Team 25 Milestone 2

A. Informal requirements

R1: Upon entering the app for the first time, the user should be directed to a form with a username and password field to allow them to login.

R2: If a user has not yet created an account, then there should be a Create an Account button underneath the form that will allow them to create an account. There should be validation for checking that the password is at least 8 characters long and contains at least one number and uppercase character. There should also be a logout button on the home page

R3: The app should pull from a database that provides a list of all cities in the United States and it should allow them to search a city and add it to their personal favorites list\

R4: Add dark/light mode theme customization for users when creating their account in the form of a toggle switch.

R5: When a user clicks on a city in their favorites list, it should bring them to a page which displays weather information for that city pulled from a weather API and a map of the city using the google maps api

B. Fully dressed use cases

1. Creating an Account Use Case
Primary actor: User

1.1 Preconditions

Open app and create a new account

1.2 Main Flow

Triggers: User submits a “Create New Account” form

[S1] User submits a username, password, and theme color to the app
[S2] The app verifies that the username and password are valid [E1]
[S3] The app stores the user’s login information in its authentication database for future logins.
[S4] The app redirects the user to the main home screen using the inputted theme color as the theme of the app.

1.3 Sub-Flows

[S1] … [S2] … [S3] … [S4] …
[S1] … [S2] … [E1] … [S1] …

1.4 Alternative Flows

[E1] Username or password is invalid. The app prompts user to re-enter a valid username and password. [S1]

2. Login into Account Use Case
Primary actor: User

1.1 Preconditions

Successfully have created an account

1.2 Main Flow

Triggers: User logins into app with their username and password

[S1] User logins into app with their username and password
[S2] The app verifies that the username and password are valid and in the authentication database [E1]
[S3] The app redirects the user to the main home screen.

1.3 Sub-Flows

[S1] … [S2] … [S3] …
[S1] … [S2] … [E1] … [S1]…

1.4 Alternative Flows

[E1] Username or password is incorrect. The app prompts user to re-enter their username and password. [S1]

3. User Permissions
Primary actor: User

1.1 Preconditions

Successfully have logged in the created account

1.2 Main Flow

Triggers: User installs the app for the first time

[S1] The app asks the user whether to activate the SIM card services for using cellular data

[S2] User permits to activate SIM card services for using cellular data [E1][E2]

[S3] The app asks the user whether to activate the locating services permission

[S4] User permits to activate the locating services permission [E3] [E4]

1.3 Sub-Flows

[S1] … [S2] … [S3] … [S4] …

[S1] … [E1] … [E2] … [S3] … [E3] … [E4] …

1.4 Alternative Flows

[E1] User refuses to activate SIM card services

[E2] The app will only connect to the authenticated WIFI

[E3] User refuses to activate SIM card services

[E4] Not able to get device's physical location on the map

4. Change Password

Primary actor: User

1.1 Preconditions

Successfully have logged in the user account and connected to the network

1.2 Main Flow

Triggers: User clicks the change password button

[S1] The app sends an email to the user's email address

[S2] User clicks the link associated with the email address and enter the current password

[S3] The app verifies that the password is valid [E1]

[S4] User are required to enter the new password twice

[S5] The app verifies the passwords are match [E2]

[S6] The app stores the user's login information in its authentication database for future logins

[S7] The app redirects the user to the login page

1.3 Sub-Flows

[S1] … [S2] … [S3] … [S4] … [S5] … [S6] … [S7] …

[S1] … [S2] … [S3] … [E1] …[S2] … [S3] … [S4] … [S5] … [E2] … [S4] … [S5] … [S6] … [S7] ...

1.4 Alternative Flows

[E1] Password is invalid. The app prompts user to re-enter a valid password [S2]

[E2] Password is not match. The app prompts user to re-enter the seconds password [S4]

5. Weather service

Primary actor: User

1.1 Preconditions

Successfully have logged in the user account and connected to the network

1.2 Main Flow

Triggers: The app detects the user has arrived at a new location

[S1] The app prompts user if allowed to connect to a local weather server
[S2] User is required to give the permission to connect to the local weather server [E1]
[S3] The app enables the weather services for this location

1.3 Sub-Flows

[S1] … [S2] … [S3]
[S1] … [S2] … [E1] … [E2]

1.4 Alternative Flows

[E1] User refuses to give the permission to connect to the local weather server [E2]
[E2] The app disables the weather services for this location

Some other potential fully dressed use cases

Add Cities
Primary actor: User

1.1 Preconditions

Successfully have logged in the user account and connected to the network

1.2 Main Flow

Triggers: User clicks the '+' button
[S1] The app prompts user a U.S. cities list to shoose
[S2] User select the specific city he/she wants to add
[S3] The app stores the user's saved locations in its database
[S4] New cities will show on the dashboard

1.3 Sub-Flows

[S1] … [S2] … [S3] … [S4]

