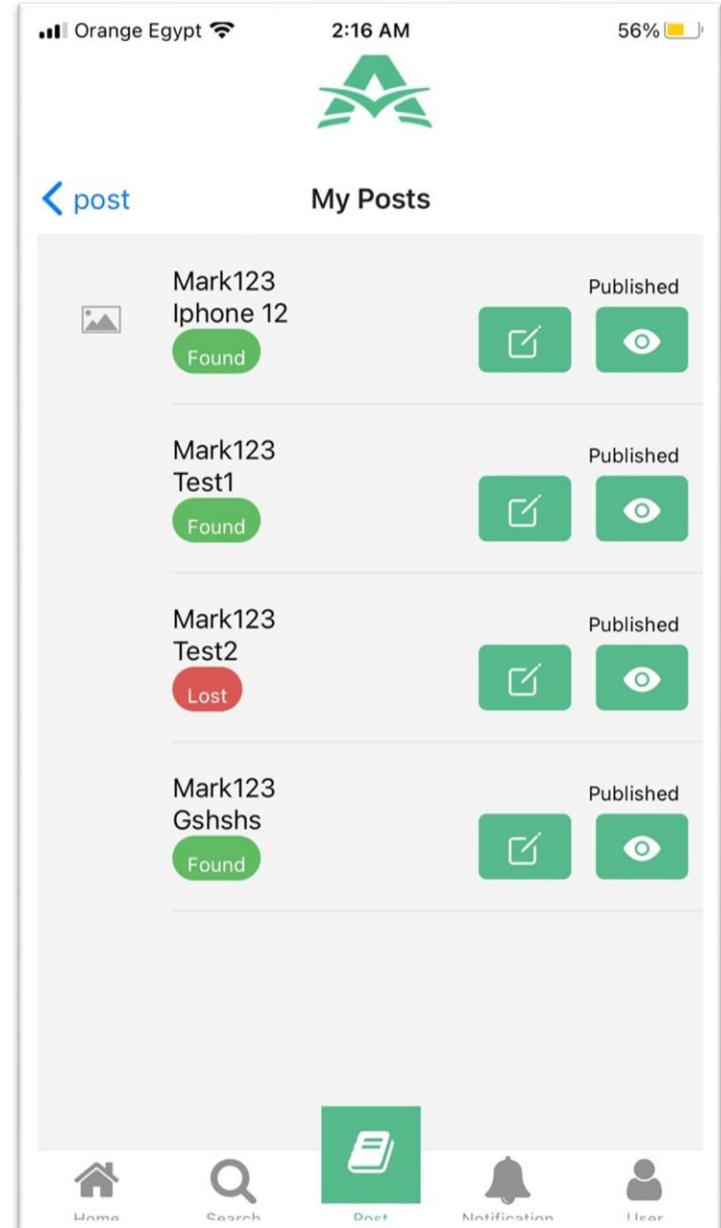
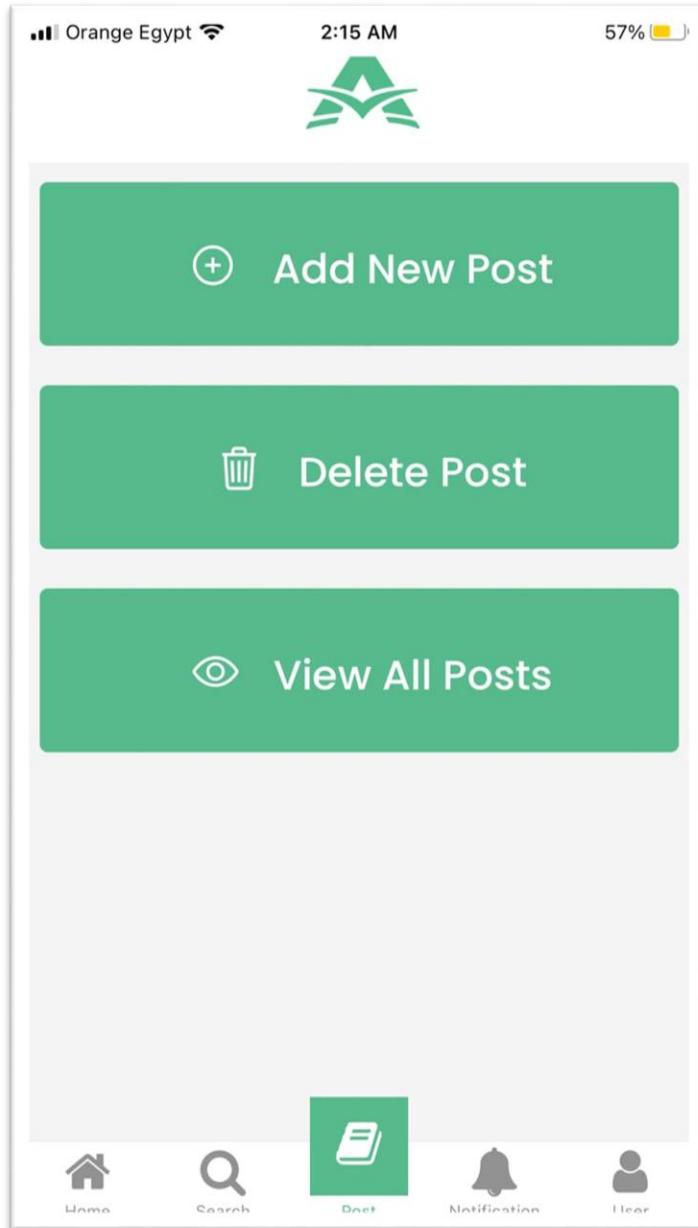


