

**IS203 Software Engineering**

**Technical Documents**

G7T8 ~888~

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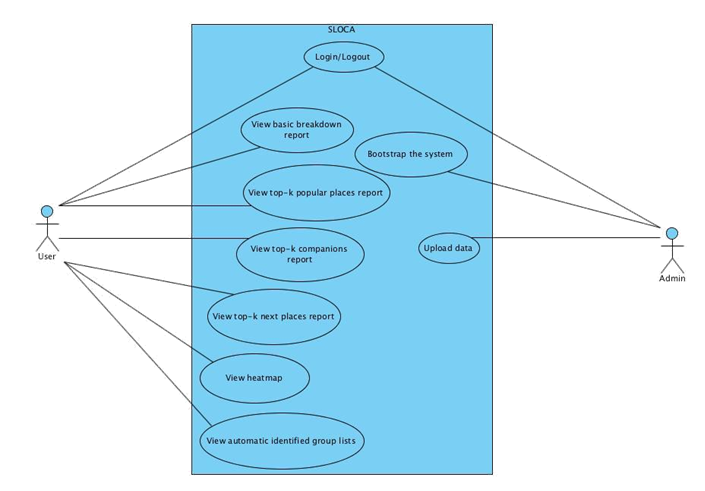
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# **1. Use Case Diagram**

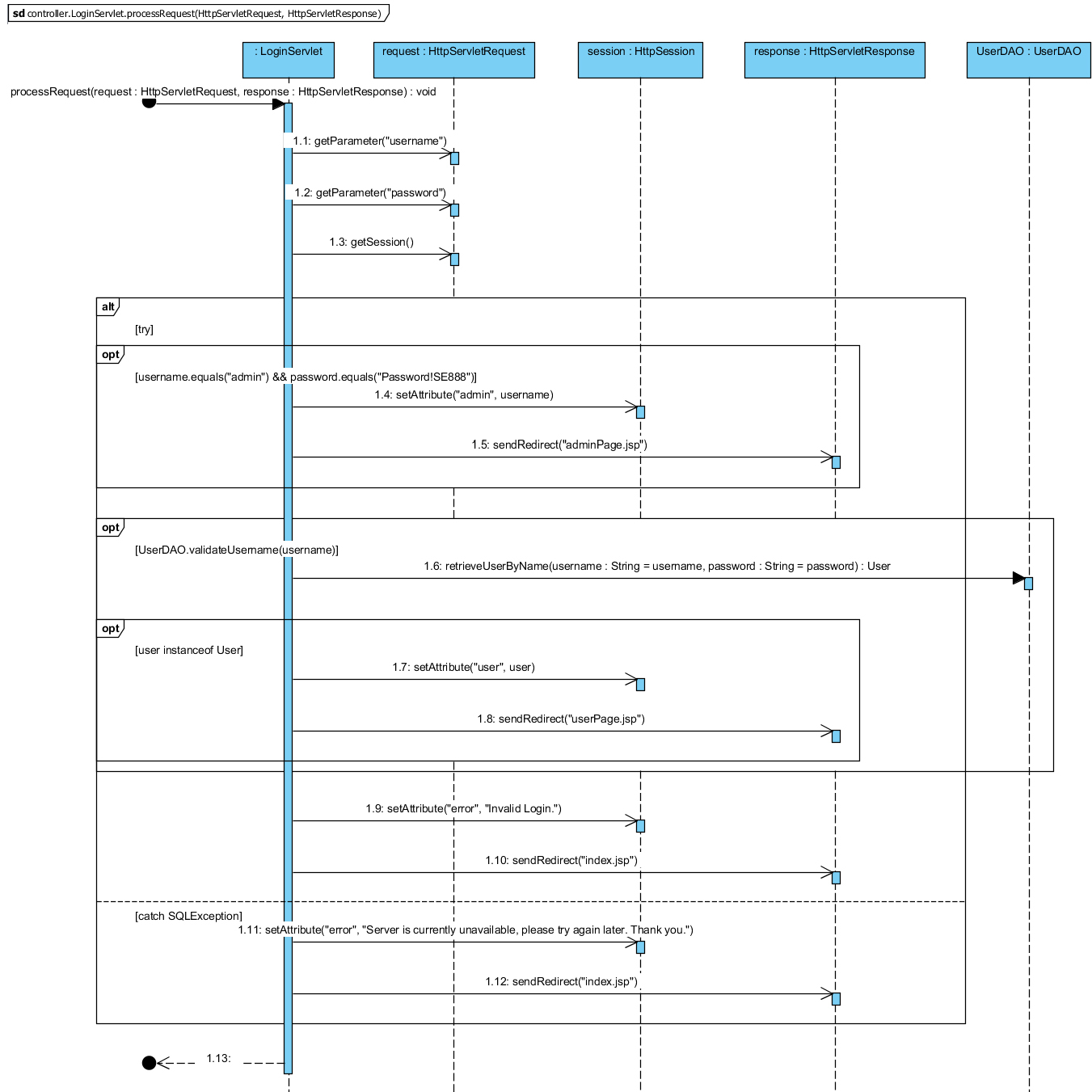
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|  |  |
| --- | --- |
| Function | Description |
| Login/Logout | Allows the admin and user to access and exit the web page |
| Basic Breakdown Report | Shows the breakdown of students in the SIS building by their year from 2013 to 2017, gender and 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 |

