

Project: UniVerse
Team No.: #6
Class: CSE 3310; Spring 2022 Module: System Requirements Analysis (SRA) Deliverable: SRA Document

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Date: [3/31/2022]

Contributors:

Adam Emerson
Kevin Flores
Joshua Boudria
Ho Anh Tuan Vo

Revision History

<i>Version number</i>	<i>Date</i>	<i>Originator</i>	<i>Reason for change</i>	<i>High level description of changes</i>
1.0	03/31/2022	Adam Emerson	Initial draft	

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1. Introduction and Project Overview

“Uni-verse” is a social networking application designed to assist students and organizers alike in creating, managing, finding, and attending on-campus events. The app’s core feature is a personalized “event feed” that will display upcoming events and activities relevant to each user. From the feed, users will be able to view details on each event and RSVP to events they wish to attend.

2. Objectives

2.1 BUSINESS OBJECTIVES

The following is a list of business objectives:

Objective 1: Login and Registration - If a user has already registered, login. If the user has forgotten their password, email it to them. If new user, Register the user by collecting the following personal information:

First Name, Last Name

E-mail address

Password

Users with a mavs.uta.edu email account will be considered students. Users with a uta.edu account will be considered organizers.

Objective 2: Feed – Feed displays upcoming events around campus. The events will be displayed in the order of relevance to the user based on their selected interests.

Objective 3: Interests – User can select interest categories that appeal to them to help sort their feed. New users will be required to select at least 3 interest categories after they register for the first time.

Objective 4: Settings – From the settings page a user will be able to update their personal information, modify their interests, and adjust their notification settings.

Objective 5: Schedule – The schedule is a calendar view of the events a user has RSVP'd to. Users can access an event's information page via the schedule.

Objective 6: Events – Events can be created by any user that is an organizer. Events have a title, date, time, location, optional number of seats, and optional event photo. The event can also be marked "Private" at which point, only invited users can view the event and RSVP.

Public events can be RSVP'd by any user. Users can do so via the event card displayed in their feed.

Objective 7: Notifications – Notifications are sent to the user when a relevant event is created, edited, or deleted. A user's notifications are reviewable in the notification center. If a user clicks on a notification, they will be taken to that events page.

2.2 SYSTEM OBJECTIVES

The following is a list of system objectives:

Objective 1: System will be an android application for mobile platform.

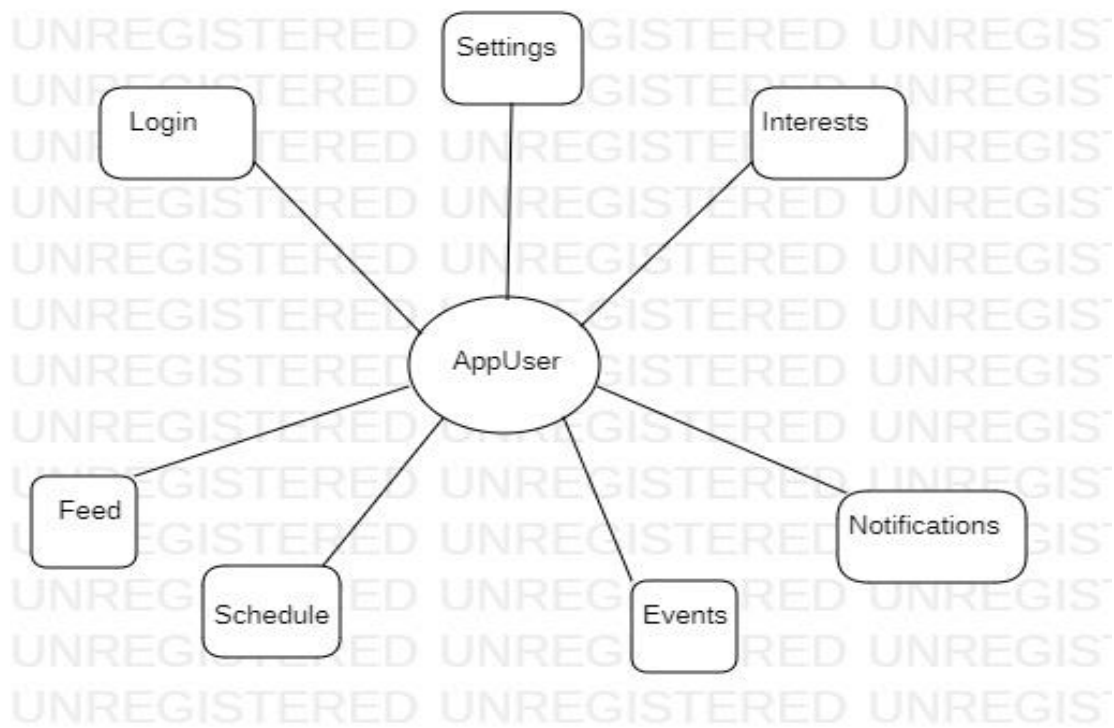
Objective 2: Application will be developed using Android Studio IDE

Objective 3: Project collaboration and version control will be facilitated by Git on the GitHub platform

Objective 4: Git-flow methodology will be used for feature development and integration into the existing application.

Objective 5: Firebase will be used as the database.

3. Project Context Diagram



4. Systems Requirements

4.1 “LOGIN AND REGISTRATION” REQUIREMENTS

Requirement Title:	Login and Registration
Sequence No:	001
Short description:	Registered user login
Description:	<p>Registered users must provide their email and password correctly to access the application. The following information will be collected:</p> <ul style="list-style-type: none">- Email address (ID) {Must be UTA email, @mavs.uta.edu for students, @uta.edu for organizers}- Password {Must be identical to the password stored in the server} <p>User can press:</p> <ul style="list-style-type: none">- Log in- Create a new account- Forgot password?
Pre-Conditions:	<ul style="list-style-type: none">- Application must be loaded already
Post Conditions:	<ul style="list-style-type: none">- Block for a certain amount of time after 3 attempts
Other attributes:	<ul style="list-style-type: none">- None

Requirement Title:	Login and Registration
Sequence No:	002
Short description:	Register new user
Description:	<p>New users must register and pick their interests before accessing the application. The following information will be collected:</p> <ul style="list-style-type: none"> - Name {First, Last name} - Email address (ID) {Must be UTA email, @mavs.uta.edu for students, @uta.edu for organizers} - Date of Birth {In pattern mm-dd-yyyy} - Select a password {Must include, letters, at least one number, at least a Capital letter, certain wild characters allowed like !@#\$%^&*} <p>User can press:</p> <ul style="list-style-type: none"> - Next - Cancel (i.e. discard changes, go back to login page)
Pre-Conditions:	<ul style="list-style-type: none"> - Application must be loaded already - User selected “Create New Account” on login page. - Duplicate registration is not allowed
Post Conditions:	<ul style="list-style-type: none"> - All “Saved” changes will be kept permanently until users update them in the future. - Proceed to "Classify Users" screen
Other attributes:	<ul style="list-style-type: none"> - None

Requirement Title:	Login and Registration
Sequence No:	003
Short description:	Classify Users
Description:	<ul style="list-style-type: none"> - Users will be classified into 2 groups according to their email format: Student or Organizer. - If the user is Student, the following information will be collected: <ul style="list-style-type: none"> o Major o Graduation year o Profile picture - If the user is Organizer, the following information will be collected: <ul style="list-style-type: none"> o Department o Title o Profile picture <p>User can press:</p> <ul style="list-style-type: none"> - Register - Cancel (i.e. discard changes, go back to login page)
Pre-Conditions:	<ul style="list-style-type: none"> - Application must be loaded already - UTA email and relevant information must all be filled in on new user page - User selected “Next” on new user page.
Post Conditions:	<ul style="list-style-type: none"> - All “Saved” changes will be kept permanently until users update them in the future. - Create new user account in database - Load “Interest Onboarding” screen
Other attributes:	<ul style="list-style-type: none"> - None