## Home page & Categories





## Post controller





## Add post

Orange Egypt 2:16 AM 5/5%

### Add Posts

 Upload an Image

Post Type  
Found

Item Location  
Madinet Nasr

Post Category  
Accessories

Post Title 

Orange Egypt 2:16 AM 5/5%

### Add Posts

Post Category  
Accessories

Post Title

Post Description  
Be Specified About The Time and Place you lost or found the item

Size (Optional)



Orange Egypt 2:16 AM 5/5%

### Add Posts

Size (Optional)

Accessory Type (Optional)

Color (Optional)

**Submit**





## Edit post

■ Orange Egypt 2:16 AM 56%

My Posts Edit Posts

Upload an Image

Upload an Image

File Iphone 12

Post Description

Iphone 12 found beside abbas el akkad

Home Search Duet Notification User

■ Orange Egypt 2:16 AM 56%

My Posts Edit Posts

Upload an Image

File Iphone 12

Post Description

Iphone 12 found beside abbas el akkad

**Submit**

Home Search Duet Notification User



## Delete post

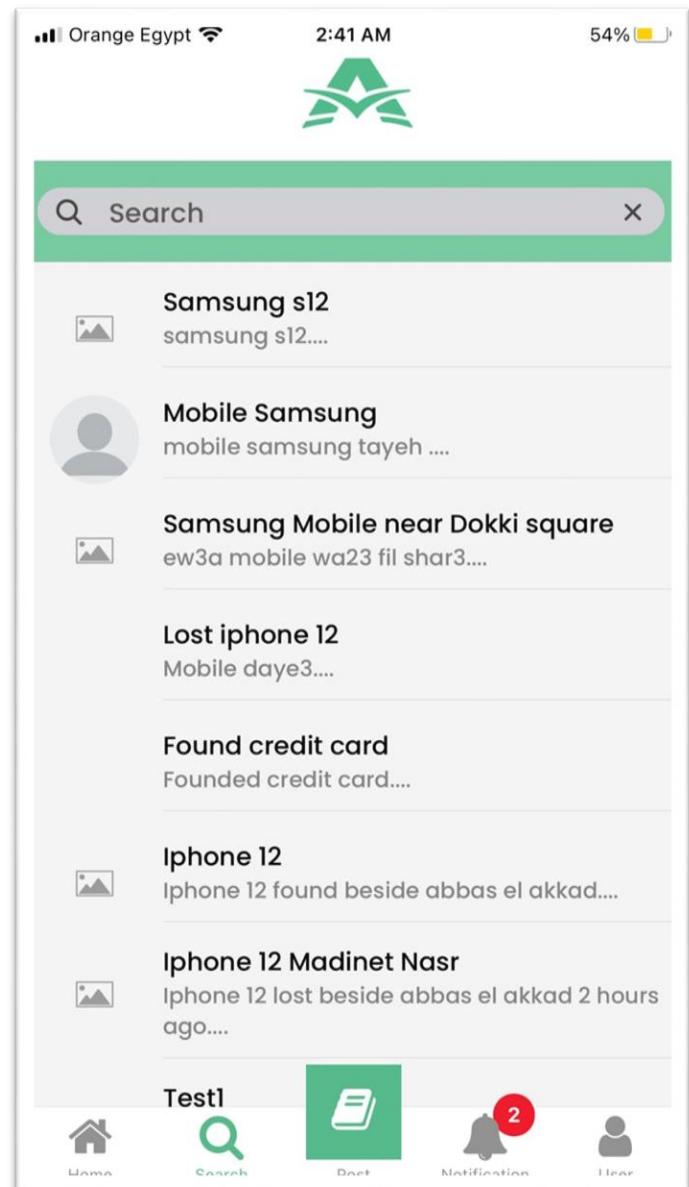
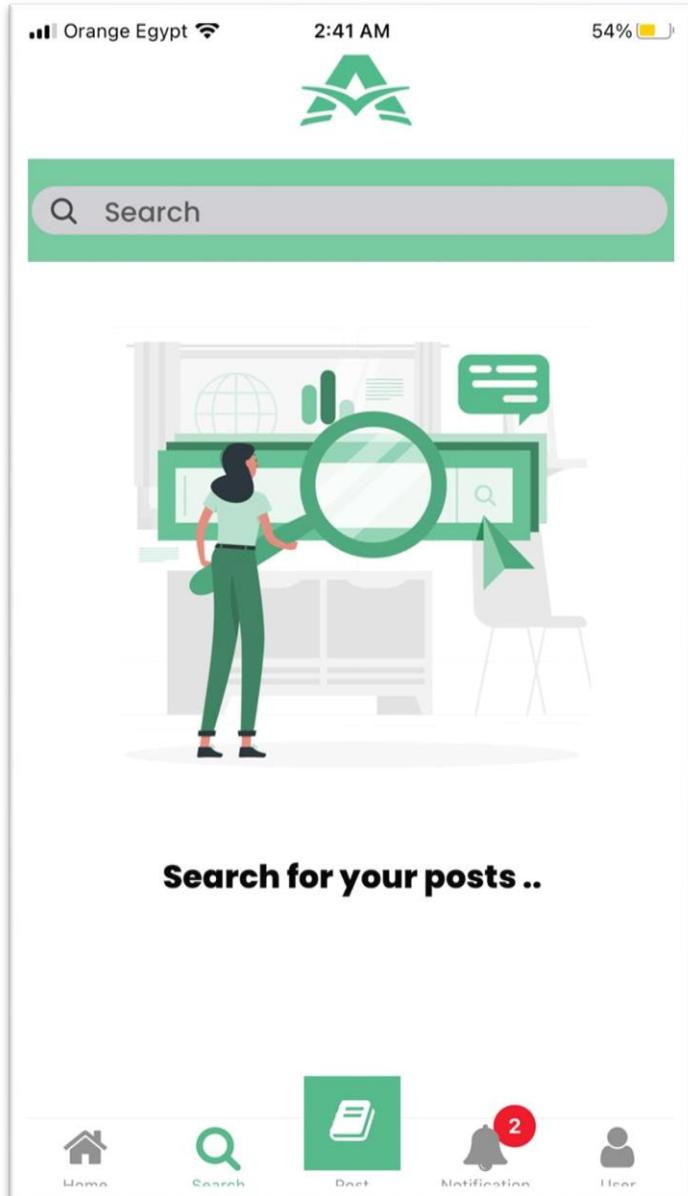
The screenshot shows a mobile application interface titled "Delete Posts". At the top, there is a header with the text "Delete Posts" and a back arrow labeled "post". The main content area displays four items, each with a small image icon, a title, a status indicator, and a "Published" label with a red trash can icon:

