



UTA Lost and Found

SFWR ENG I – CSE – 5324 – 002

Iteration
III
05/01/2023

Team Name: Furious Five
Team Number: 6

Team Members:

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Table of Contents

Contents	Pg No.
Project Description	1
Requirements	4
Use Case List	5
High-Level Use Diagram	6
Use Case Diagram	7
Expanded Use Cases	8
Sequence Diagram	13
Requirement to Use Case Traceability Matrix	15
Increment Matrix	16
Domain Model	17
Design Class Diagram	18
Youtube Link	19

Project Description

More items than ever are being lost by university students. Did you realize that, in only one academic year, more than 50% of students misplaced something on campus? According to a survey 4.5 million items are lost by students on University Campuses every year. However only 18% of them are inquired about. A typical student loses two items every year, anything from a charger to student IDs or even Electronic Devices. The UTA Lost and Found application will help the students recover their misplaced items. This application will be used to search for user's lost, stolen, or missing items or even their runaway pets.

The UTA Lost and Found application is developed keeping in mind the problem of loss of valuables which in turn causes the loss of money, time as well as manpower. Loss of property not only causes loss of funds but can also affect the sentiments of the person attached to the property. By using this application users can try to recover their items without using much effort which will save time. This application can also help find the user's property more efficiently than trying to find it manually which saves a lot of manpower.

Major Functionalities

1. User Registration/Login -

The user has unique login credentials. They need to sign up first and then login with their credentials.

2. Add/Update/Delete Item details -

The user can add any item that is found. For that, the user will fill up the form and add in all the details such as date lost, name, picture, category of the found item with their contact details.

3. User Profile -

Users will be able to update all the details including their personal information, contact information.

4. View Lost Items -

On login, the home page will display lost items reported by the users who found it.

5. Search/Filter lost Items -

On the home page, the items can be searched using a search bar and can also be filtered based on the category and date posted.

6. Resolve Lost Items -

Once the item is found, the person who reported the item can only resolve the missing item post and it would be removed from the user end.

7. Password Management -

The system will take the record of the password of all the users. And it also provides the reset password option in case the user forgets his credentials.

44 **8. Logout –**

45 Users can logout when they want using the logout button.

46
47 **9. Delete account –**

48 Account will be deleted as and when the user wishes to.

49
50 **10. Reward Points –**

51 Users will get reward points once the lost item post is resolved.

52
53
54 **Resource for the Application:**

55
56 Wireless/Cellular network

- 57 • Database
- 58 • Permission to access storage of the phone.

Team Experience level

Cesar Rea: When it comes to app development, I am considered a beginner. I have had some experience of the process, and the creation of an app from CSE 3310 using Android studio. I have written in programming languages such as C/C++, Java, SQL and Python. Although it may look like I am inexperienced, I have been in many team environments before, and I will step in as a leader when the necessity occurs. I learned to take on challenges and overcome new learning curves. As a CSE major, I am excited to learn what being a software engineer is all about.

Darsh Patel: I have had a fair bit of experience when it comes to app development but still can be considered a beginner, nonetheless. I have had the opportunity of creating an Apartment management android application with android studio in a group of 4 members in my Bachelors. From my past experiences as a web development Intern, I have learnt that teamwork is the key to success by under proper guidance and leadership. Some of the languages I have worked on are Python, Java, HTML,CSS,Bootstrap , C++ but I like to experiment with new technologies and learn new languages and thus I am excited to see what new things this Semester has to offer.

Kavish Khatri: To be honest, I am not very familiar with application development. Previously, I have worked on multiple projects and internships. The majority of the focus of my internships was developing web-based applications and not mobile apps. Also, I have experience working with Rest APIs and developing them. Some of the languages that I have worked with are C, C++, Python, Java, HTML, CSS, Bootstrap and many more. I am looking forward to learning and working on mobile applications.

Keya Shah: I have in-depth experience in developing mobile applications for the Android platform using Java. My technical skills include proficiency in Android SDK, Android Studio, Java, and related technologies such as XML, JSON, and RESTful APIs. I have a strong understanding of mobile development best practices, including Material Design guidelines and Android's architecture components. Additionally, I am familiar with agile development methodologies, and have a track record of successfully delivering projects on time and within budget. I am looking forward to gaining more knowledge about Mobile Application Development which will be more valuable in my portfolio.

Urmi Sheth: I am a complete entrant when it comes to Android development. I have a little experience with web development where I worked with .Net, C#, HTML, CSS, Javascript, JQuery, SQL, Bootstrap. Also, I worked as a Test Analyst for almost 15 months in which I have done system integration testing, user acceptance testing. I am always keen to learn about new technologies and boost my technical skills.

Requirements

Req ID	Requirement Statement	Line Ref.
R1	The system shall allow the user to create an account.	21
R2	The system shall provide authenticated users to login to their account.	21
R3	The system shall provide a reset password feature for registered users	40
R4	The system shall provide the user to edit their profile such as personal details, contact numbers, address.	28
R5	The system shall provide the user with the functionality to delete the account if they no longer want to continue.	47
R6	The system shall provide the user to create a post of the item lost.	24
R7	The system shall allow the user to edit the lost item post if its needed.	24
R8	The system shall provide the user to delete the post of lost item.	24
R9	The system shall allow the user to resolve the post if they find the lost item.	37
R10	The system shall allow the user to view the list of all lost items once they login on their dashboard	31
R11	The system shall allow the user to search/filter an item	34
R12	The system shall allow the user to get rewards points once the item is claimed	50
R13	The system shall delete the post automatically after 6 months.	34
R14	The system shall allow the user to logout from application	44