Requirement Title:	Login and Registration
Sequence No:	004
Short description:	Retrieve forgotten password
Description:	<p>Registered users must provide their email correctly to retrieve the password. The following information will be collected:</p> <ul style="list-style-type: none"> - Email address (ID) { Must be UTA email, @mavs.uta.edu for students, @uta.edu for organizers } <p>After that, the password will be sent to that UTA email.</p> <p>User can press:</p> <ul style="list-style-type: none"> - Submit - Cancel (go back to login screen)
Pre-Conditions:	<ul style="list-style-type: none"> - Application must be loaded already - User selected “Forgot Password?”
Post Conditions:	<ul style="list-style-type: none"> - An email with password will be sent out to the user
Other attributes:	<ul style="list-style-type: none"> - None

4.2 “FEED” REQUIREMENTS

Requirement Title:	Feed
Sequence No:	001
Short description:	After login, user views Feed.
Description:	<p>The user is presented with the Feed showing relevant events. Feed serves as de facto home screen for User. The Feed is the central object of a Tabbed navigation bar.</p> <p>Feed consists of a scrolling window full of event cards. Event cards are clickable and doing so will transition the user to the Event view.</p> <p>The events with relevant interests will be placed at the top of the feed and sorted chronologically. Any events with interests outside the user's preference will be listed chronologically after the relevant events.</p> <p>User can press:</p> <ul style="list-style-type: none">- Profile- Calendar- Notifications- Settings- More Info (per Event Card) <p>If Organizer, User can press:</p> <ul style="list-style-type: none">- Create Event
Pre-Conditions:	<ul style="list-style-type: none">- User must be logged in.
Post Conditions:	<ul style="list-style-type: none">- None
Other attributes:	<ul style="list-style-type: none">- None

Requirement Title:	Feed
Sequence No:	002
Short description:	User refreshes Feed
Description:	The user can refresh the Feed content by swiping down from the top of the Feed.
Pre-Conditions:	- User must be logged in.
Post Conditions:	- Retrieve and load most recent event data.
Other attributes:	- None

Requirement Title:	Feed
Sequence No:	003
Short description:	User returns to top of feed
Description:	If the user has scrolled down from the top of the feed, a floating action button will appear in the bottom left corner. Pressing this button will auto-scroll the user back to the top of the feed.
Pre-Conditions:	- User must be logged in. - User has scrolled down.
Post Conditions:	- Scroll feed to top.
Other attributes:	- None

Requirement Title:	Feed
Sequence No:	004
Short description:	User presses “More Info” on event card
Description:	When the User presses “More Info” on an event card, load the Event Info page.
Pre-Conditions:	- User must be logged in.
Post Conditions:	- Load Event Info screen
Other attributes:	- None

Requirement Title:	Feed
Sequence No:	005
Short description:	User presses “Settings” tab
Description:	When the User presses the “Settings” tab on the navigation bar, load the Settings page.
Pre-Conditions:	- User must be logged in.
Post Conditions:	- Load Settings page.
Other attributes:	- None

Requirement Title:	Feed
Sequence No:	006
Short description:	User presses “Notifications” tab
Description:	When the User presses the “Notifications” tab on the navigation bar, load the Notifications page.
Pre-Conditions:	- User must be logged in.
Post Conditions:	- Load Notifications page.
Other attributes:	- None

Requirement Title:	Feed
Sequence No:	007
Short description:	User presses “Schedule” tab
Description:	When the User presses the “Schule” tab on the navigation bar, load the Schedule page.
Pre-Conditions:	- User must be logged in.
Post Conditions:	- Load Schedule page.
Other attributes:	- None

Requirement Title:	Feed
Sequence No:	008
Short description:	User presses “Create Event” button
Description:	If User is an Organizer, Create Event floating action button is visible in the bottom right corner of the feed. Pressing the button brings the User to the Create Event page.
Pre-Conditions:	<ul style="list-style-type: none"> - User must be logged in. - User must be Organizer
Post Conditions:	<ul style="list-style-type: none"> - Load Create Event page.
Other attributes:	<ul style="list-style-type: none"> - None

4.3 “INTERESTS” REQUIREMENTS

Requirement Title:	Interests
Sequence No:	001
Short description:	New User Onboarding
Description:	<p>Users are presented with a list of interest categories. The interests selected will be used to filter their feed.</p> <p>Users must choose a minimum of 3 interests before they are able to proceed by selecting “Submit”.</p> <p>User can press:</p> <ul style="list-style-type: none">- On interests to select or deselect- Submit when 3 interests have been selected
Pre-Conditions:	<ul style="list-style-type: none">- Users must be a first-time registered user
Post Conditions:	<ul style="list-style-type: none">- Load “Feed” page.
Other attributes:	<ul style="list-style-type: none">- None

Requirement Title:	Interests
Sequence No:	002
Short description:	Edit interests
Description:	<p>Users are presented with a list of interest categories. If a user selects an interest it will toggle between selected or not.</p> <p>Selected interests will be used to filter the feed in their home page.</p> <p>If the user selects no interests, then feed will show all events.</p> <p>Previously saved interests will be highlighted.</p> <p>User can press:</p> <ul style="list-style-type: none"> - On interests to select or deselect
Pre-Conditions:	<ul style="list-style-type: none"> - User is on profile tab and presses edit interests
Post Conditions:	<ul style="list-style-type: none"> - None
Other attributes:	<ul style="list-style-type: none"> - Interest status will be saved dynamically when an interest is toggled.

4.4 “SETTINGS” REQUIREMENTS

Requirement Title:	Settings
Sequence No:	001
Short description:	Settings Screen
Description:	<p>User is presented with a list of modifiable settings.</p> <ul style="list-style-type: none"> - Notification: ON/OFF button to unmute/mute notification - Edit Personal Information: Users can provide or update their information. - Update Interests - Logout
Pre-Conditions:	<ul style="list-style-type: none"> - Users must be logged in
Post Conditions:	<ul style="list-style-type: none"> - The application must ask for login next time if user log out
Other attributes:	<ul style="list-style-type: none"> - None

Requirement Title:	Settings
Sequence No:	002
Short description:	Update Personal Information
Description:	<p>Users can change their account’s settings like notification, personal information, password.</p> <ul style="list-style-type: none"> - Personal information: Users can provide or update their information. <ul style="list-style-type: none"> o Name {Must be letters only, no numbers or wild characters} o DOB {Must be mm-dd-yyyy} o Profile picture {Must be in image format like jpeg, png} - Password: Users can change their old password {Must include, letters, at least one number, at least a Capital letter, certain wild characters allowed like !@#\$\$%^&*} <p>Users can press:</p> <ul style="list-style-type: none"> - Submit - Cancel (i.e. discard changes)
Pre-Conditions:	<ul style="list-style-type: none"> - Users must be logged in - User selected “Edit Personal Info” from settings screen
Post Conditions:	<ul style="list-style-type: none"> - All new changes will be kept permanently until users update them in the future.
Other attributes:	<ul style="list-style-type: none"> - None

Requirement Title:	Settings
Sequence No:	003
Short description:	User Updates Interests
Description:	If user selects “Update Interests”, load the Edit Interests screen.
Pre-Conditions:	- Users must be logged in
Post Conditions:	- Load “Edit” Interest screen
Other attributes:	- None

Requirement Title:	Settings
Sequence No:	004
Short description:	User Toggles Notification Switch
Description:	<p>If user toggles the notification switch, update the user’s notifications preferences.</p> <p>If the switch is ON, user will receive notifications about events. If the switch is OFF, user will not receive notifications about events.</p>
Pre-Conditions:	- Users must be logged in
Post Conditions:	- Update user notification preference
Other attributes:	- None

Requirement Title:	Settings
Sequence No:	005
Short description:	User Logs Out
Description:	When the user selects “Log Out”, log them out of their account and return the app to the log-in screen.
Pre-Conditions:	- Users must be logged in
Post Conditions:	<ul style="list-style-type: none"> - Log out user - Load log-in screen
Other attributes:	- None

4.5 “SCHEDULE” REQUIREMENTS

Requirement Title:	Schedule
Sequence No:	001
Short description:	Display calendar schedule when schedule tab is clicked
Description:	<p>When the schedule tab is clicked user is presented with a calendar that shows all RSVP'd events as labels on their corresponding day.</p> <p>If the user is an organizer also show all the events the user has created.</p> <p>If a user selects an event, load the event info page.</p> <p>User can press:</p> <ul style="list-style-type: none">- Event Label
Pre-Conditions:	<ul style="list-style-type: none">- User pressed schedule tab
Post Conditions:	None
Other attributes:	None

