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K-MAINTENANCE

Swe215 project - Submission 3

HAITHAM AL-SAEED
SALMAN AL-GHAMDI
HASHIM AL-GHAMDI
SALEM BAMUKHIER

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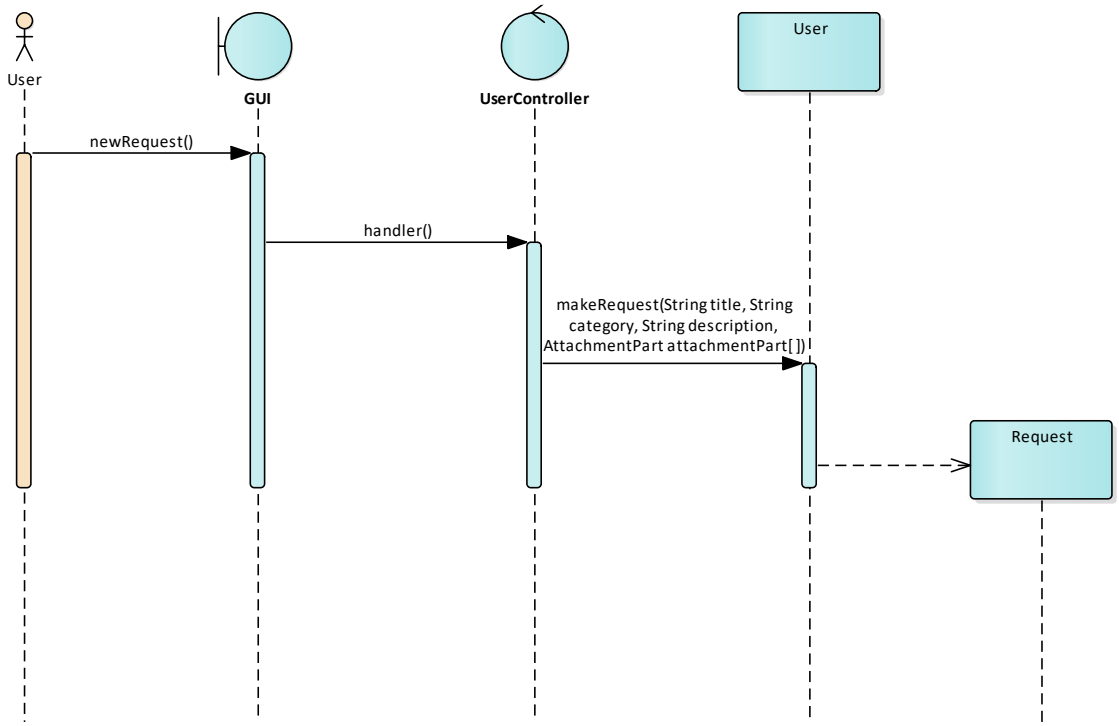
Analysis Models

a. Interaction Diagrams

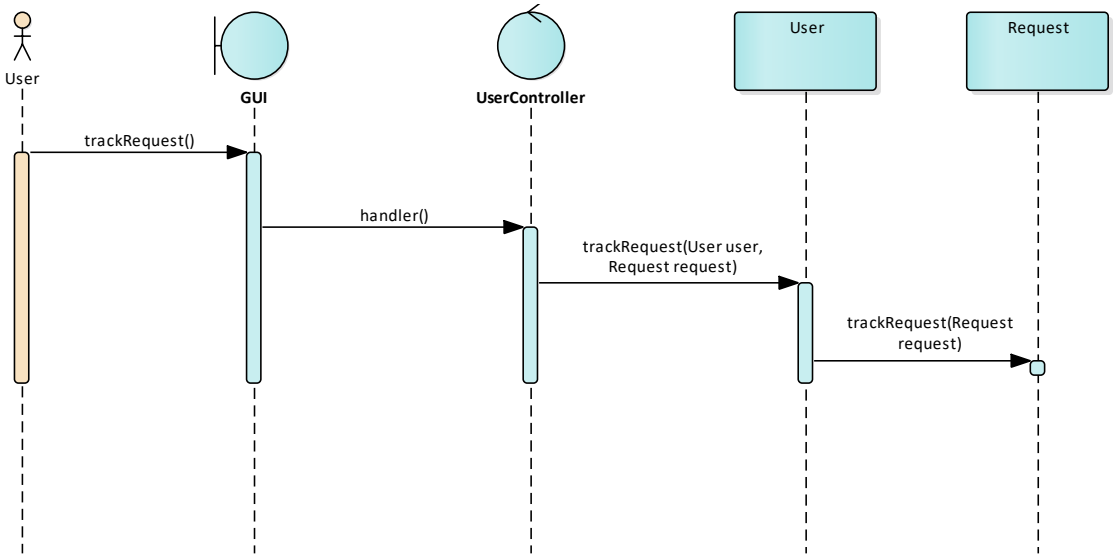
The team chose 4 use cases and made their sequence diagrams.

