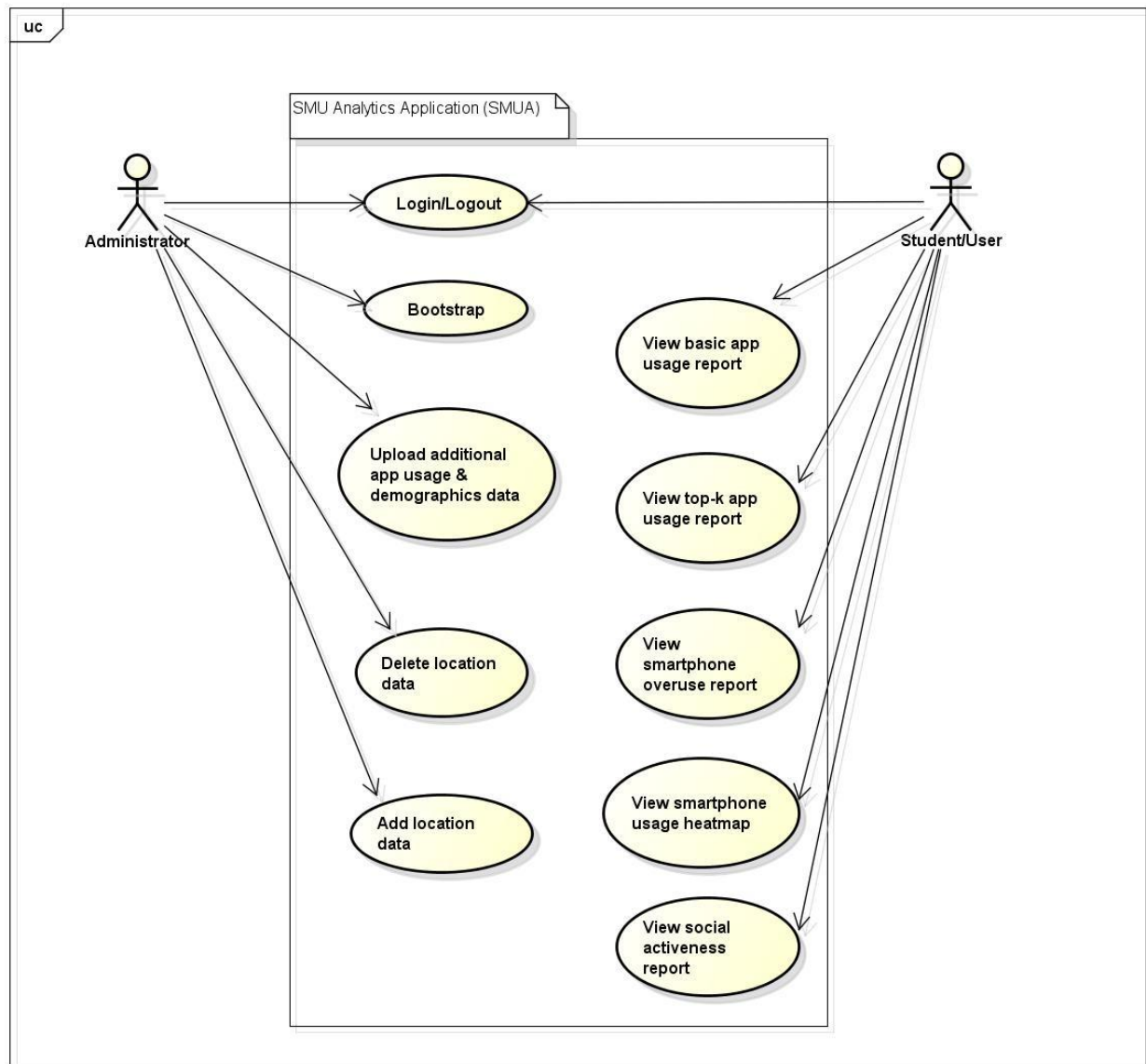


Overview of SMUA Use Case Diagram



Overview of SMUA Use Case Diagram Descriptions

Use Case	Description
Login	The login page will allow users to gain control to access SMU Analytical Application (SMUA). The login page requires users' Email ID and Password.
Logout	The logout page will direct users to the login page.
Bootstrap	Accessible by administrators. An admin page that allows administrators to populate the data for SMUA.
View basic app usage report	This use case allows user to view the basic app usage reports of SMUA. This functionality breaks down the report into usage time category, usage time category and demographics, app category and Diurnal pattern of app usage time.
View top-k app usage report	This use case allows user to view the top-k app usage reports of SMUA. This functionality breaks down the report into top-k most used apps, top-k students with most app usage, top-k schools with most app usage.
View smartphone usage heatmap	The smartphone usage heatmap allows user to view the density of people occupying in the SIS building at a particular floor and time.
View social activeness report	This use case allows user to view the social activeness reports of SMUA based on social communication app usage and physical grouping.
Add location data	This use case allows administrators to bootstrap the SMUA with new location data of students.
Delete location data	This use case allows administrator to delete a subset of data which could cause undesirable bias to the analysis while bootstrapping and/or using a web UI. All the subsequent queries after the deletion must return the results without including the deleted data.
Upload additional app usage report	This use case allows administrator to upload additional data in SMUA.

Use Case: Login/Logout for Administrator



Description

The login page will allow administrator to gain control to access the SMU Analytical Application (SMUA)

Business Logic

1. Administrator can login to the SMUA Application with Email ID and Password
2. Administrator clicks on the login button.
3. SMUA Application will validate the following:
 - Email ID
 - Password
4. Administrator clicks on the logout button
5. SMUA application directs the administrator back to the login page

Upon successful authentication, admin is granted access to the SMUA Application and is directed to the Admin Page which contains admin functions.

In the case of unsuccessful authentication, SMUA application will display an error message; “You are not authorized to use this page” and be directed back to the login page.

Use Case: Login/Logout for Student



Description

The login page will allow student to gain control to access the SMU Analytical Application (SMUA)

Business Logic

1. Student can login to the SMUA Application with Email ID and Password
2. Student clicks on the login button.
3. SMUA Application will validate the following:
 - Email ID
 - Password
4. Student clicks on the logout button
5. SMUA application directs the student back to the login page

Upon successful authentication, student is granted access to the SMUA Application and is directed to the Home Page.

In the case of unsuccessful authentication, SMUA application will display an error message; “Invalid Email ID or Password” and directed back to the login page.

Use Case: Bootstrap for Administrator



Description

This use case allows administrators to populate the data for the SMUA Application.

Business Logic

1. Database is cleared upon every bootstrap execution.
2. Administrator clicks on the “Choose File” button from the Admin Page to upload the file.
3. Each file in being process in chronological order and each entry will be stored into the database.
4. Upon successful validation, a JSON success response will be shown.
5. Upon failure, there will be a JSON error response.

Functional specification

All entries are to be trimmed for whitespace.