4.6 “EVENTS” REQUIREMENTS

Requirement Title:	Events
Sequence No:	001
Short description:	View Event information
Description:	<p>Users will be able to view an event’s information including</p> <ul style="list-style-type: none">- Event name- Organizer name- Date- Time- Location- Number of people attending- Remaining RSVP slots- General description of the event- Event Photo <p>Users will have the option to RSVP to an event. RSVP’d events will be added to their schedule.</p> <p>User can press:</p> <ul style="list-style-type: none">- Back- RSVP <p>If the user is the organizer of the event, they will see an additional “Edit Event” button that will allow them to make changes to the event.</p>
Pre-Conditions:	<ul style="list-style-type: none">- User presses the “More Info” button on feed
Post Conditions:	<ul style="list-style-type: none">- Load event Information
Other attributes:	<ul style="list-style-type: none">- None

Requirement Title:	Events
Sequence No:	002
Short description:	RSVP to event
Description:	Event will be added to user's schedule.
Pre-Conditions:	- User presses the RSVP button
Post Conditions:	- Add event to calendar - User will be added to attendee list - RSVP button changes to "Cancel RSVP" button
Other attributes:	- None

Requirement Title:	Events
Sequence No:	003
Short description:	Cancel RSVP
Description:	The user may press the "Cancel RSVP" button and the event will be removed from their schedule
Pre-Conditions:	- User presses the "Cancel RSVP" - User has already RSVP'd to event
Post Conditions:	- Delete event from user's schedule. - User will be removed from attendee list. - "Cancel RSVP" button changes to "RSVP" button
Other attributes:	- None

Requirement Title:	Events
Sequence No:	004
Short description:	Organizer creates event
Description:	<p>Organizer will be able to create a new event by accessing the “Create Event” button on their feed. This will load up a blank event card where the Organizer can edit each field.</p> <p>Fields:</p> <ul style="list-style-type: none"> - Event name - Organizer - Date - Time - Location - Number of students that can rsvp (or unlimited) - General Description of the event - Optional photo relevant to event <p>User can press:</p> <ul style="list-style-type: none"> - Save - Cancel
Pre-Conditions:	<ul style="list-style-type: none"> - Organizer presses “Create Event” button - Load editable event information page
Post Conditions:	<ul style="list-style-type: none"> - Save changes to event
Other attributes:	<ul style="list-style-type: none"> - User must press Save button to keep changes

Requirement Title:	Events
Sequence No:	005
Short description:	Organizer presses the “Edit Event” button
Description:	<p>Organizer of the event may edit information on the event including</p> <ul style="list-style-type: none"> - Event name - Organizer - Date - Time - Location - General description of Event - Number of students that can rsvp (or unlimited) - Event Photo <p>User can press:</p> <ul style="list-style-type: none"> - Cancel - Save
Pre-Conditions:	<ul style="list-style-type: none"> - Organizer presses “Edit Event” button - Load editable event information page with previous information
Post Conditions:	<ul style="list-style-type: none"> - Save changes to event if Save button pressed - Notify attendees of change
Other attributes:	<ul style="list-style-type: none"> - Organizer should be alerted if they attempt to lower the number of attendees below the amount of students that have already RSVP’d.

4.7 “NOTIFICATIONS” REQUIREMENTS

Requirement Title:	Notifications
Sequence No:	001
Short description:	User presses the notifications button
Description:	The notifications center is loaded with a list of all notifications. Starting at the top will be all unviewed notifications in bold. Following will be all previous notifications for the user.
Pre-Conditions:	<ul style="list-style-type: none">- User presses the notifications button
Post Conditions:	<ul style="list-style-type: none">- Load all notifications
Other attributes:	<ul style="list-style-type: none">- Notifications center button will have a number next to it showing the number of unviewed notifications

Requirement Title:	Notifications
Sequence No:	002
Short description:	User receives a notification
Description:	Users will receive notifications to their phone about updates to events. Users may click on the notification to open the app to the notifications tab of the app.
Pre-Conditions:	<ul style="list-style-type: none">- User receives a notification of an event that has been updated- User clicks on the notification
Post Conditions:	<ul style="list-style-type: none">- Open notification
Other attributes:	<ul style="list-style-type: none">- None

Requirement Title:	Notifications
Sequence No:	003
Short description:	App forces notification
Description:	Users will receive notifications to their phone about important information even if they have notifications turned off. Important information may be things such as school cancellation, university emergency situations, etc.
Pre-Conditions:	<ul style="list-style-type: none">- User must have notifications turned off
Post Conditions:	<ul style="list-style-type: none">- None
Other attributes:	<ul style="list-style-type: none">- None

Requirement Title:	Notifications
Sequence No:	004
Short description:	User clicks on Notification
Description:	Once in Notification center user can click on a notification where they will be taken to the Event Info screen
Pre-Conditions:	- User must be in Notification Center
Post Conditions:	- Load Event Info Screen
Other attributes:	- None