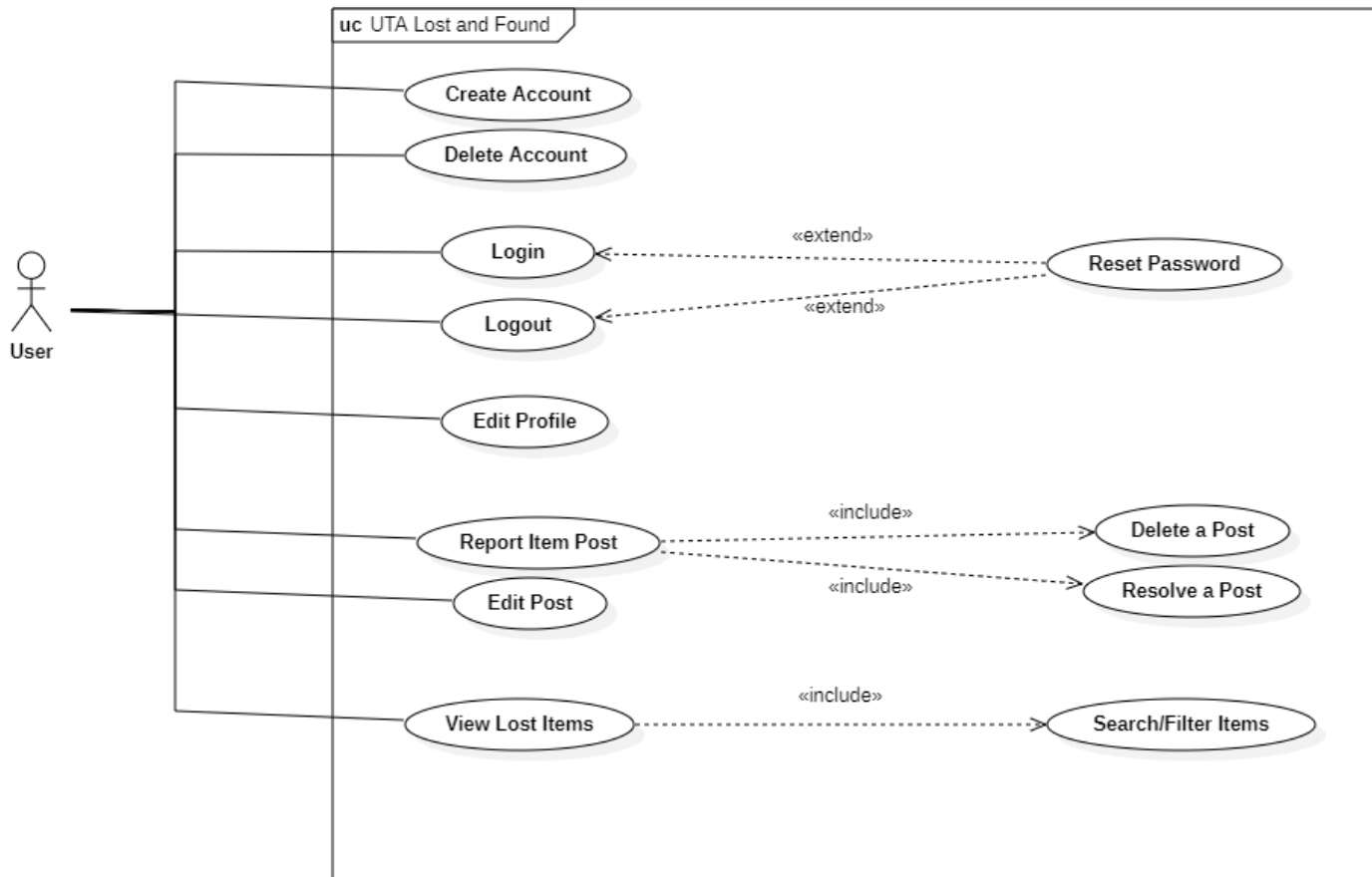
Use Case List

Use Case #	Use Case Name
UC1	Create Account
UC2	Login
UC3	Password Reset
UC4	Logout
UC5	Edit Profile
UC6	Delete Account
UC7	Report a Lost Item
UC8	Edit a Lost Item Post
UC9	Delete a Lost Item Post
UC10	View all Lost Items
UC11	Resolve a Lost Item
UC12	Filter for a Lost Item

High Level Use Cases

- UC1 Create Account
 - TUCBW User clicks on register button
 - TUCEW User account created
- UC2 Login
 - TUCBW User clicks on login button
 - TUCEW User logged in the application
- UC3 Password Reset
 - TUCBW User clicks on reset password
 - TUCEW User password successfully changed
- UC4 Logout
 - TUCBW User clicks on logout button
 - TUCEW User logged out from the application
- UC5 Edit Profile
 - TUCBW User clicks on their profile
 - TUCEW User updates their profile
- UC6 Delete Account
 - TUCBW User clicks on delete account
 - TUCEW User account deleted successfully
- UC7 Report a lost item
 - TUCBW User create a post for lost item
 - TUCEW User lost item posted and expiry time set for next 6 months
- UC8 Edit a lost item post
 - TUCBW User clicks on edit post
 - TUCEW User updates the post
- UC9 Delete a lost item post
 - TUCBW User clicks on Delete post
 - TUCEW User deletes the post
- UC10 View all Lost items
 - TUCBW User logged in the application
 - TUCEW User views the list of all lost items on the application
- UC11 Resolve a lost item
 - TUCBW User resolves a post of lost item once found
 - TUCEW User get reward points
- UC12 Filter for a lost item/post
 - TUCBW User sorts the items/posts
 - TUCEW User retrieves all the related items/post

