

# IS203 Software Engineering Technical Documents

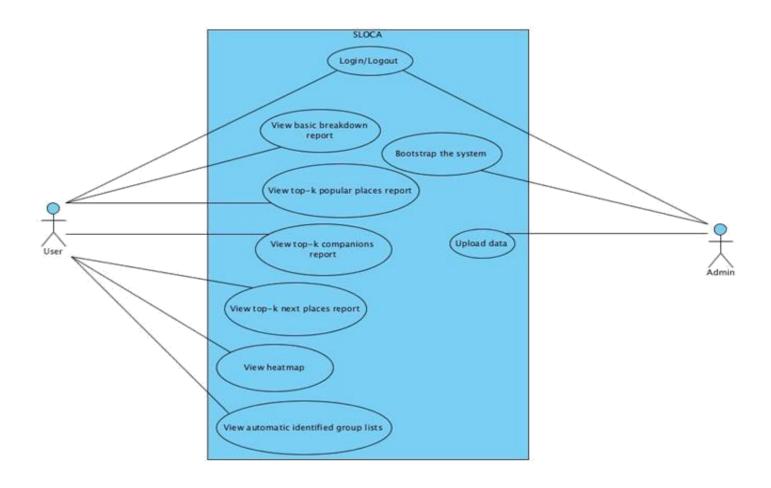
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### **Table of Contents**

1. Use Case Diagram	3
2. Sequence Diagram	5
2.1. Login	
2.2. Logout	6
2.3. Heatmap	6
2.4. Basic Location Report	7
2.5. Automatic Group Detection	8
2.6. Bootstrap Initialize	9
2.7. Bootstrap Update	10
3. Class Diagram	11
4. Logical Diagram	12

## 1. Use Case Diagram

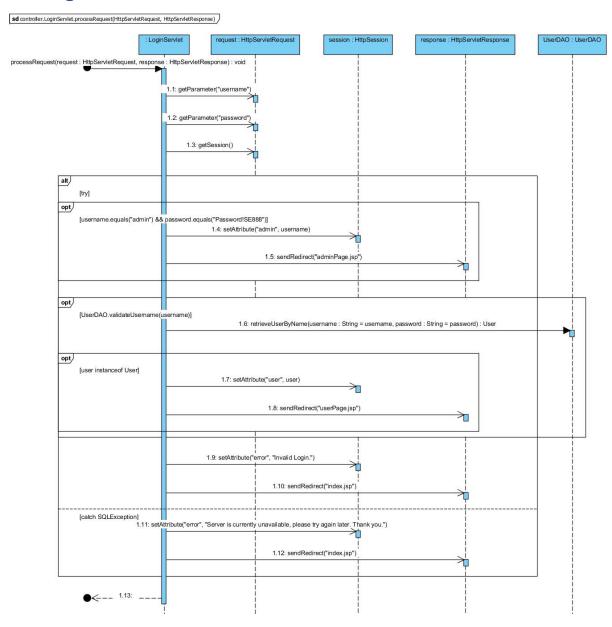


## **Use Case Description**

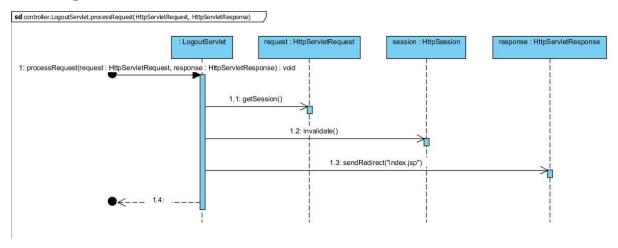
Function	Description
Login/Logout	Allows the admin and user to access and exit the web page
Basic Breakdown Report	Shows the breakdown of students in the SIS building by their year from 2013 to 2017, gender and school
Top-K Popular Places	Shows the most popular place, which is determined by the number of people in SIS at a specific time
Top-K Companion	See top-k other users who were co-located with a specified user (using MAC address) in a specified query window
Top-K Next Places	Shows the top-k next popular places that users located at place A are likely to visit in the next 15 minutes
Heatmap	Allow user to view crowd density at a specified floor in the SIS building, at a particular data and time
Automatic Identified Group List	Discover potential groups in SIS building at a given time/date based on users' location traces
Bootstrap	Allows the admin to upload new data into the web page
Upload	Allows the admin to update data into the web page