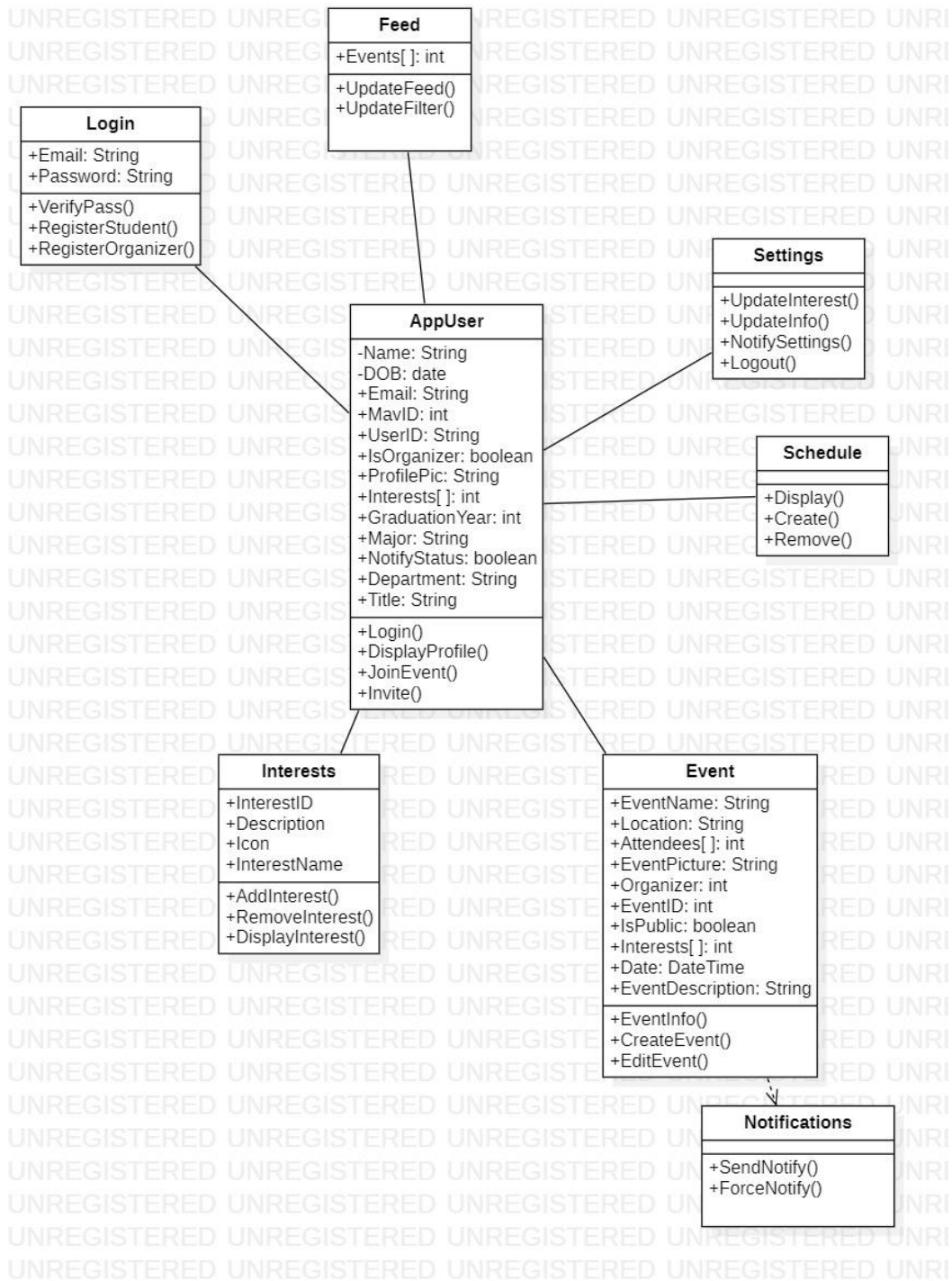
5. Software Processes and UML Diagrams

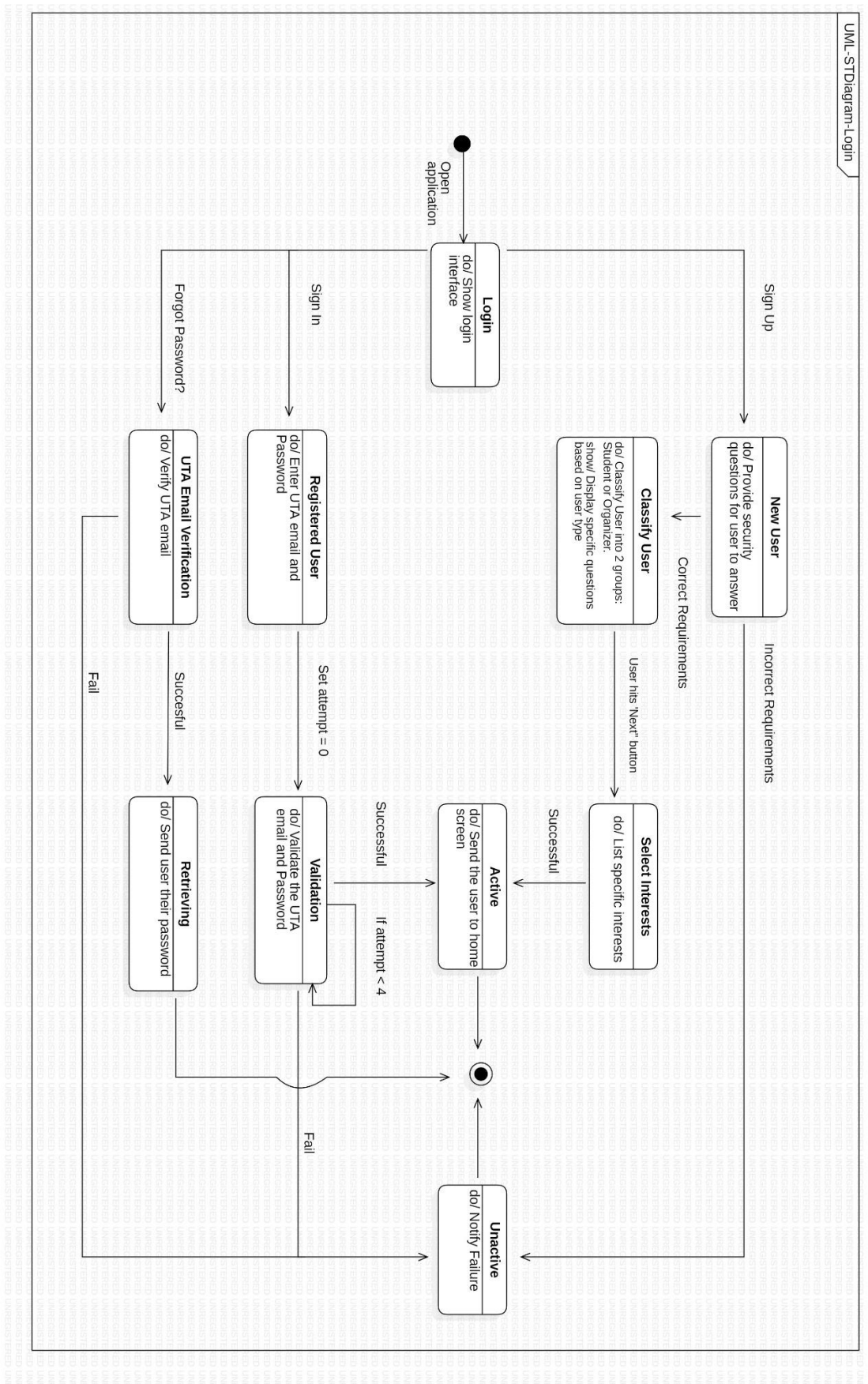
5.1 HARDWARE AND INFRASTRUCTURE

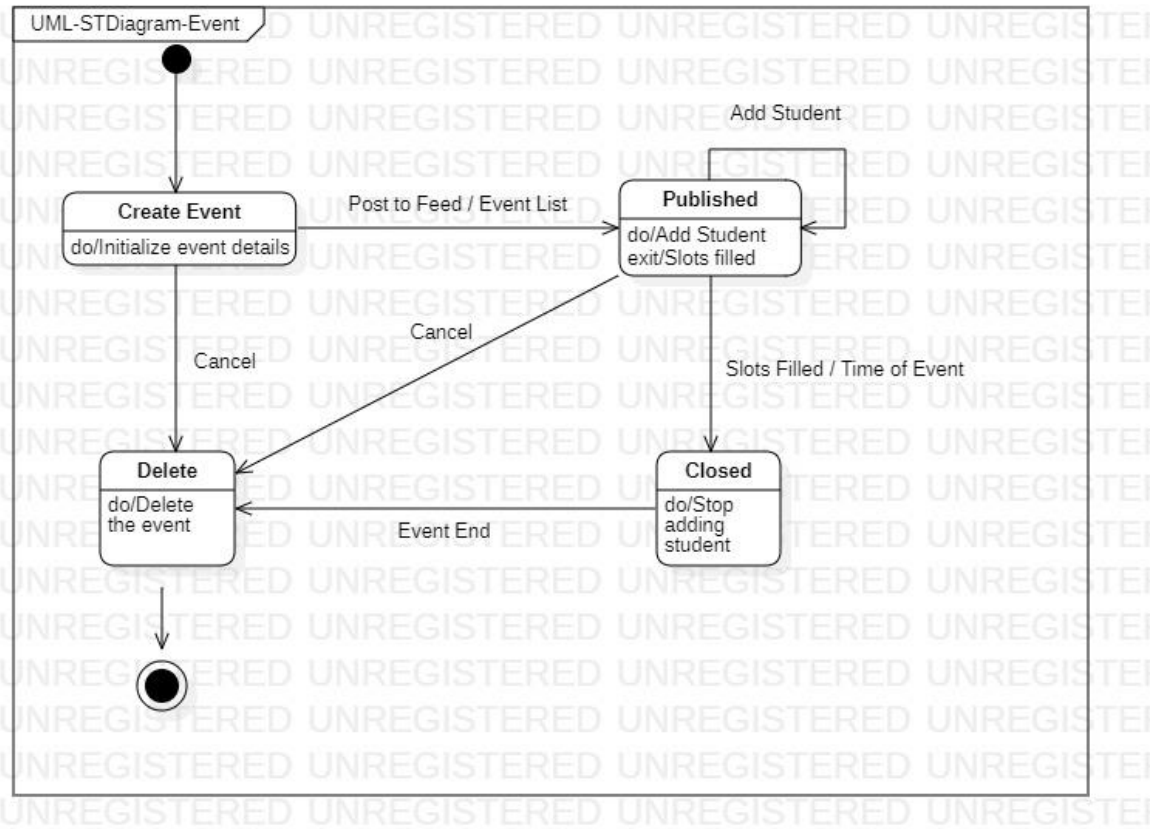
We will be using Android Minimum SDK 29 (Android 10) for our app due to requirements surrounding Firebase, the database we have selected to back our app.