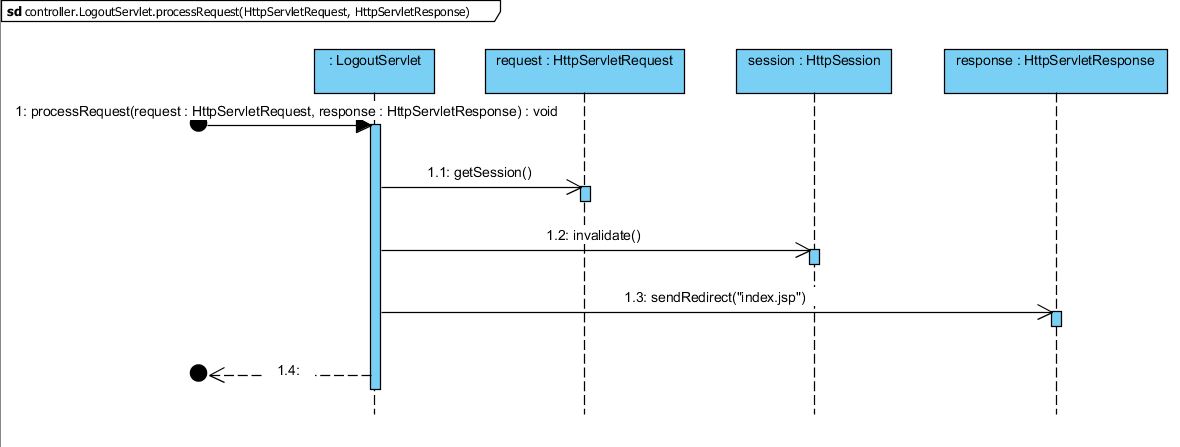
**Use Case Description**

# **2. Sequence Diagram**