#### 2. Sequence Diagram

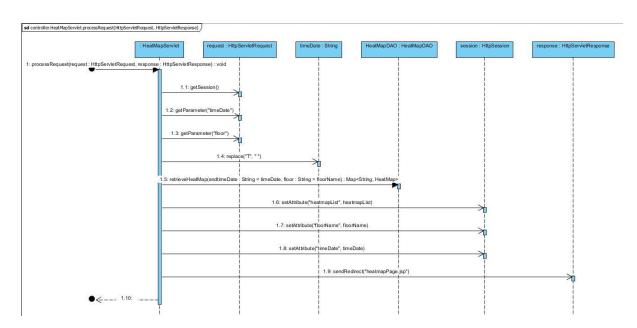
## 2.1. Login



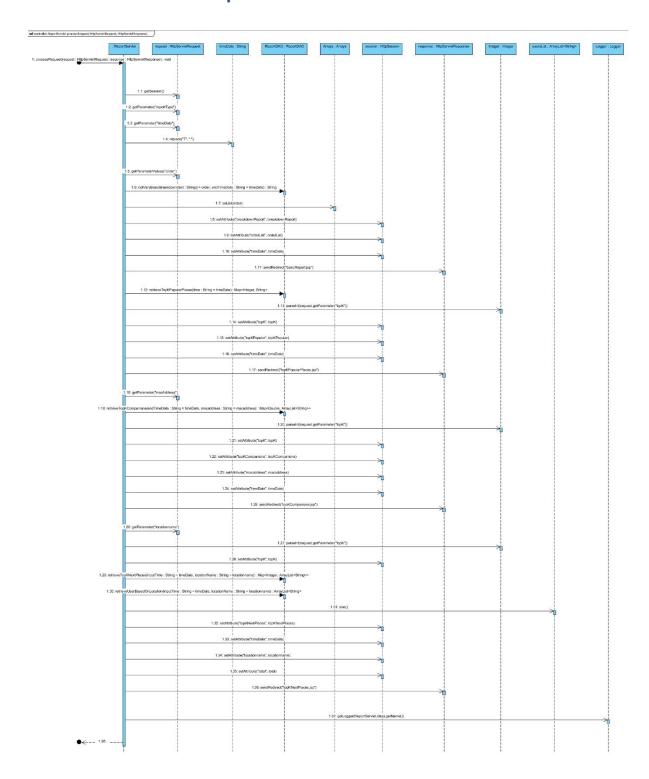
#### 2.2. Logout



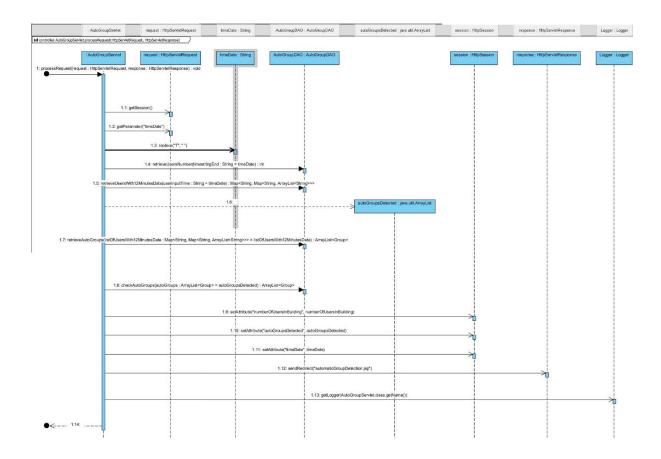
#### 2.3. Heatmap



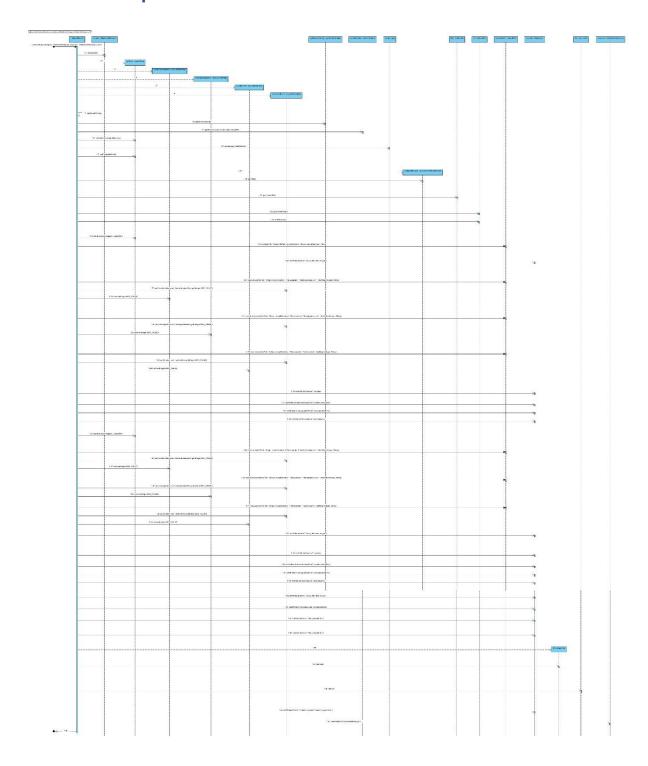