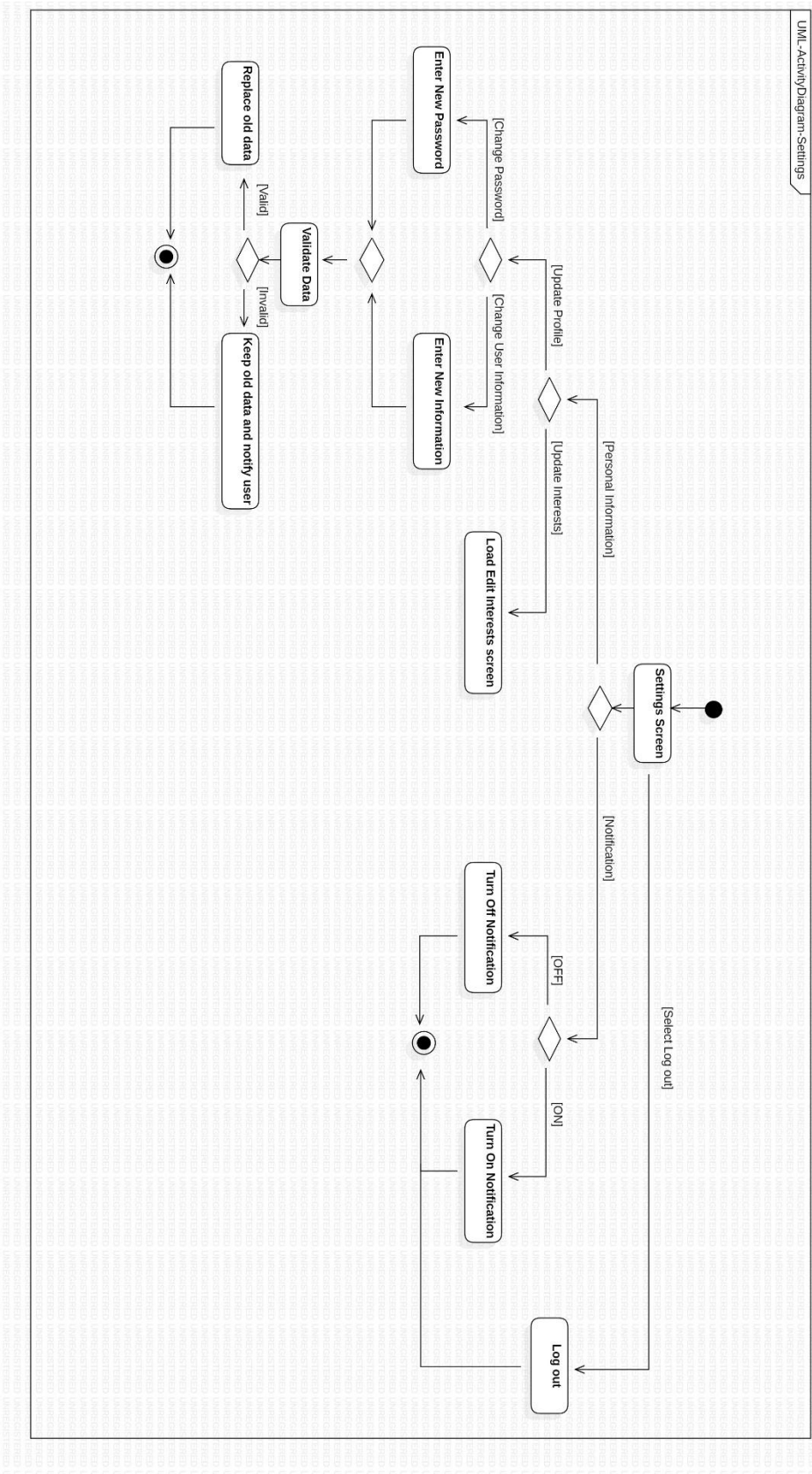
Firebase will be used as our database and will store our User and Event information.