- Iphone 12 (Found) - Published
- Test1 (Found) - Published
- Test2 (Lost) - Published
- Gshshs (Found) - Published

At the bottom of the screen, there is a navigation bar with five icons: Home (house), Search (magnifying glass), Post (notebook), Notification (bell), and User (person).

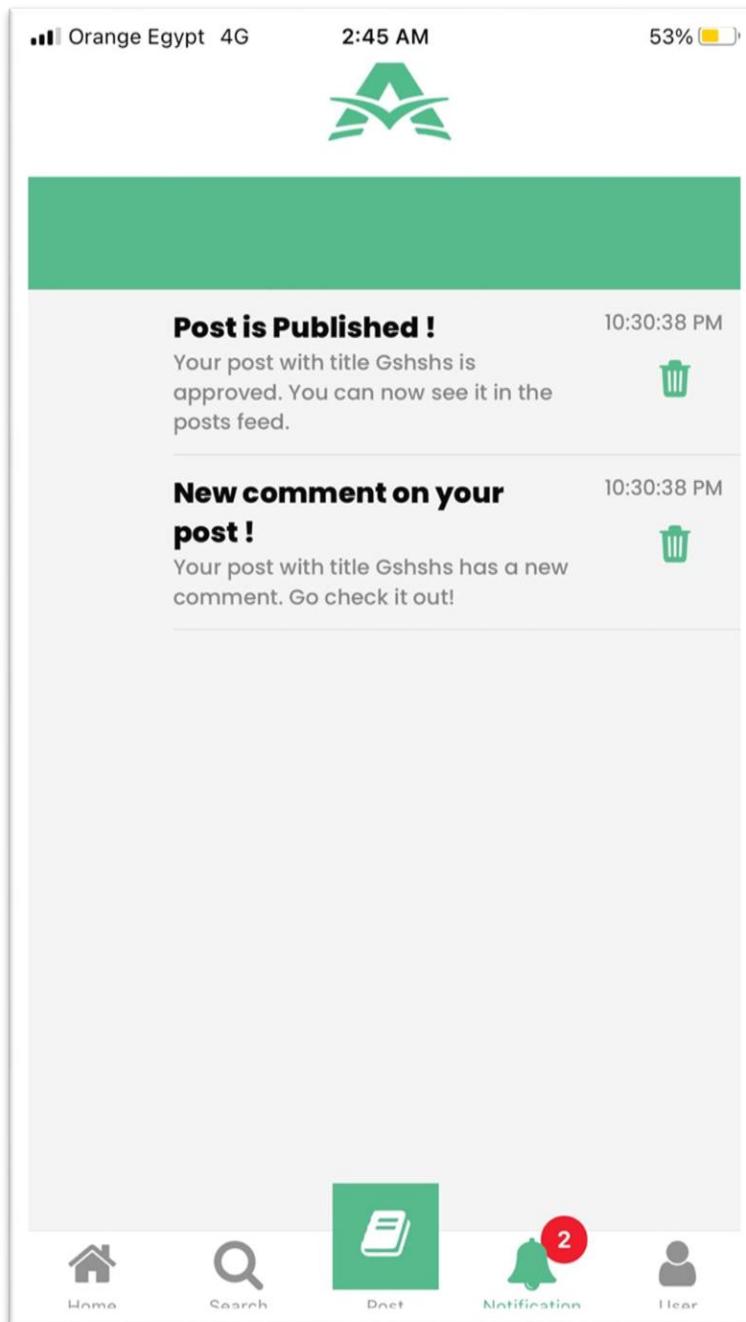


## Search posts



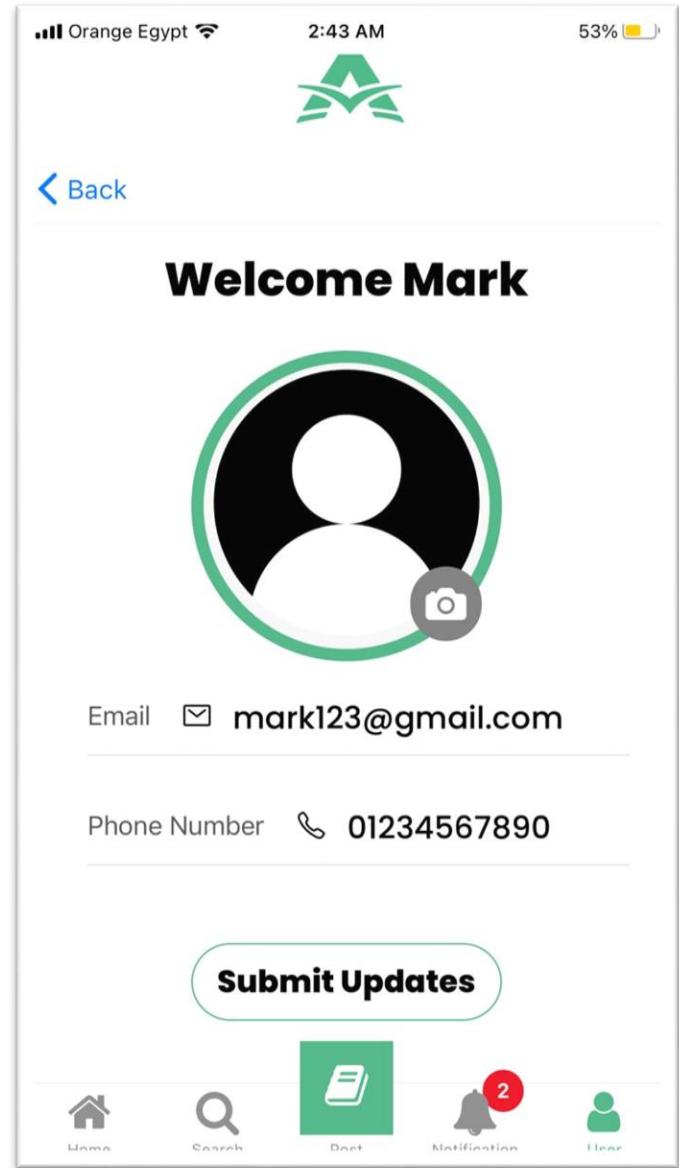
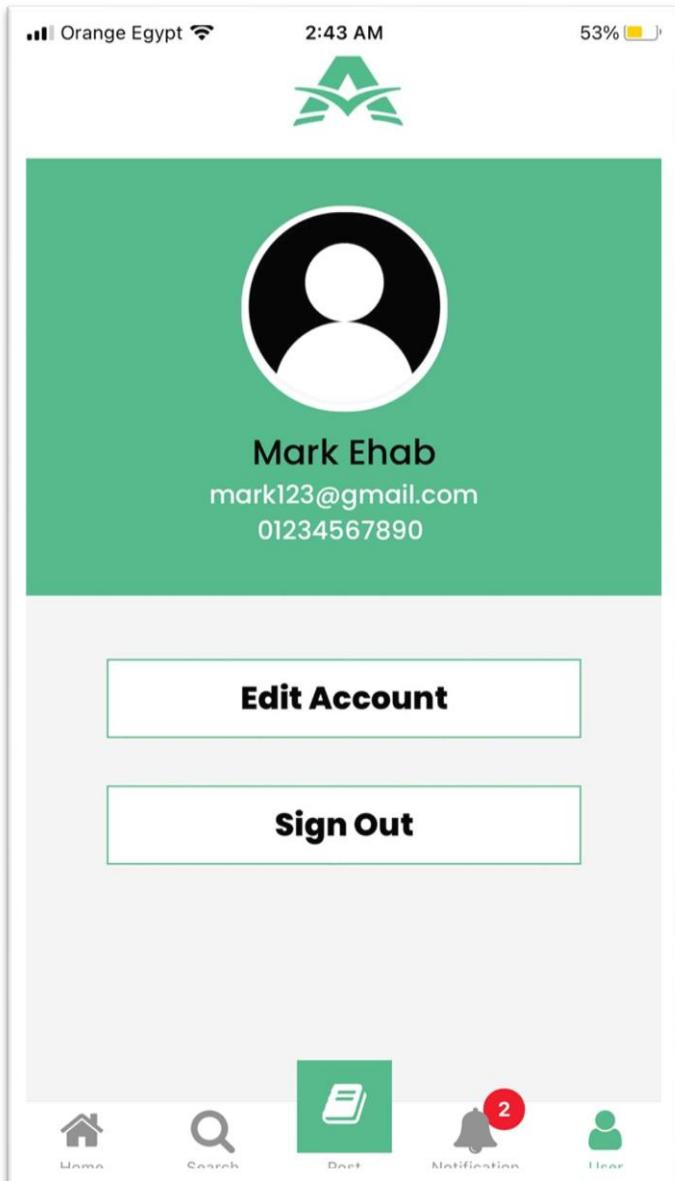