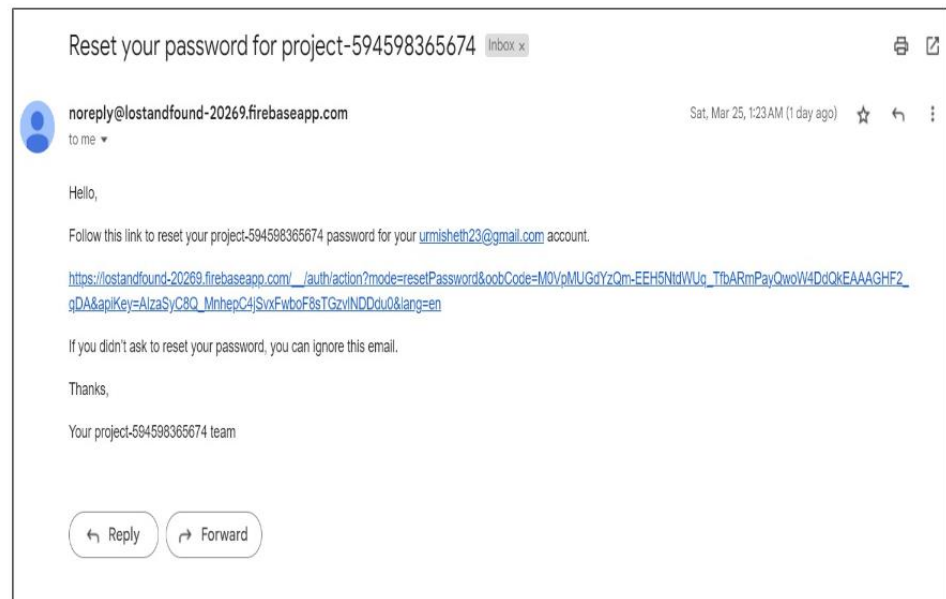
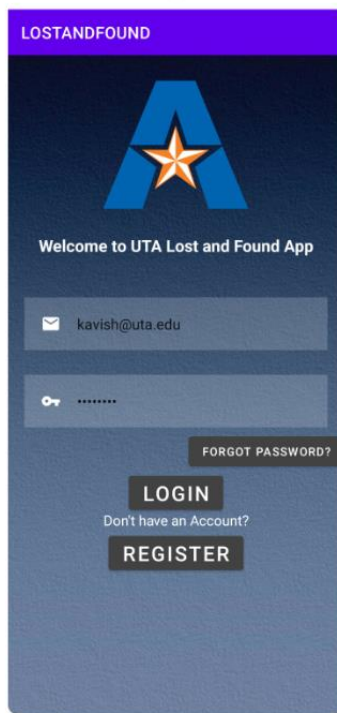
Use Case Diagram



Expanded Use Cases

EUC 3: Reset Password

Precondition: The Use case assumes that User has already created an account.	
Actor: User	System: Application
1. TUCBW User clicks on Forgot Password button 3. User inputs Email ID 5. TUCEW User resets their password	0. The system displays Login Page 2. The system ask for Email ID 4. The system sends link to User's Email
Postcondition: The new password can now login user into their account.	



EUC 7: Report a Lost Item

Precondition: The Use case assumes that the User had logged into the system and can see the dashboard.

Actor: User	System: Application
1. TUCBW User create a post for lost item 3. User inputs information for the lost item 5. TUCEW User lost item posted and expiry time set for next 6 months	0. System displays the dashboard page 2. System displays create post page * 4. System checks information and creates the post.

Postcondition: The Lost item post is now visible to all other users.



EUC 10: View all Lost Items

Precondition: This Use case assumes that the user has already registered into the system.