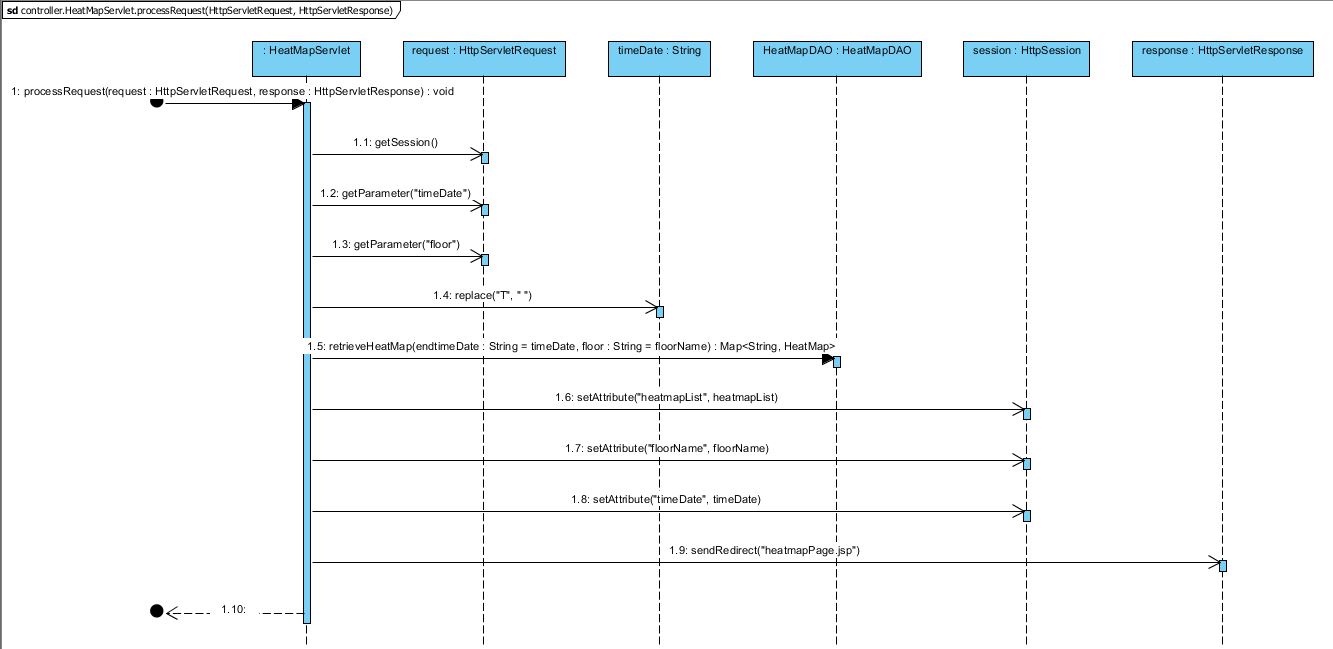
## **2.1. Login**



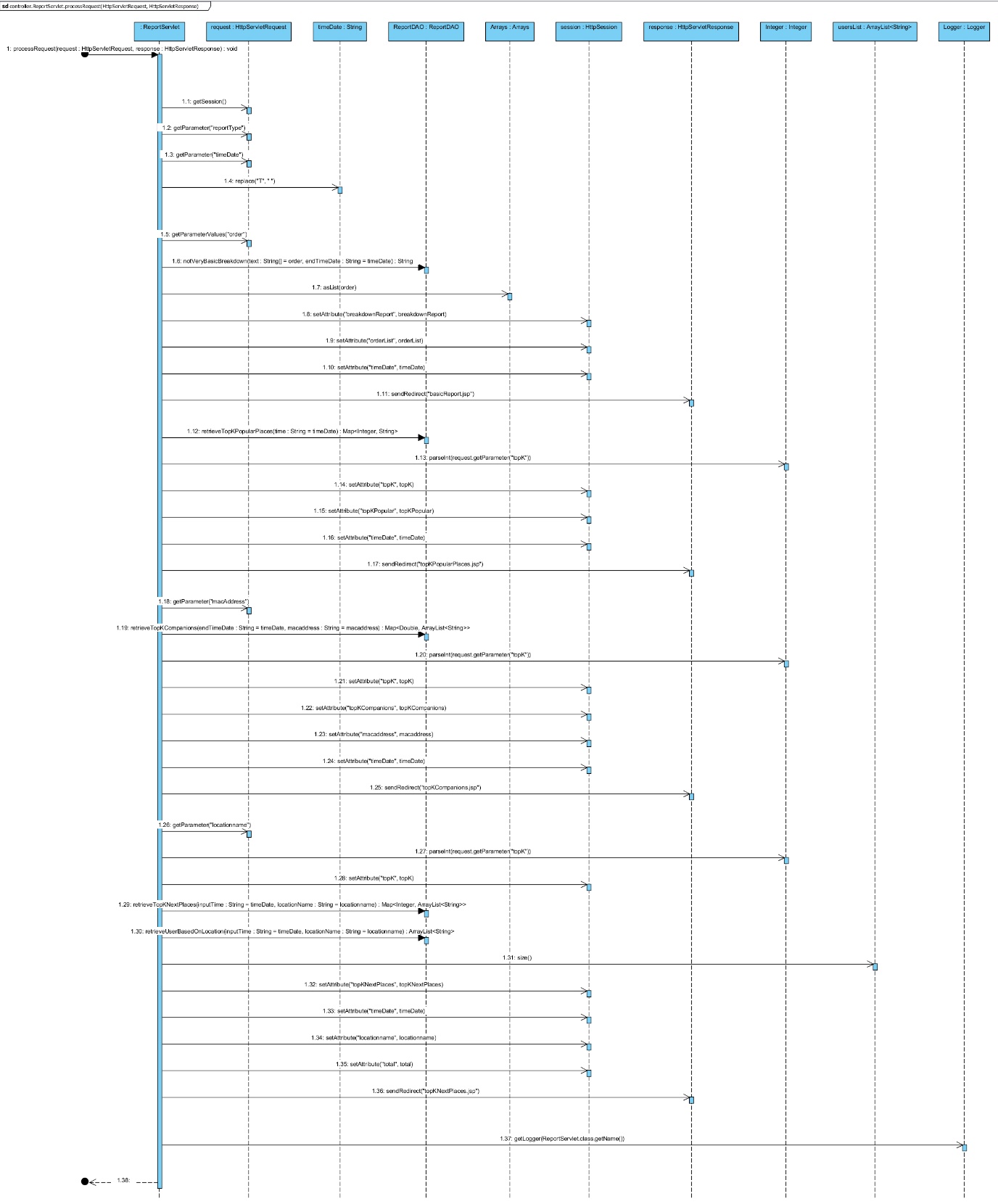