## 2.4. Basic Location Report



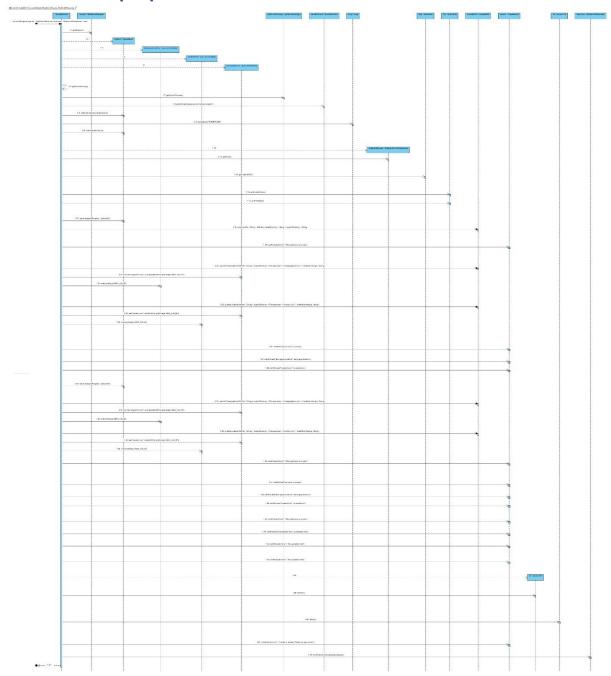
## 2.5. Automatic Group Detection



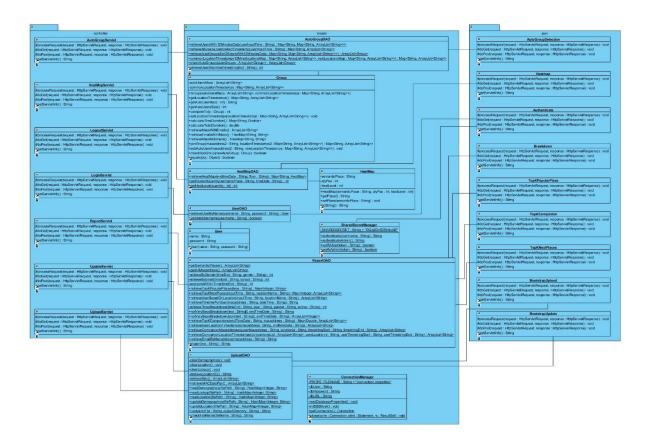
## 2.6. Bootstrap Initialize



## 2.7. Bootstrap Update



## 3. Class Diagram



## 4. Logical Diagram