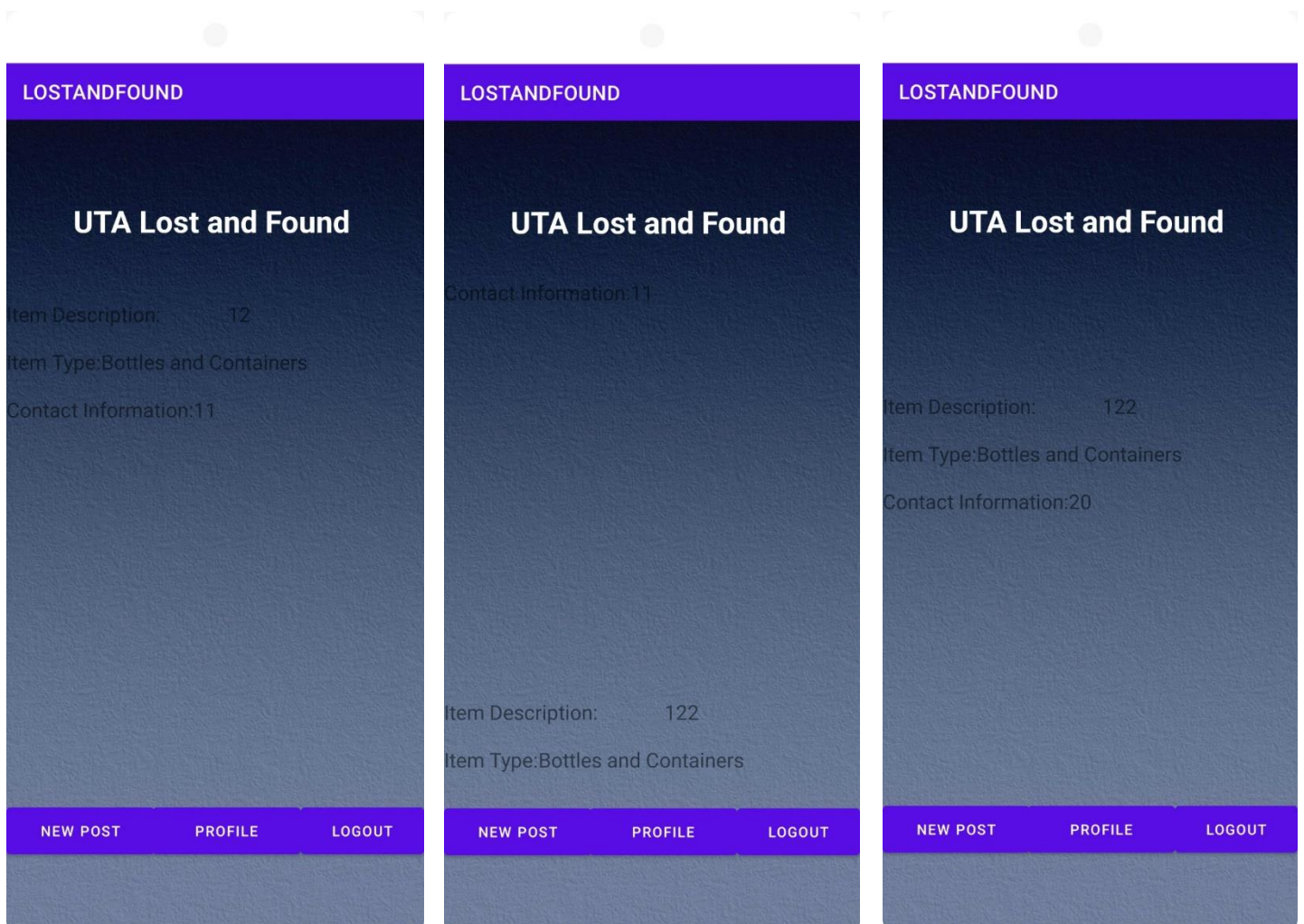
Actor: User

System: Application

1. **TUCBW** User logged in the application
3. **TUCEW** User views the list of all lost items on the application

0. System displays the login page.
* 2. System displays multiple posts on the dashboard page.

Postcondition: The User can now proceed to view and search for lost items.



EUC 8: Edit Post

Precondition: The Use case assumes that User has logged in and already created a Post.

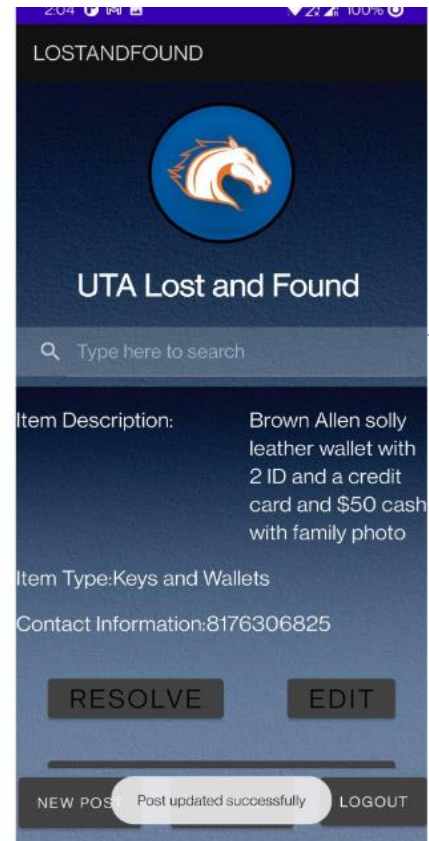
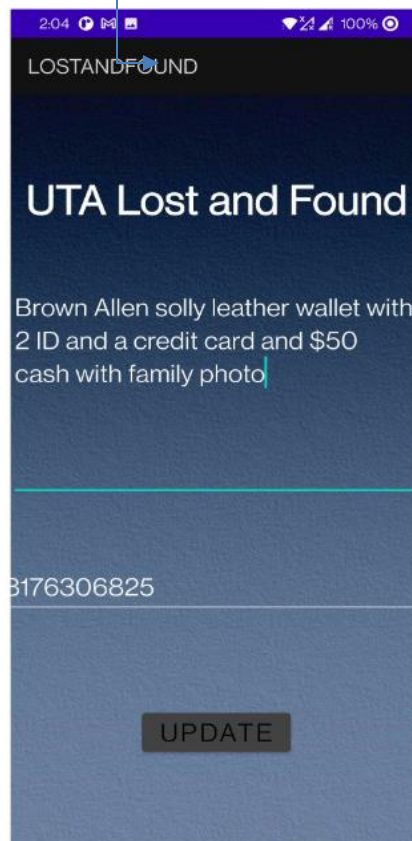
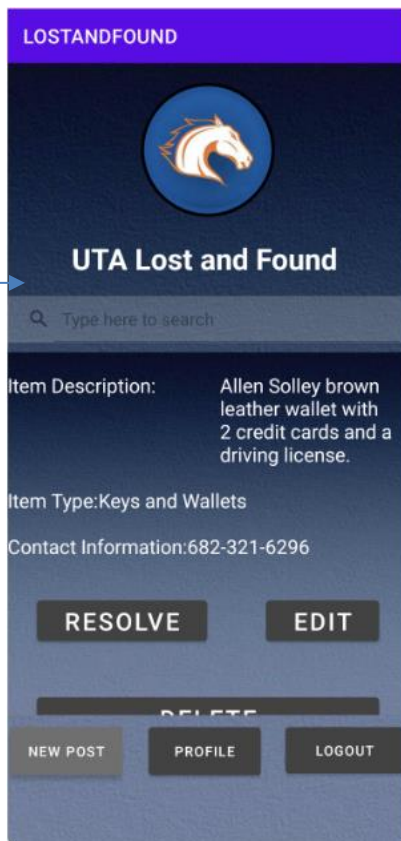
Actor: User

System: Application

1. **TUCBW** User clicks on edit post
3. User inputs changes to the post
5. **TUCEW** User updates the post

0. The system displays Dashboard
2. The system displays Edit page
- *4. The system changes the Post's information

Postcondition: The User can now see their newly updated post.