## **2.2. Logout**



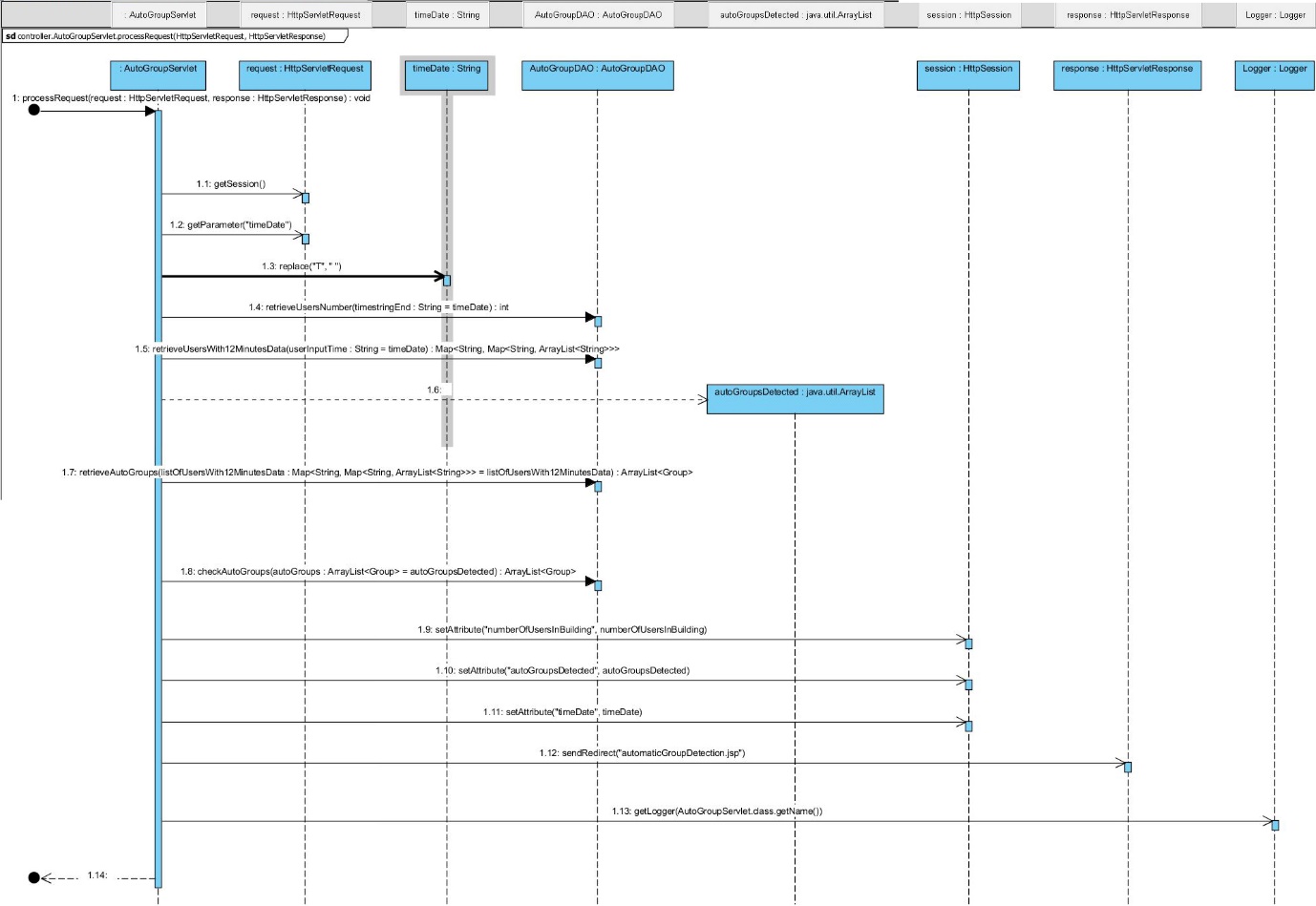
## **2.3. Heatmap**