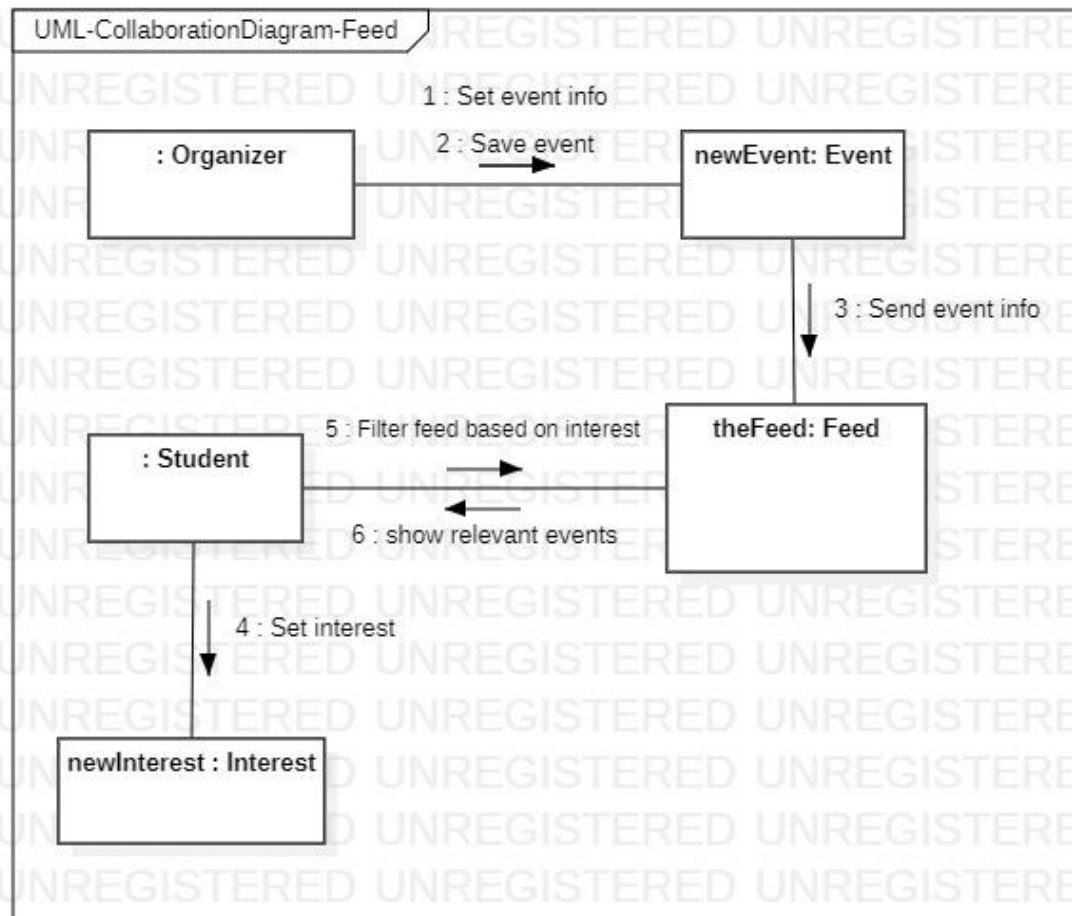
5.2 UML DIAGRAMS

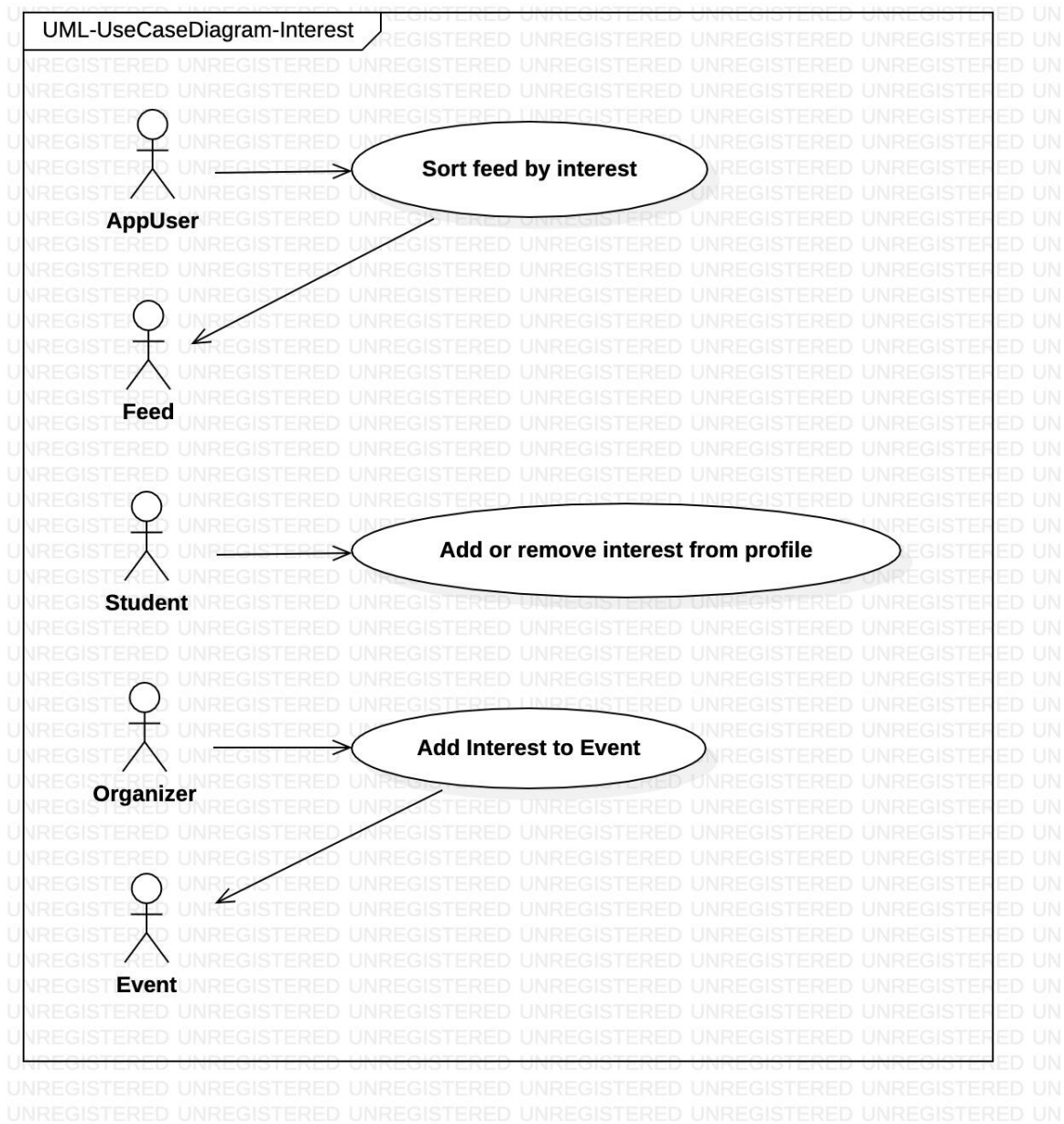


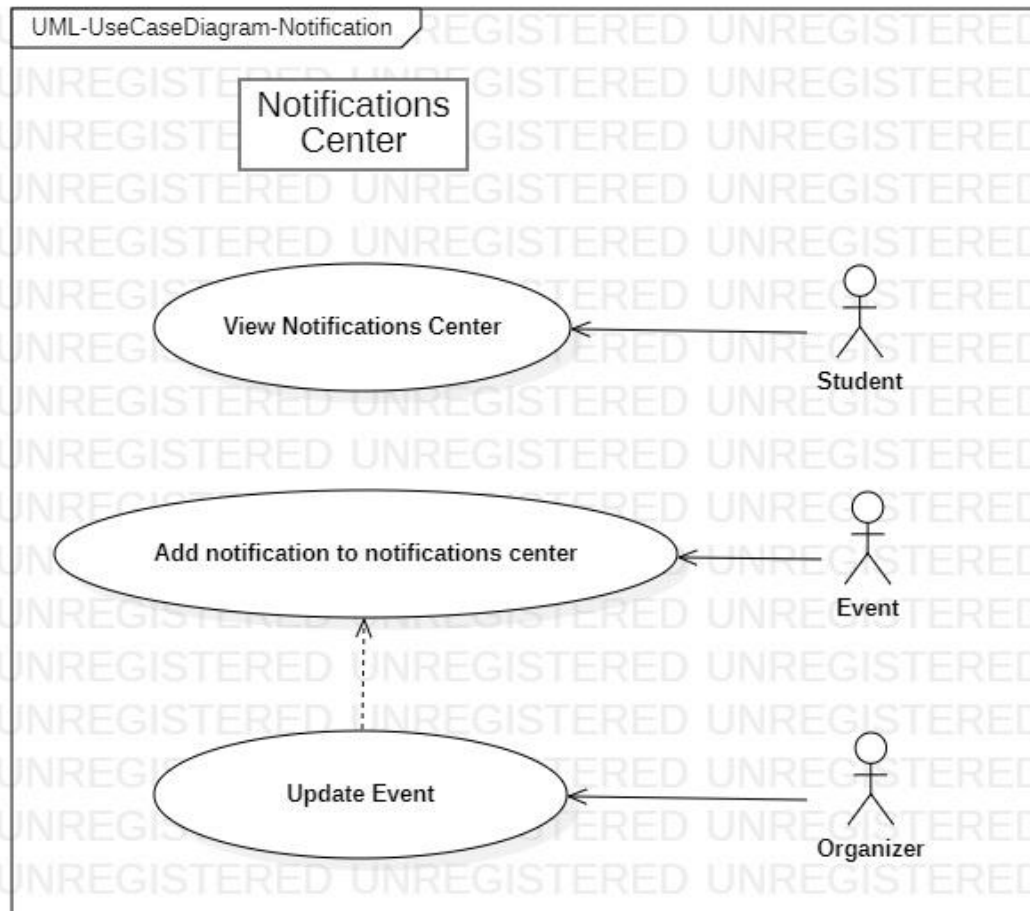


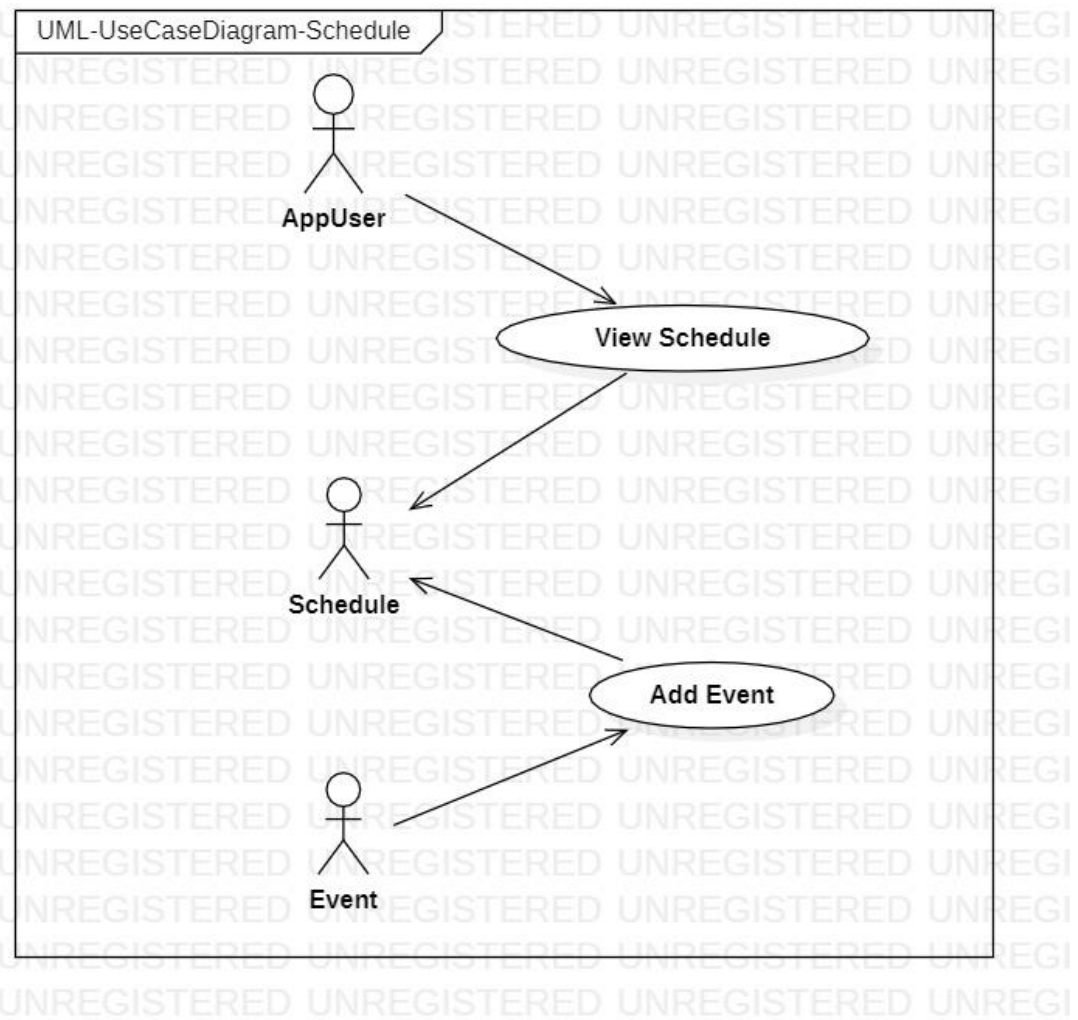








