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#### About:

The project is to design and implement a sub component of the House Mate System known as the House Mate Entitlement Service. The Entitlement Service .

#### Contents:

See JavaDoc for details on the following classes and their methods:

- Gatekeeper
- AccessToken
- Importer
- Permission
- Resource
- ResourceRole
- Role
- RoleLibrary
- User
- UserLibrary
- VoiceSog
- AccessDeniedException
- AuthenticationException
- InvalidAccessTokenException

#### Execution:

Build: After unzipping the file, open the terminal window and cd to the directory that the project was placed in. Then compile the program with the following command:

```
javac cscie97/asn4/housemate/model/*.java cscie97/asn4/housemate/controller/*.java  
cscie97/asn4/housemate/entitlement/*.java cscie97/asn4/housemate/test/*.java
```

Run: Use the command:

```
java -cp . cscie97.asn4.housemate.test.TestDriver housesetup2.txt
```

where housesetup2.txt is the data file with all the commands.

#### Changes:

In the previous assignment, it mentioned that there was a problem show command returning extra information. After looking at the code I realized that it was updated so that it to do exactly that. In other words, if asking about the configuration of the room it would show the config of the appliances in that room as well. If asking for the configuration of the house then you will get the configuration of the rooms as well. However there was a small logic error that resulted in housing configuration being shown if asking about a room. A check has been added to keep the extra information of the home out.

#### Extras:

AN extra file has been provided in the zip file called UserList usr. It will upload a list of users with their name, password, user name, and type. These users are also added to the model so that resources can be added. Provided that you follow the syntax thats provided in the documentation, you can run your own file with the

following command:

```
java -cp . cscie97.asn4.housemate.test.TestDriver housesetup2.txt file_name.usr
```

The project still contains the file syntax.txt as it still contains interactive mode as well as default.rule. Interactive mode can be enabled by using any of the following commands:

```
java -cp . cscie97.asn4.housemate.test.TestDriver -i
```

```
java -cp . cscie97.asn4.housemate.test.TestDriver -i file_name.rule
```

```
java -cp . cscie97.asn4.housemate.test.TestDriver -i file_name.usr
```

```
java -cp . cscie97.asn4.housemate.test.TestDriver -i housesetup2.txt
```

```
java -cp . cscie97.asn4.housemate.test.TestDriver -i housesetup2.txt file_name.rule
```

```
java -cp . cscie97.asn4.housemate.test.TestDriver -i housesetup2.txt file_name.usr
```

```
java -cp . cscie97.asn4.housemate.test.TestDriver -i file_name.rule file_name.usr
```

```
java -cp . cscie97.asn4.housemate.test.TestDriver -i housesetup2.txt file_name.rule file_name.usr
```

However, the new interactive feature has been updated with a log in section that gives the user three tries before terminating the program. An admin user is initialized upon running the program and can be used to log in with the following user name and password:

User name: Master Controller

Password: alpha

### Log File:

The log file has been updated so that new user information gets recorded as well. As a security feature, this is not a good idea since the passwords are not encrypted. Improving the security regarding the entitlement service is something that's worth looking into should there be time. Also, the Gatekeeper class should be multi-threaded so that it can handle multiple users as well.

### Review:

Ashish Surana: most of the review material given was for clarification on what certain aspects of my design did. This helped me make sure that my documentation was clear enough to explain each part.

### Issues:

Running the program: it is possible that the run command will produce the following:

Error: Could not find or load main class -cp

This usually happens if you copy/pasted the command into the terminal. Simply type the command in and it should run.

#### Notes:

While a timeout token is present in AccessToken, this variable currently doesn't get used. However there are plans to see if a timeout method and counter can be implemented that will result in the user being logged off if they remain inactive for a certain period of time.