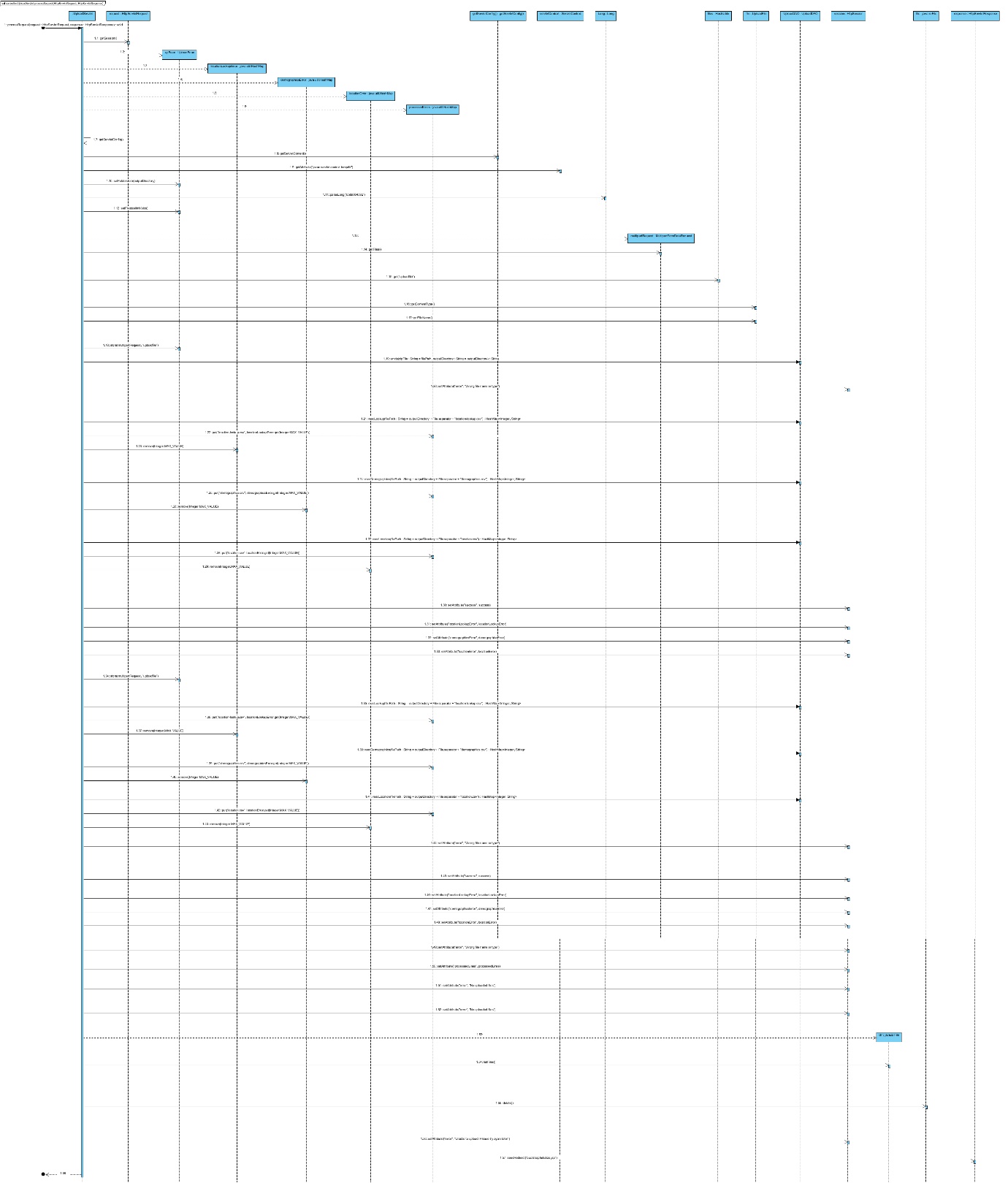
## **2.4. Basic Location Report**



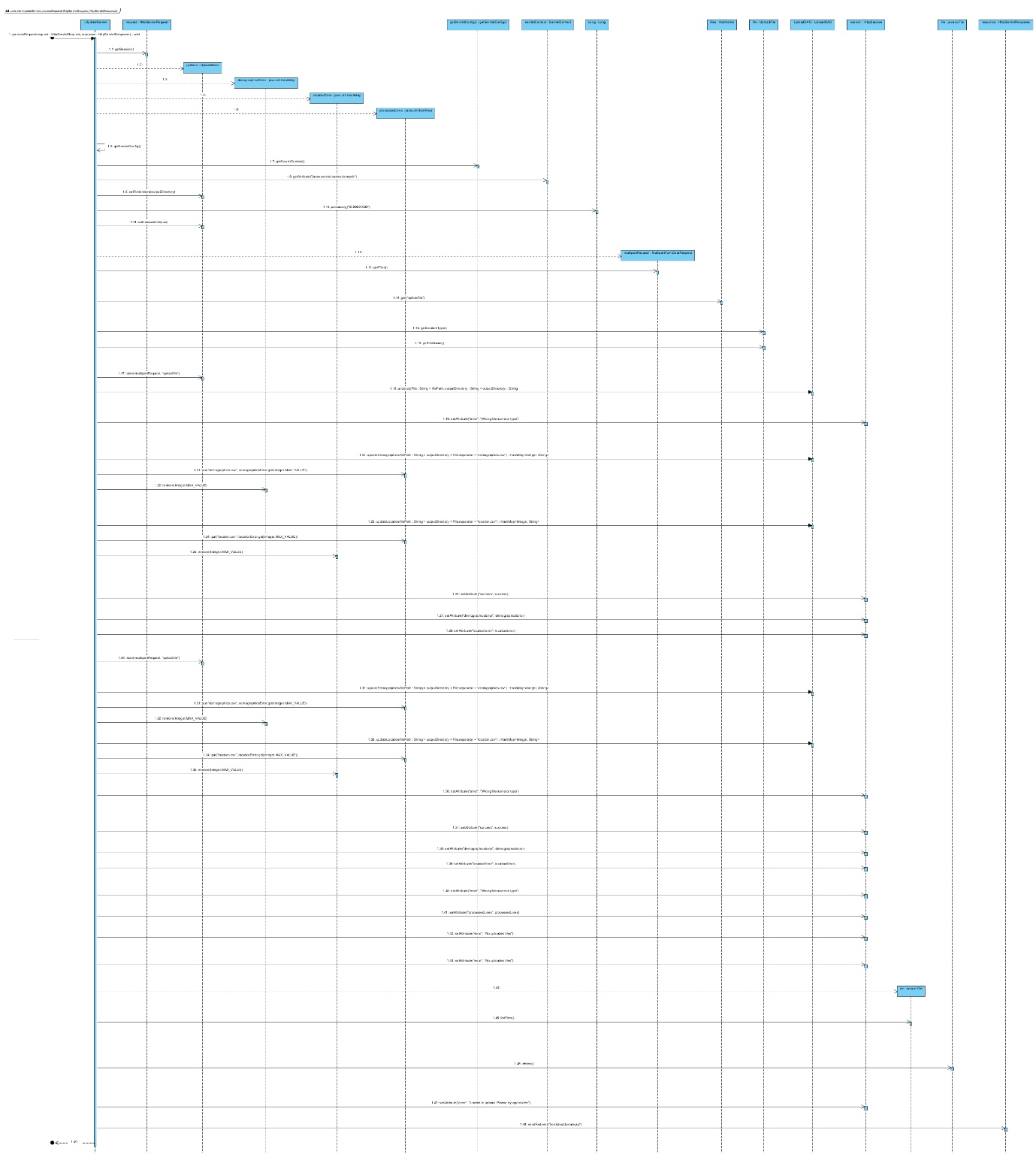