EUC 9: Delete Post

Precondition: The Use case assumes that the User has already logged in and created a Post.

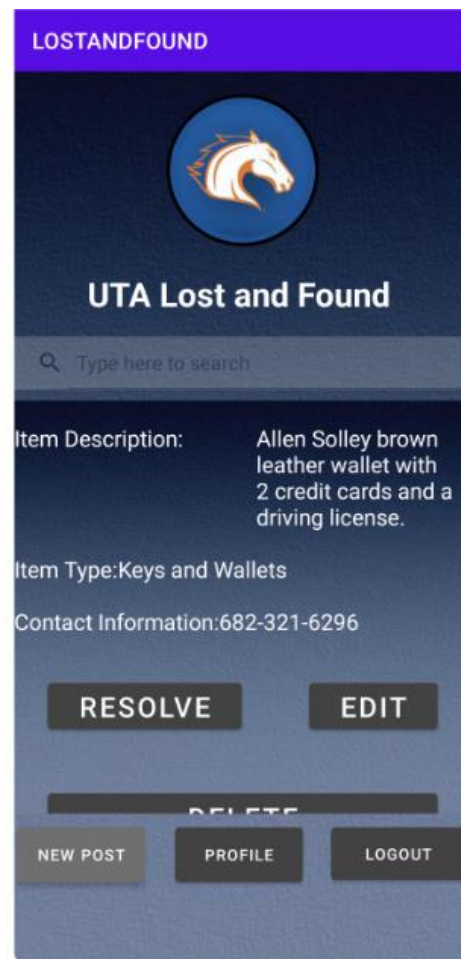
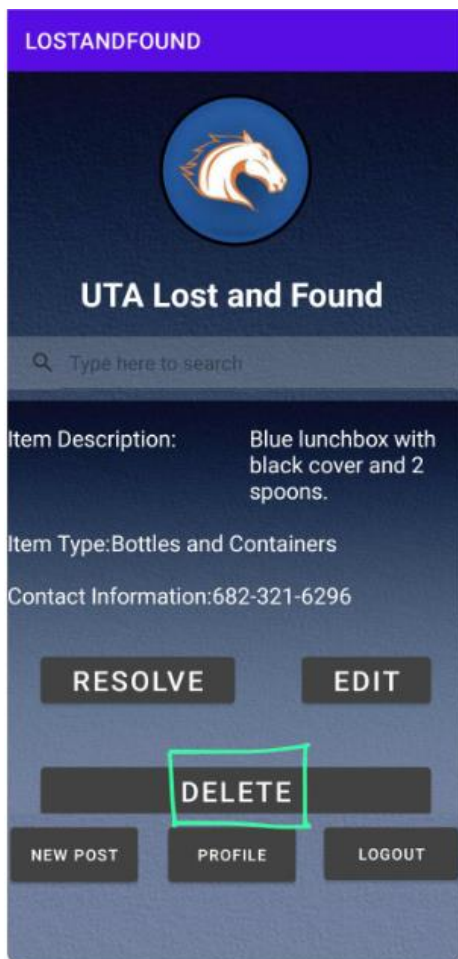
Actor: User

System: Application

- 1. **TUCBW** User clicks on Delete post
- 3. User clicks on Yes
- 5. **TUCEW** User deletes the post

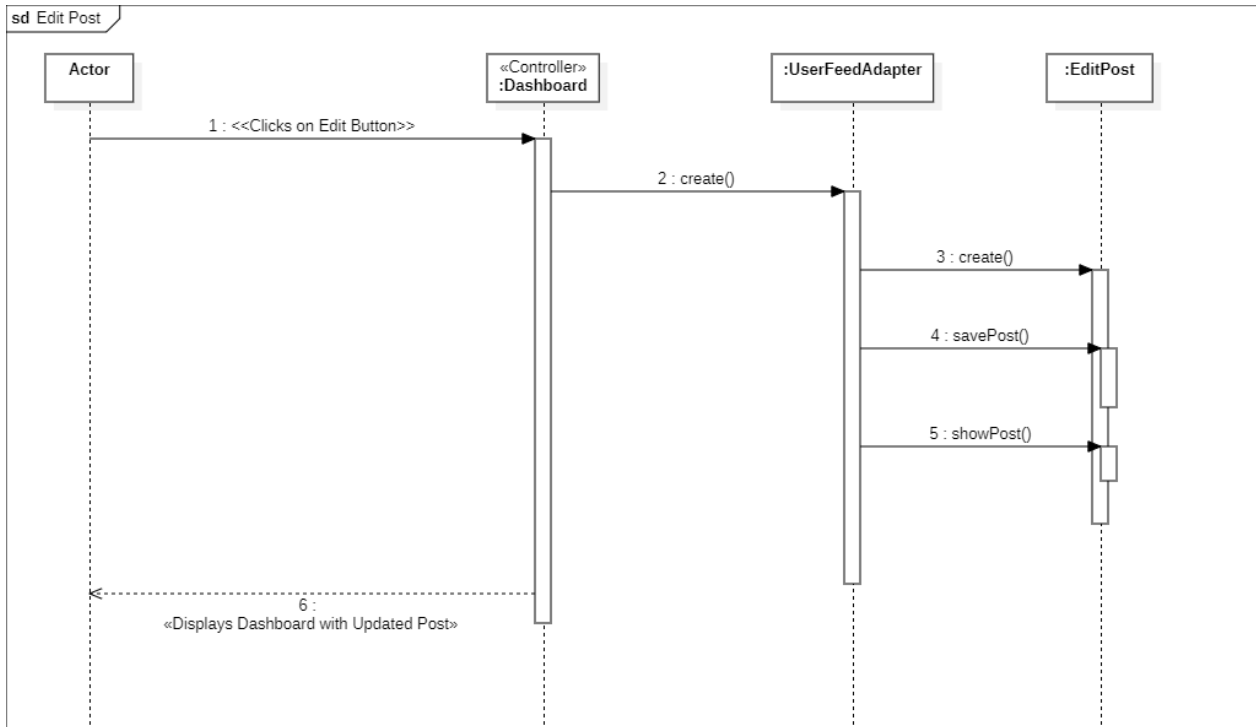
- 0. System displays the dashboard page
- 2. Systems displays confirmation dialog box.
- *4. System proceeds to delete the posts stored information.