i. Make Request diagram:



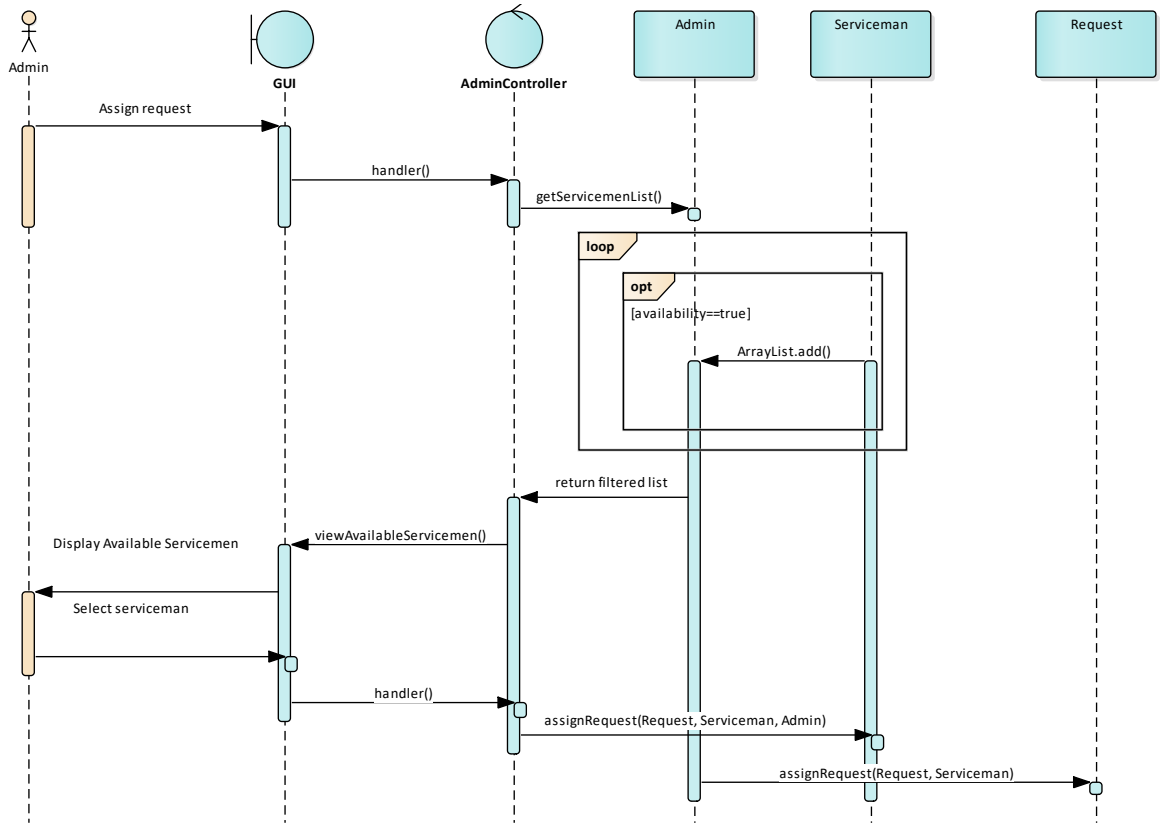
INTERACTION MESSAGES
1.0 'newRequest' from 'User' sent to 'GUI'. Synchronous Call.
1.1 'handler' from 'GUI' sent to 'UserController'. Synchronous Call.
1.2 'makeRequest' from 'UserController' sent to 'User'. Synchronous Call
1.3 '' from 'User' sent to 'Request'. Synchronous Call.

ii. Track Request diagram:



INTERACTION MESSAGES
1.0 'trackRequest()' from 'User' sent to 'GUI'. Synchronous Call.
1.1 'handler()' from 'GUI' sent to 'UserController'. Synchronous Call.
1.2 'trackRequest(User user, Request request)' from 'UserController' sent to 'User'. Synchronous Call.
1.3 'trackRequest(Request request)' from 'User' sent to 'Request'. Synchronous Call. Returns void.