1.4 Alternative Flows

Delete Cities
Primary actor: User

1.1 Preconditions

Successfully have logged in the user account and connected to the network

1.2 Main Flow

Triggers: User swipes left on tab of a specific city that wants to delete
[S1] The right side of the tab that user wants to delete shows a red block: 'Delete'
[S2] User click the 'Delete' block
[S3] The city will be removed from its database
[S4] The city will not be shown on the dashboard

1.3 Sub-Flows

[S1] … [S2] … [S3] … [S4]

1.4 Alternative Flows

Map-based User Interface
Primary actor: User

1.1 Preconditions

Successfully have logged in the user account and connected to the network

1.2 Main Flow

Triggers: User clicks on the specific city tab

[S1] The app shows the map of the selected city

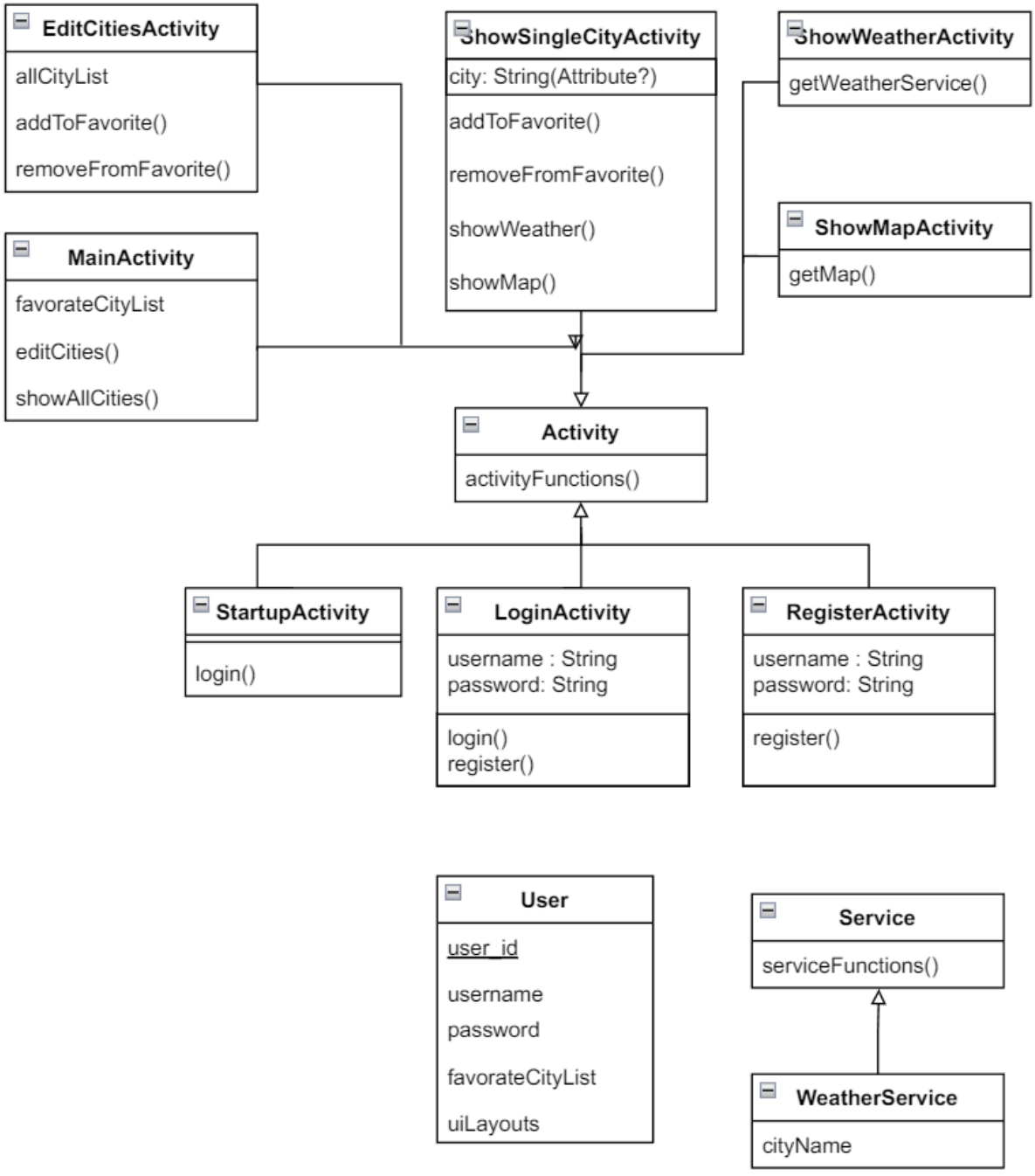
[S2] The app shows the weather layer of two-hour period on the map

1.3 Sub-Flows

[S1] … [S2] …

1.4 Alternative Flows

C. Class diagram



D. Component Transition Graph