### Notification (user View)





## Edit account





## Forgot password (reset password)

Orange Egypt 2:47 AM 52%

**Reset Your Password**

Email Address

Security Question

**Submit**

Home Search User

This screen shows a woman in a green top and grey pants standing next to a large smartphone. The phone's screen displays a password reset interface with a user icon and the word 'PASSWORD'. Below the phone, the text 'Reset Your Password' is displayed. There are fields for 'Email Address' and 'Security Question'. At the bottom is a large green 'Submit' button with rounded corners, flanked by 'Home' and 'Search' icons.

Orange Egypt 2:48 AM 52%

**Now Add Your New Password**

**New Password**

**Confirm Password**

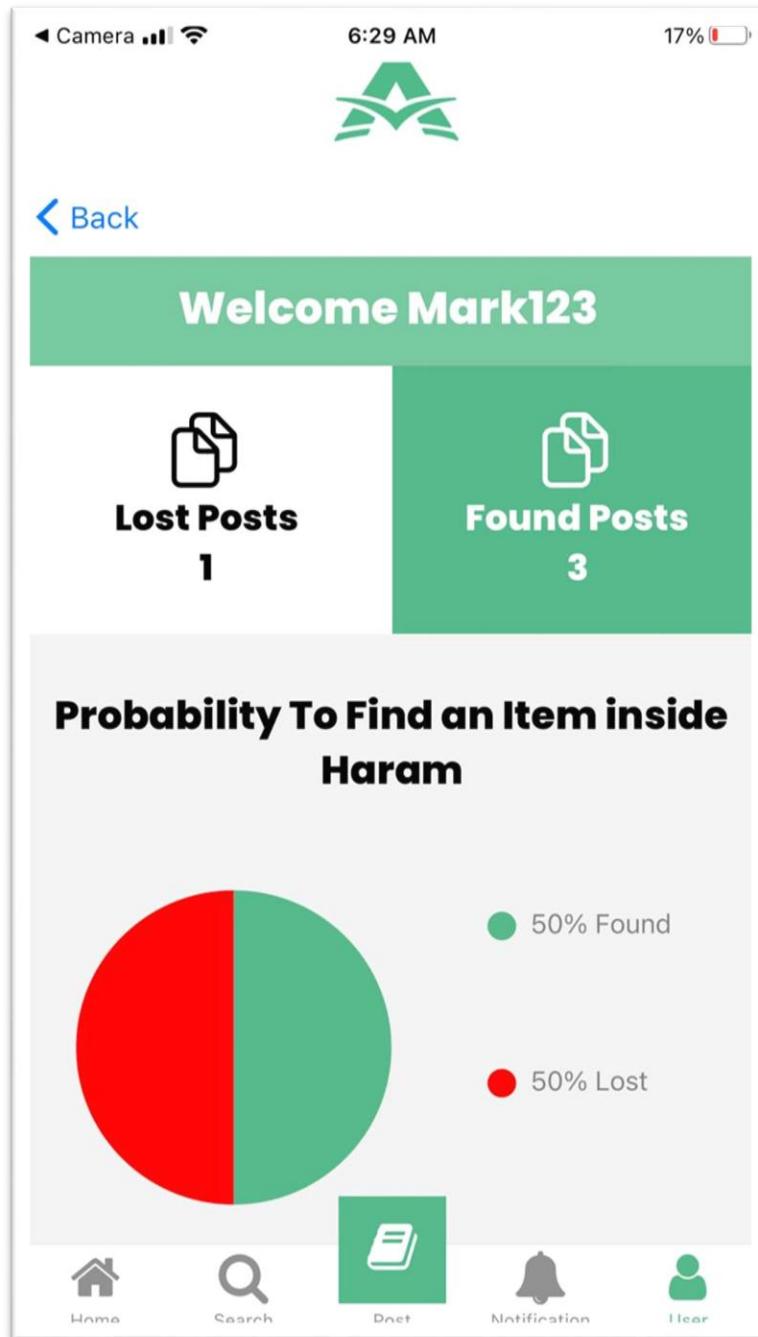
**Submit**

Home Search User

This screen shows a man in a green sweater vest and grey shirt sitting at a desk, working on a laptop. On the desk are several files, a small potted plant, and a lock icon. The text 'Now Add Your New Password' is displayed above two input fields: one for 'New Password' and one for 'Confirm Password', both preceded by a lock icon. At the bottom is a large green 'Submit' button with rounded corners, flanked by 'Home' and 'Search' icons.