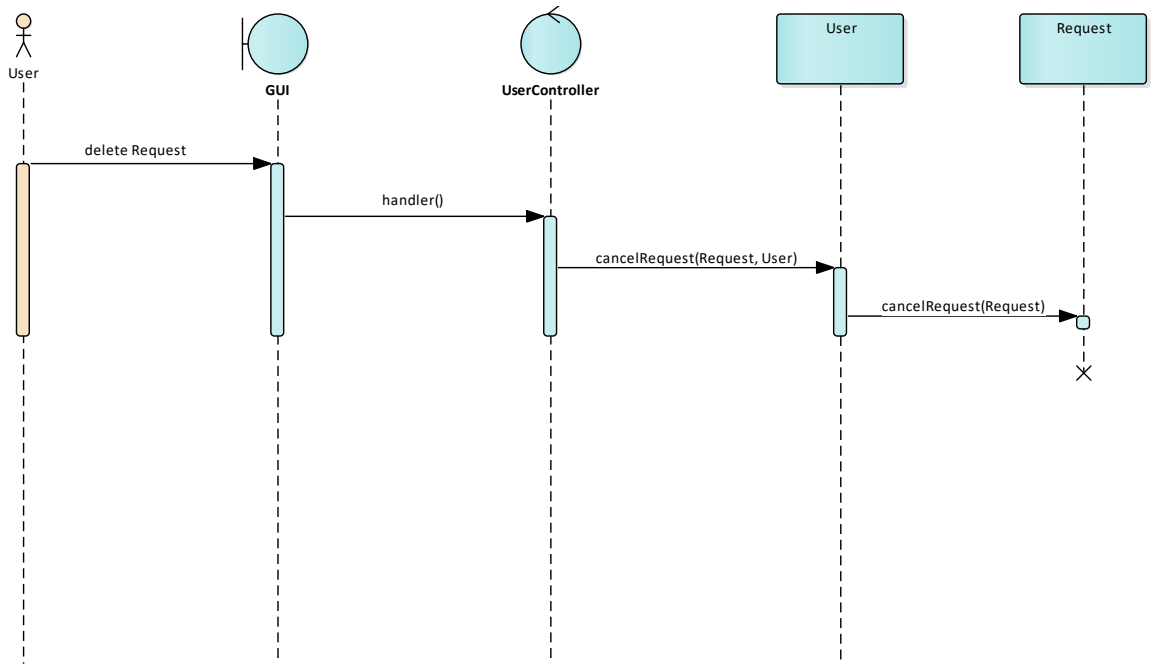
iii. Assign Service diagram:



INTERACTION MESSAGES
1.0 '' from 'Admin' sent to 'GUI'. Synchronous Call.
1.1 'handler' from 'GUI' sent to 'AdminController'. Synchronous Call.
1.2 'getServicemenList' from 'AdminController' sent to 'Admin'. Synchronous Call.
1.3 'ArrayList.add' from 'Serviceman' sent to 'Admin'. Synchronous Call.
1.4 '' from 'Admin' sent to 'AdminController'. Synchronous Call.

1.5 'viewAvailableServicemen' from 'AdminController' sent to 'GUI'. Synchronous Call. Returns void.
1.6 '' from 'GUI' sent to 'Admin'. Synchronous Call.
1.7 '' from 'Admin' sent to 'GUI'. Synchronous Call.
1.8 'handler' from 'GUI' sent to 'AdminController'. Synchronous Call.
1.9 'assignRequest' from 'AdminController' sent to 'Serviceman'. Synchronous Call.
1.10 'assignRequest' from 'Admin' sent to 'Request'. Synchronous Call.

iv. Cancel Request diagram:

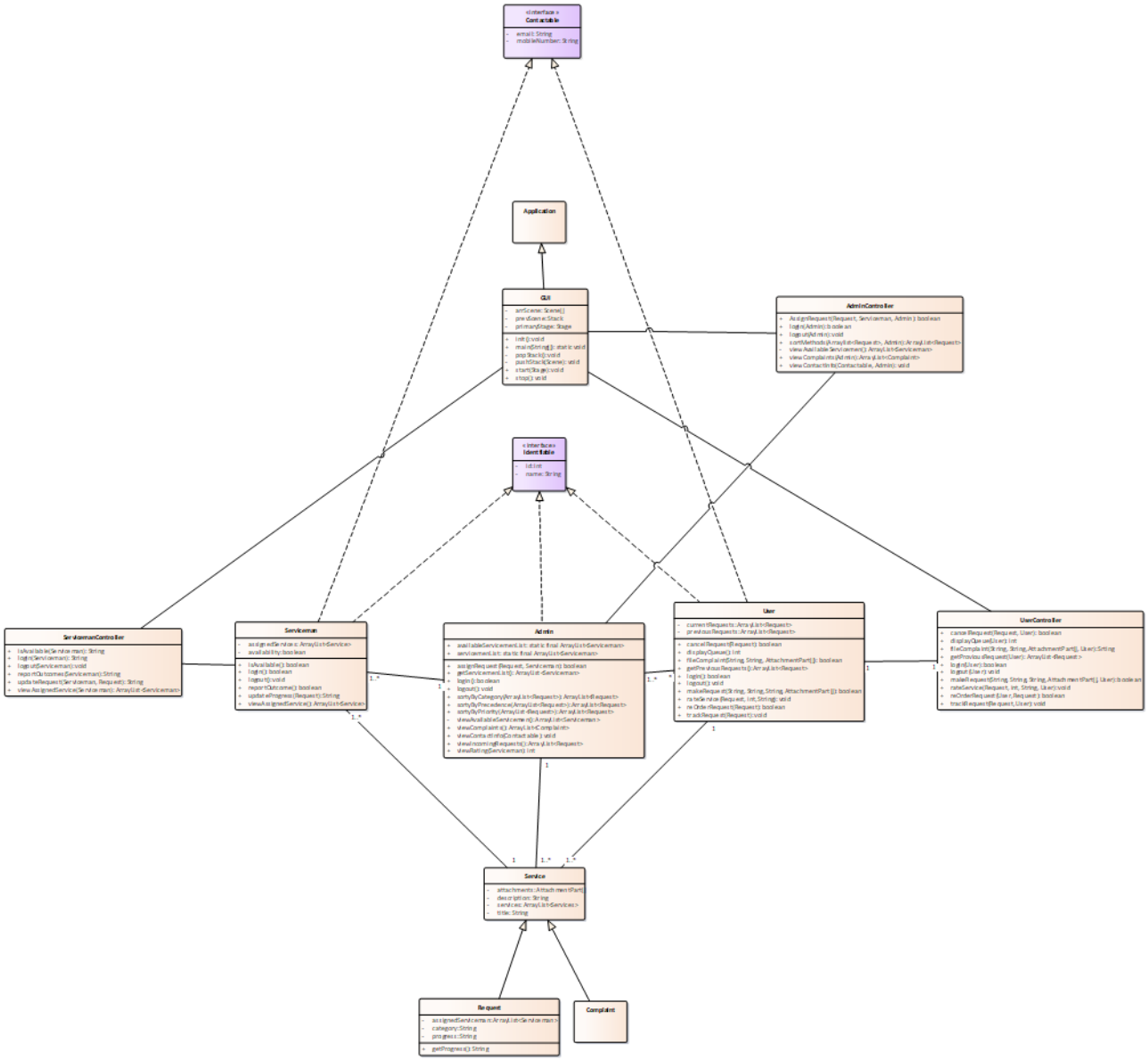


INTERACTION MESSAGES
1.0 '' from 'User' sent to 'GUI'. Synchronous Call.
1.1 'handler' from 'GUI' sent to 'UserController'. Synchronous Call.
1.2 'cancelRequest' from 'UserController' sent to 'User'. Synchronous Call.
1.3 'cancelRequest' from 'User' sent to 'Request'. Synchronous Call.