Postcondition: Post will be removed from Dashboard.

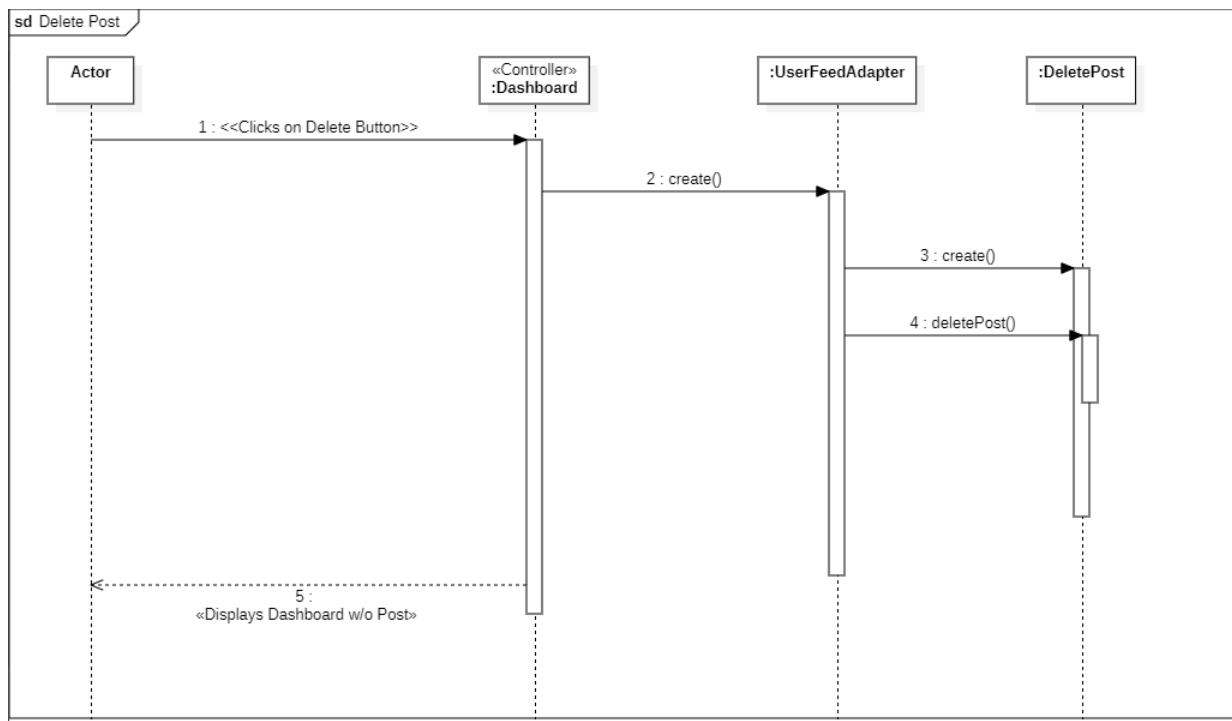


Sequence Diagrams

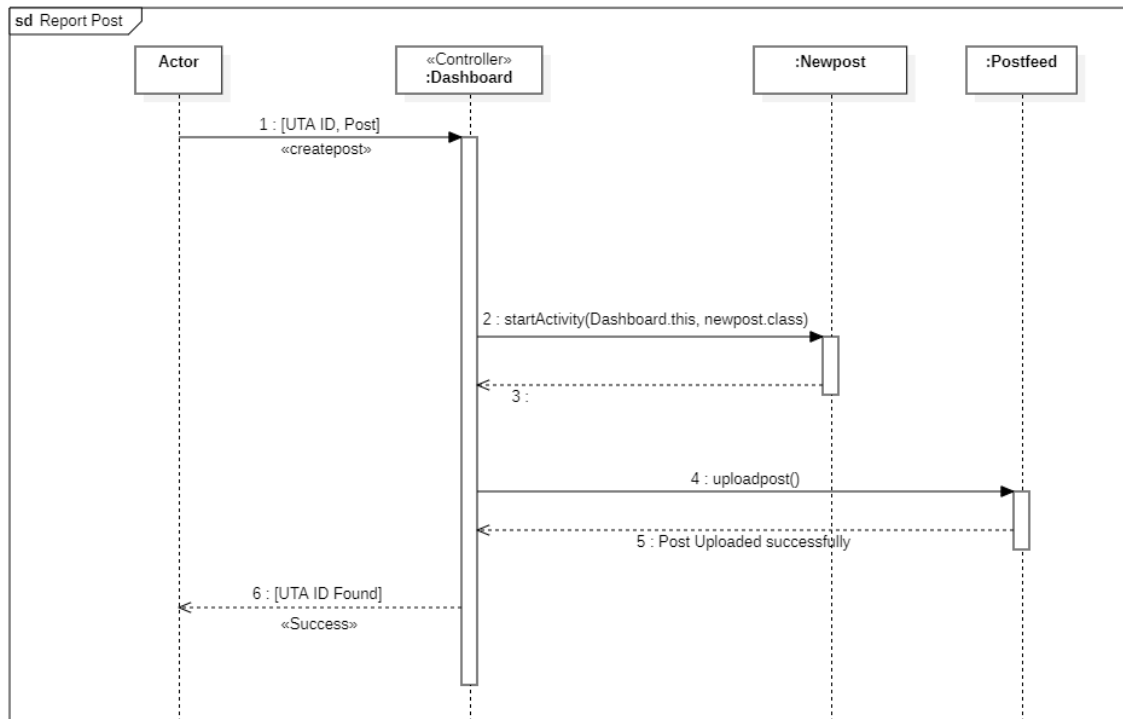
UC: 8



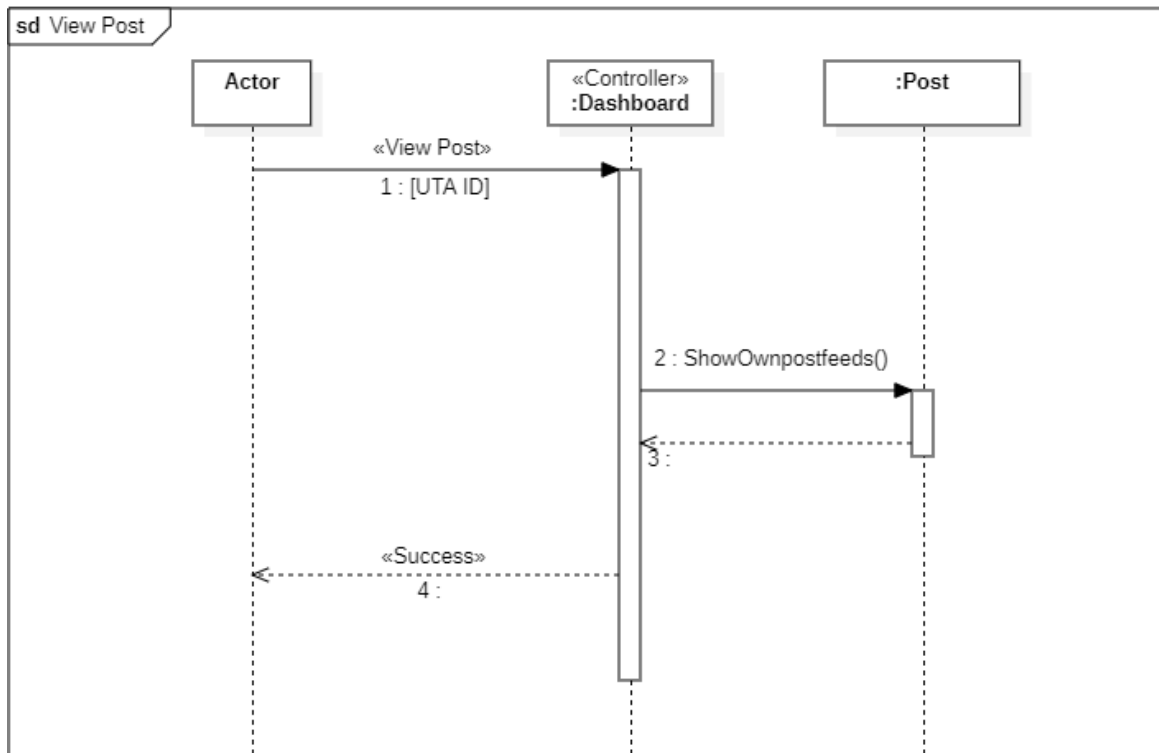
UC: 9



UC: 7



UC: 10



Requirement to Use Case Traceability Matrix

	Priority Weight	UC1	UC2	UC3	UC4	UC5	UC6	UC7	UC8	UC9	UC10	UC11	UC12
R1	1	X											
R2	1		X										
R3	2			X									
R4	2					X							
R5	3						X						
R6	1							X					
R7	1								X				
R8	1									X			
R9	1											X	
R10	1										X		
R11	2												X
R12	3											X	
R13	3							X					
R14	1				X								
	Score	1	1	2	1	2	3	4	1	1	1	4	2

NOTE: Priority Weight = 1 = Higher Priority, Priority Weight = 3 = Lowest Priority