## **2.5. Automatic Group Detection**



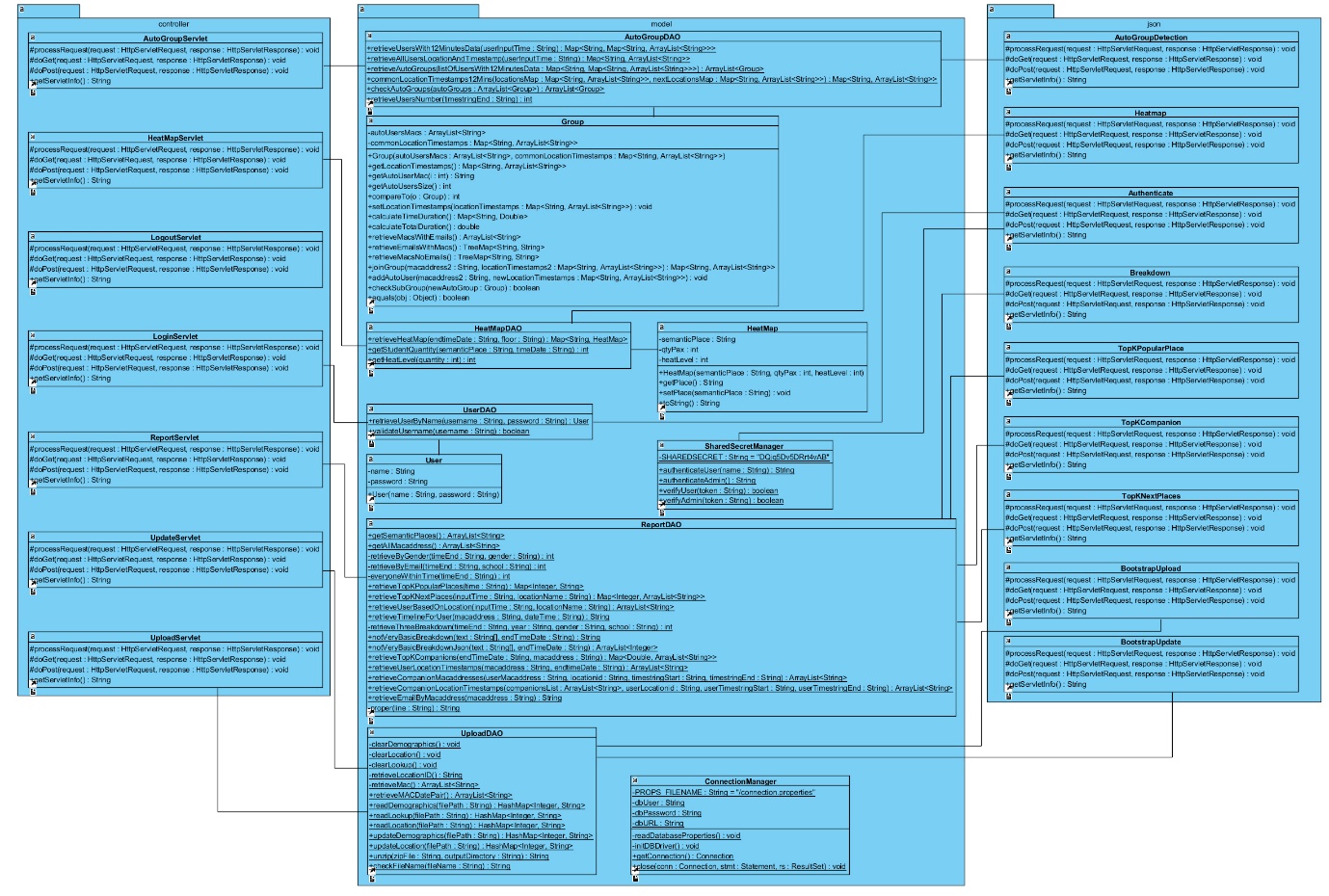
## **2.6. Bootstrap Initialize**



**2.7. Bootstrap Update**



# **3. Class Diagram**



# **4. Logical Diagram**