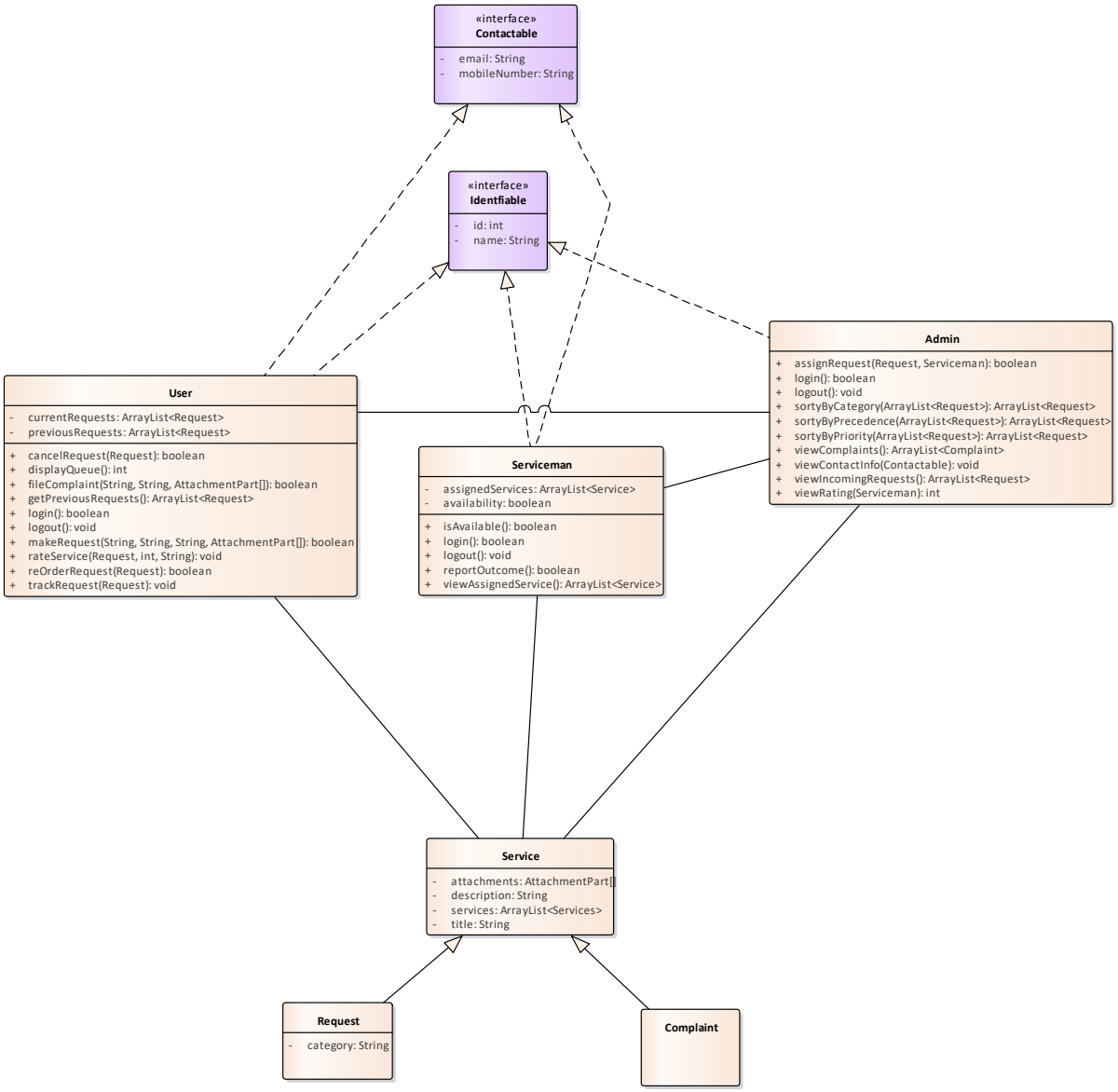
b. Class Diagrams

The team used Model–View–Controller (MVC) software design pattern to design the class diagrams.

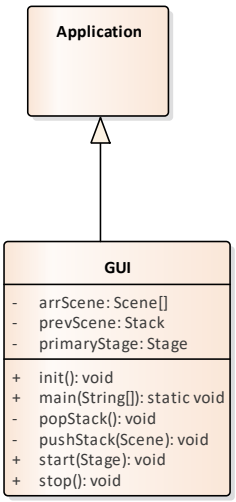
i. The whole system class diagram:



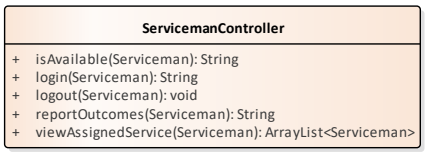
ii. Model package diagram:

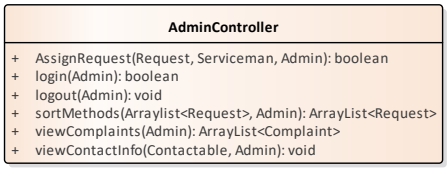


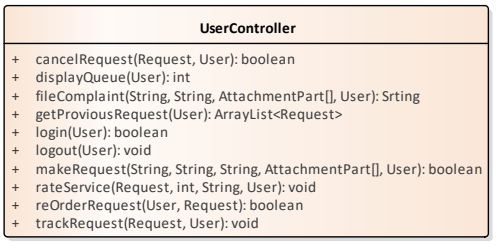
iii. View package diagram:



iv. Controller package diagram:







c. *Assumptions*

i. The team assumed that the ID used for users will not exceed 9 digits (i.e. the integer limit).

ii. The team assumed that verifying credentials will be done by KFUPM system, so no need for including it in the component designed.

iii. The team assumed that the user interface will be implemented using JavaFX, so the View package was designed based on JavaFX.