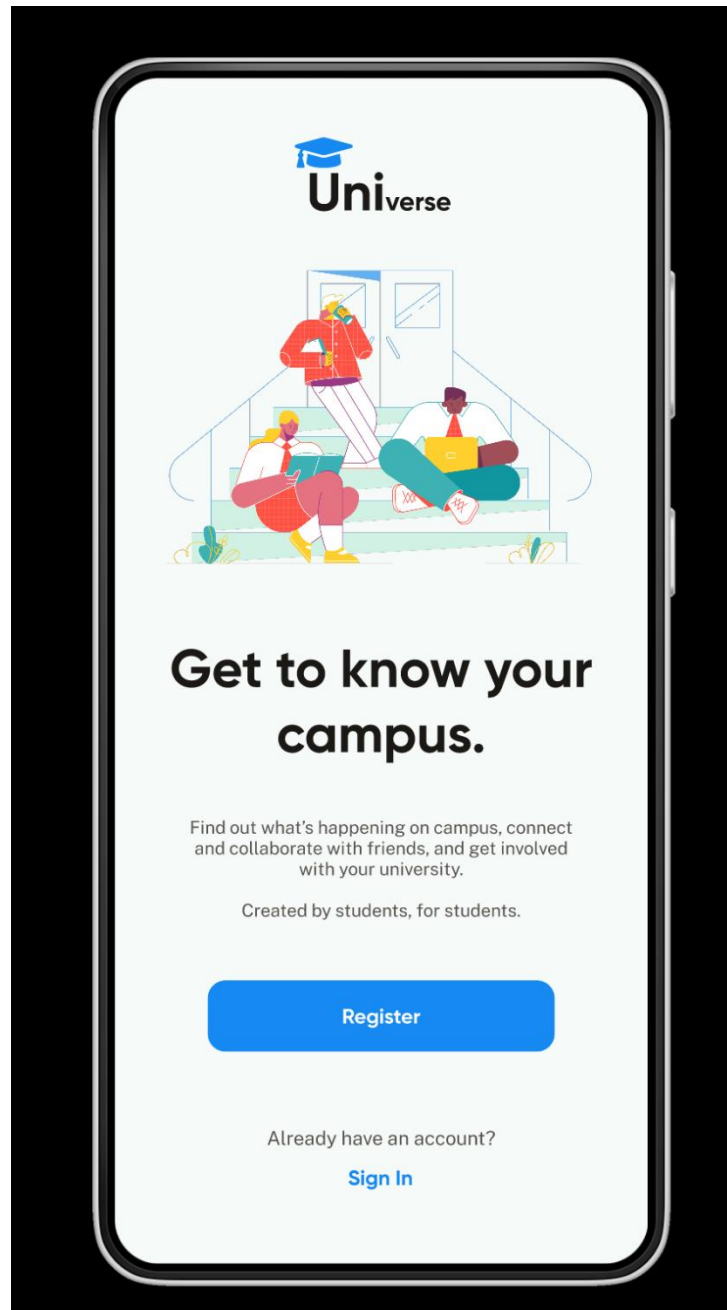




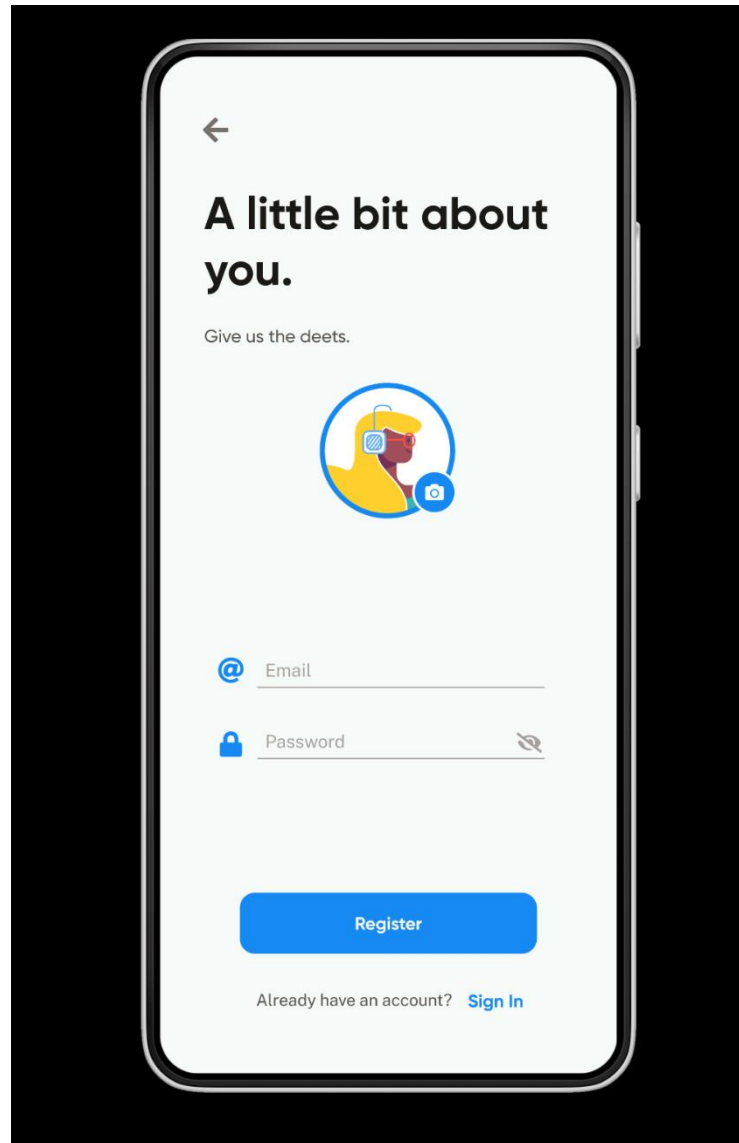
5.3 TEST PLAN

A Test Plan will be provided at a later date.