## Charts dashboard





❖ Admin View

Admin panel

The screenshot shows the Admin Panel mobile application. At the top, there is a header bar with the text "Admin Panel". Below the header, a banner displays the message "Welcome Omar123". The main content area is divided into six cards arranged in a 3x2 grid:

- Lost Posts**: 9
- Found Posts**: 8
- Pending Posts**: 0
- Users**: 12
- Categories**: 4
- Locations**: 6

At the bottom of the screen, there is a navigation bar with five items: Home, Search, Admin, Notification (with a red badge showing 5), and Help.



## Notification (Admin View)

The screenshot shows a mobile application interface for an admin's notification center. At the top, there is a header bar with the text "Orange Egypt" (signal strength), "3:03 AM", and "48%" (battery level). Below the header is a large green banner with the Amana logo. The main content area displays four notifications, each with a green circular icon containing a white plus sign. The notifications are as follows:

- New Post Added !** 7:18:45 PM  
Hey Admin, User Mark123 is pending a new post with title Test1, check it out ! Delete
- New Post Added !** 10:30:38 PM  
Hey Admin, User Mark123 is pending a new post with title Gshshs, check it out ! Delete
- New Post Added !** 10:30:38 PM  
Hey Admin, User amr is pending a new post with title Lost credit card, check it out ! Delete
- New Post Added !** 10:30:38 PM  
Hey Admin, User amr is pending a new post with title Shshs, check it out ! Delete

At the bottom of the screen, there is a navigation bar with five icons: Home (house), Search (magnifying glass), Admin (people), Notification (bell with a red badge showing '4'), and Clear (person).

Post approval

Post Details

**Lost credit card**

Accept Post   Delete Post

Details

**Post Status** Lost

**Item Location** Madinet Nasr

**Category** Accessories

Home   Search   Admin   Notification   User

Post details (Admin view)

Post Details

Samsung s12

Comment As Admin

Details

**Post Status** Lost

**Item Location** Maadi

**Category** Devices

Home   Search   Admin   Notification (4)   User



## CHAPTER 5 : Testing

### 5.1 Test cases

Test case ID	Test Scenario Description	Test Case Description	Test Procedures	Expected result	Status
1	Verify login functionality of Amana	Enter a valid email and valid password	1-Click user profile button 2-Enter email and Pass 3-Click Login Button	Equal to Actual	Pass
		Enter a valid email and Invalid password	1-Click user profile button 2-Enter email and Pass 3-Click Login Button	Equal to Actual	Pass
		Enter a invalid email and valid password	1-Click user profile button 2-Enter email and Pass 3-Click Login Button	Equal to Actual	Pass
		Enter a invalid email and invalid password	1-Click user profile button 2-Enter email and Pass 3-Click Login Button	Equal to Actual	Pass
		Leave email and passwaord blank	1-Click user profile button 2-Enter email and Pass 3-Click Login Button	Equal to Actual	Pass

Test case ID	Test Scenario Description	Test Case Description	Test Procedures	Expected result	Status	
2	Verify Register functionality of Amana	Enter non exist email and non exist username	1-Click user profile button 2-Click sign up link 3-Fill required fields 4-Click Register button	Equal to Actual	please make sure that the phone no. consists of 11 digit	fixed
		Enter non exist email and exist username	1-Click user profile button 2-Click sign up link 3-Fill required fields 4-Click Register button	Equal to Actual	Pass	
		Enter exist email and non exist username	1-Click user profile button 2-Click sign up link 3-Fill required fields 4-Click Register button	Equal to Actual	Pass	
		Enter non exist email and non exist username	1-Click user profile button 2-Click sign up link 3-Fill required fields 4-Click Register button	Equal to Actual	Pass	
		Leave any field blank	1-Click user profile button 2-Click sign up link 3-Fill required fields 4-Click Register button	Equal to Actual	Pass but we need only a message that tell the user that "you should fill all the fields correctly"	fixed



Test case ID	Test Scenario Description	Test Case Description	Test Procedures	Expected result	Status
3	Sign out functionality of Amana	Normal user sign out	1-Login 2-Do tasks 3-Click User Profile 4-Sign out	Equal to Actual	Pass
		Admin sign out	1-Login 2-Do tasks 3-Click User Profile 4-Sign out	Equal to Actual	Pass