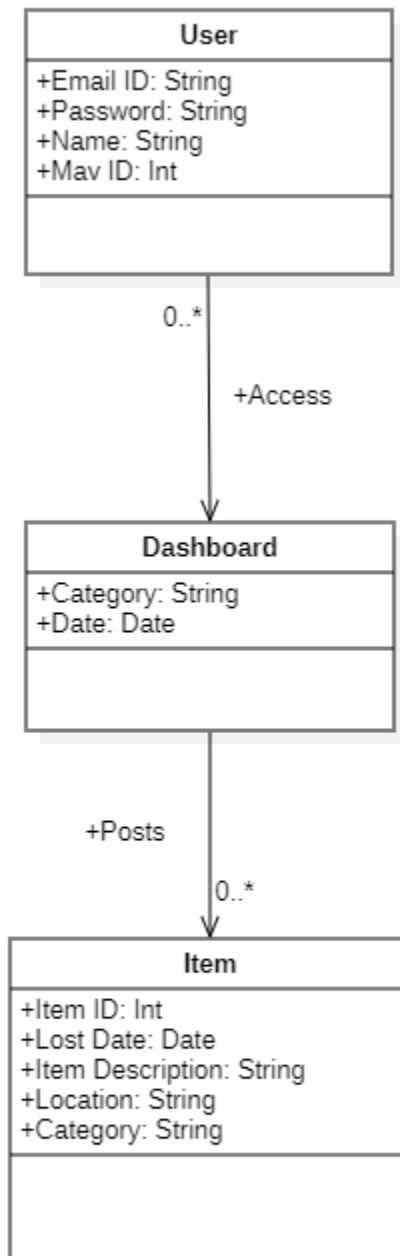
Increment Matrix

Use Case	Priority	Effort (Person-Weeks)	Depends On	Assigned To	Iteration 1 (03/10/23)	Iteration 2 (04/07/23)	Iteration 3 (05/01/23)
UC1	1	2	None	US, KK	2	0	0
UC2	1	2	UC1	KS, DP	2	0	0
UC3	2	2	UC1, UC2	CR, US	0	2	0
UC4	1	2	UC2	KS, DP	2	0	0
UC5	2	3	UC2	CR, KK, US	1	2	0
UC6	3	1	UC1, UC2	CR, KK	0	1	0
UC7	4	3	UC2	KK, KS, DP	0	2	0
*UC8	1	2	UC7	KK, CR	0	2	Planned 0 Actual 2
*UC9	1	3	UC7	KS, DP	0	0	Planned 3 Actual 3
UC10	1	2	UC2	CR, DP	0	2	0
UC11	4	3	UC7, UC8	US, KS, DP	0	0	Planned 3 Actual 3
UC12	2	3	UC2, UC10	DP, CS, KS	0	0	Planned 3 Actual 3
Total Effort		28			7	11	P:11 / A:11

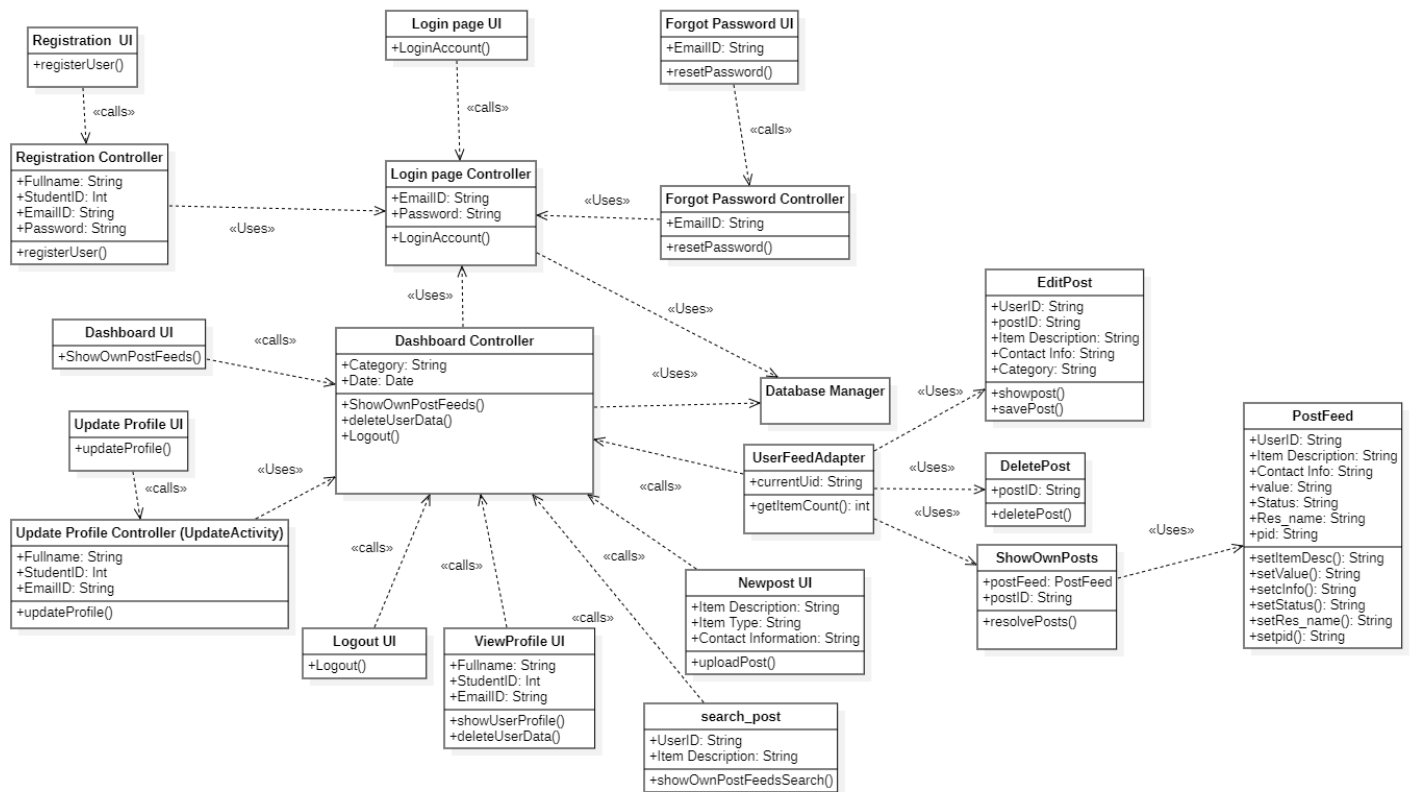
1 Person-week = 5 hrs

CR - Cesar Rea | DP - Darsh Patel | KK – Kavish
Khatrī | KS - Keya Shah | US - Urmi Sheth

Domain Model



Design Class Diagram



Youtube Link

Youtube Video:

<https://youtu.be/BWB9TiUgwHs>