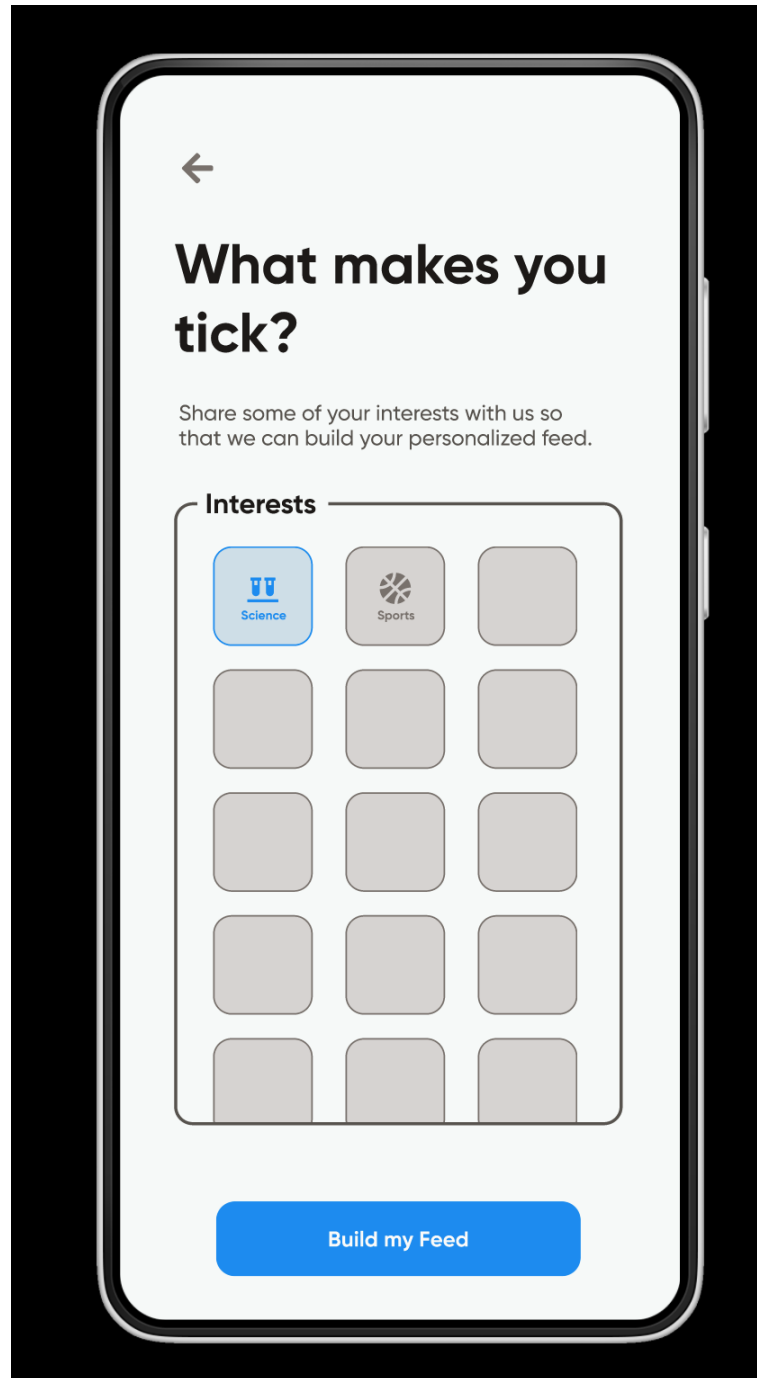
5.4 SCREEN SHOTS



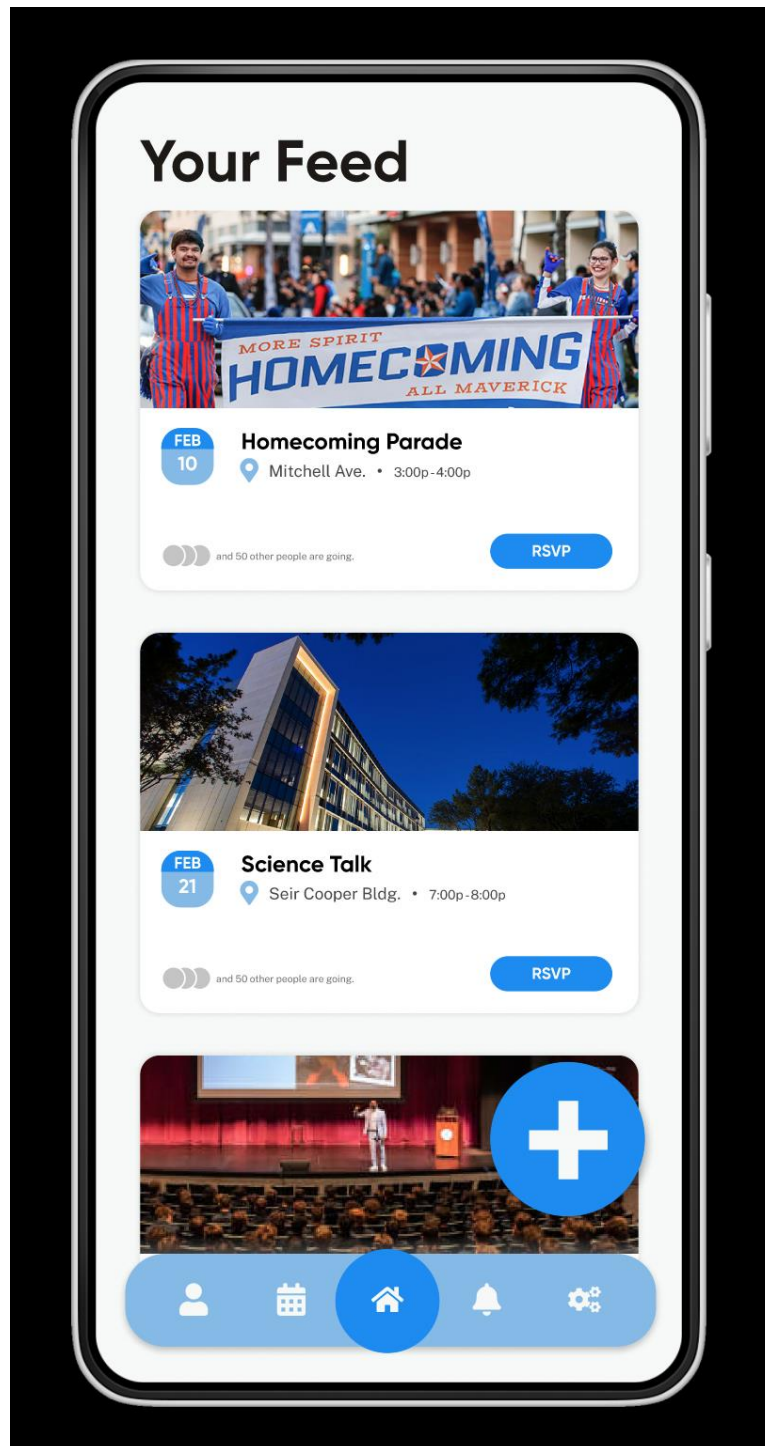
Early Mockup of App Landing Page



Early Mockup of App Registration Screen



Early Mockup of Interests Screen



Early Mockup of User Feed

6. Assumptions and Constraints

6.1 ASSUMPTIONS

The following is a list of assumptions:

- We will only be supporting UTA students and faculty with our product at launch.
- Students and faculty must register with a mavs.uta.edu or uta.edu email address

6.2 CONSTRAINTS

The following is a list of constraints:

- Team lacks android development skills
- Limited by tight deadline.

6.3 OUT OF SCOPE MATERIAL

The following is a list of “out of scope” material:

- Post Project maintenance is not covered
- Increased security for password retrieval process not covered

7. Delivery and Schedule

Task/Milestone Description	Anticipated Start Date	Anticipated End Date	Status	Comments
Prepare UML diagrams	02/01/2022	02/28/2022	Complete	UML diagram delivered Increment 1 Deliverable
SRA document (Includes project objectives, Requirements and UML diagrams)	03/03/2022	04/05/2022	Complete	Deliverable will be the SRA document. All stakeholders agree on the content of the SRA by signing section 8. Increment 2 Deliverable
Design: Design big picture, define format, navigation and functionality to include	03/03/2022	04/05/2022	In Progress	
Implementation: Login and registration	03/31/2022	04/05/2022	In Progress	Auth w/ Firebase
Implementation: Interests	04/05/2022	04/09/2022	TBC	Depends on Login
Implementation: Event	04/09/2022	04/16/2022	TBC	Store events in Firebase
Implementation: Schedule	04/16/2022	04/23/2022	TBC	Depends on Events
Implementation: Feed	04/16/2022	04/23/2022	TBC	Depends on Events
Implementation: Notifications	04/16/2022	04/23/2022	TBC	Depends on Events
Implementation: Settings	04/23/2022	04/28/2022	TBC	Depends on Notifications, Interests, Login
Test case design	03/31/2022	04/19/2022	TBC	Increment 3 Deliverable
External Documentation (i.e. User Manual)	03/01/2022	05/03/2022	TBC	
Project presentation	04/26/2022	04/28/2022	TBC	
Final Milestone: project delivery	05/01/2022	05/03/2022	TBC	Increment 4 Deliverable

8. Stakeholder Approval Form

Stakeholder Name	Stakeholder Role	Stakeholder Comments	Stakeholder Approval Signature and Date
Bahram Khalili	Development Mgr.		
Akshit Singhal	Project Assistant		
Adam Emerson	Developer		
Kevin Flores	Developer		
Joshua Boudria	Developer		
Ho Anh Tuan Vo	Developer		

Appendix:

None