Test case ID	Test Scenario Description	Test Case Description	Test Procedures	Expected result	Status
4	Create Post Functionality of Amana	Non registered user try to create post	1-Open application	Equal to Actual	Pass
		Registered user try to create post as a Loser and post pushed to the database.	1-Login 2-Click on post icon 3-Click on Create Add Post 4-fill all required fields 5-Click Submit button	Equal to Actual	Pass
		Registered user try to create post as a Founder and post pushed to the database.	1-Login 2-Click on post icon 3-Click on Create Add Post 4-fill all required fields 5-Click Submit button	Equal to Actual	Pass

Test case ID	Test Scenario Description	Test Case Description	Test Procedures	Expected result	Status	
5	Delete Post Functionality of Amana	User try to delete his post	1-Login 2-Click on post icon 3-Click on View all post 4-Click on Delete Post	Not As Actual	Bug("User cant delete his post")	fixed
		Admin deletes post against community standards.	1-Login 2-Click on Admin panel 3-Click on pending post 4-Check if against community standard 5-Click on Delete button	As Actual	Pass	



Test case ID	Test Scenario Description	Test Case Description	Test Procedures	Expected result	Status	
6	Edit Post Functionality of Amana	User try to edit his post before being publish	1-Login 2-Click post button 3-Click View all posts 4-Click edit button	Not As Expected	Bug("when user try to edit as a founder it shows the reward box")	fixed
		User try to edit his post after being publish	1-Login 2-Click post button 3-Click View all posts 4-Click edit button	Not As Actual	Bug("The Edit request is not resend to the Admin")	Bug " when you edit the post after it has been publish you should change the image to submit "

Test case ID	Test Scenario Description	Test Case Description	Test Procedures	Expected result	Status
7	Edit Account Functionality of Amana	User/Admin try to edit his account photo	1-Login 2-Click on User Profile 3-Click Edit Button 4-Edit data 5-Click Submit updates	As Actual	Pass
		User/Admin try to edit his Phone number	1-Login 2-Click on User Profile 3-Click Edit Button 4-Edit data 5-Click Submit updates	As Actual	Pass
		User/Admin try to edit his email address	1-Login 2-Click on User Profile 3-Click Edit Button 4-Edit data 5-Click Submit updates	As Actual	Pass



Test case ID	Test Scenario Description	Test Case Description	Test Procedures	Expected result	Status	
8	Update Password Functionality	User/Admin enters exits email address	1-Go to Login screen 2-Click on forgot Password 3-Enter email address 4-Enter the security question 5- click on submit button	Not As Actual	Bug("Visual problems happens to the screen")	fixed
		User/Admin enters non-exist email address	1-Go to Login screen 2-Click on forgot Password 3-Enter email address 4-Enter the security question 5- click on submit button	Not As Actual	Bug("Visual problems happens to the screen")	fixed
		user / admin enter valid email address with matching new and confirm pass	1-Go to Login screen 2-Click on forgot Password 3-Enter email address 4-Enter the security question 5- click on submit button	Not As Actual	Bug("when the user enters the new pass and confirm pass the error message occurs")	fixed
		User/admin submit the e-mail address without enter the answer of the question	1-Go to Login screen 2-Click on forgot Password 3-Enter email address 4-Enter the security question 5- click on submit button	Not As Actual	Bug " it shouldn't navigate once the user didn't answer the security question"	fixed
		user / admin enter valid email address with no matching between new and confirm pass	1-Go to Login screen 2-Click on forgot Password 3-Enter email address 4-Enter the security question 5- click on submit button	Not As Actual	Bug("when the user enters the new pass and confirm pass the error message occurs")	fixed
		User/Admin leaves email address Blank	1-Go to Login screen 2-Click on forgot Password 3-Enter email address 4-Enter the security question 5- click on submit button	Not As Actual	Bug " it shouldn't navigate once the user didn't fill in the both fields"	fixed

Test case ID	Test Scenario Description	Test Case Description	Test Procedures	Expected result	Status
9	Notifications Functionality	User add post/admin waits for notification	1-Login 2-Open notifications	As Actual	Pass
		User edit post/admin receives notification	1-Login 2-Open notifications	As Actual	Pass
		User receives notification when comment is applied	1-Login 2-Open notifications	As Actual	Pass
		Admin deletes post/User receives notification	1-Login 2-Open notifications	As Actual	Pass
		Admin refuse edit/User receives notification	1-Login 2-Open notifications	As Actual	Pass
		Admin accept edit/User receives notification	1-Login 2-Open notifications	As Actual	Pass



Test case ID	Test Scenario Description	Test Case Description	Test Procedures	Expected result	Status	
10	Comments functionality	User try to comment on a post	1-Login 2-Check post 3-Click on the Post 4-Click on comment button 5-Click Post button	As Actual	Pass	
		User try to comment on his post	1-Login 2-Check post 3-Click on the Post 4-Click on comment button 5-Click Post button	Not As Actual	Bug("The post owner receives a notification that he commented on his post")	fixed
		User delete his own comment	1-Login 2-Check post 3-Click on the Post 4-Click on comment button 5-Click Post button	As Actual	Pass	
		User delete comment on his post	1-Login 2-Check post 3-Click on the Post 4-Click on comment button 5-Click Post button	As Actual	Pass	

Test case ID	Test Scenario Description	Test Case Description	Test Procedures	Expected result	Status	
11	Flag functionality	User flag a post	1-Login 2-open post 3-Press flag button	As Actual	Pass	
		User can't flag his own post	1-Login 2-open post 3-Press flag button	Not As Actual	Bug("User can flag his own post")	fixed



## CHAPTER 6 : Evaluation

### **6.1 Achievements done in AMANA**

1. Making a wide platform that has much users distributed all over the country
2. Creating account and editing is and interact on it with the others
3. Posting and commenting to reach to what the user want
4. Reporting the inappropriate posts or the spam ones
5. The community has its own standard terms and conditions that saves the user
6. Helping the people to solve their problems by saving their time and efforts
7. Gained knowledge in new technologies that we have never know before, we added it with what we learned in the collage and we became able to come with this project.
8. Work Distribution and team work as Dealing with and adapting to new team members make the person more sociable and helps him in his career.
9. Increase the communication of people as we provide a way of communication to make the two main users in touch.
10. Security and privacy protects users accounts data

### **6.2 Benefits of AMANA**

Providing the society with a mobile application like Amana will serve living community in a good manner it will urge honesty by giving a hand for people who found something to try to give it back to its owner and revives the hope in who lost it to try the application that may help him with great possibility.

Amana saved the money that may spent in Editing a report in the police department And Saves the time and the efforts that may be consumed during this search.



### 6.3 Lessons learned from AMANA (Conclusion)

1. Having good qualities such as being honest and Trustworthy
2. Helping the others will benefit yourself as well
3. Increasing the social communication will serve you
4. Good data helps organizations to goals to keep moving forward.
5. Data helps you understand and improve business processes so you can reduce wasted money and time.
6. One of the most important goals of technological advances is to save time doing tasks. Speed and efficiency are among the biggest promises of technology
7. Working in a team and acting as a part of a whole body as an active member.
8. Self learning is very Important, Try out different programming languages and tools
9. Start small, then extend. if creating a new system, always start by making a very simple version with almost none of the required functionality. Then extend the solution step by step.
10. Change one thing at a time. If some tests fail, it's easier to find the problem if you only changed one thing.
11. Add logging and error handling early. one of the first things we do is adding logging and error handling, because both are useful from the very beginning.
12. Test the parts before the whole. Often there are problems with integrating different parts.
13. Everything takes longer than you think. it is hard to estimate how much time a feature will take even if everything goes smoothly.
14. Understand the existing code first. Most coding requires changing existing code in some way. Even if it is a new feature, it needs to fit into the existing program.
15. Read and run. there are two complementary methods for understanding code. You can read the code, and you can run the code.
16. There will always be bugs. I don't like approaches to software development that claim to "get it right the first time". No matter how much effort you put in, there will always be bugs.
17. Discuss how to solve a problem, being face to face beats video, call, chat and email. how much better the solutions are after discussing them in person with colleagues.



## 6.4 Future Work

We are planning for adding some modern features for this app by the time and changing the path of the application to take it into the competitive software market....

- Collaboration with the government will be good for the public because this will relieve pressure on the police in reporting lost items.
- Amana will support Arabic language.
- Amana will expand more to cover more categories for Items.
- Fetching posts from social media apps (e.g Facebook).
- This will be served by Image recognition feature that facilitates matching posts using modern algorithm in this point (machine learning).
- System will have real admins in addition to helping chatbots that use Artificial intelligence to recognize photos to deal with them with acceptance or declines after reporting as spams.

### For Business:-

- Getting money from google play store monetization (Ads).
- Selling the application for Enterprises or Collaborate with some Agencies.
- Taking a percentage (part) from the reward that written in the post.



## 6.4 References & Resources

### - For System Analysis and project planning

1. <https://trello.com/amana65>

### - Technological languages and Comparisons

1. <https://www.icicletech.com/blog/react-native-flutter-ionic-xamarin-nativescript>
2. <https://nodejs.org/en/docs/>
3. <https://codeburst.io/react-native-vs-ionic-vs-flutter-comparison-of-top-cross-platform-app-development-tools-71c8011309ac>
4. <http://expressjs.com/en/api.html>
5. <https://dzone.com/articles/mongodb-vs-rdbms>

### For coding and Implementation

Udemy Online courses

- Node.js, Express, MongoDB & More: The Complete Bootcamp 2021  
<https://www.udemy.com/course/nodejs-express-mongodb-bootcamp/>
- MERN Stack E-Commerce Mobile App with React Native [2021]  
<https://www.udemy.com/course/mern-stack-e-commerce-mobile-app-react-native-redux-expo/>
- Complete React Native in 2021: Zero to Mastery [with Hooks]  
<https://www.udemy.com/course/complete-react-native-mobile-development-zero-to-mastery-with-hooks/>

\*\*\*\*\*