

IMPLEMENTATION REPORT OF RENTAL SYSTEM

(Link to the code : [SEN_2.28_FINAL_IMPLEMENTATION_CODES](#))

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Implemented Classes & Functionalities

- ***Class USER***

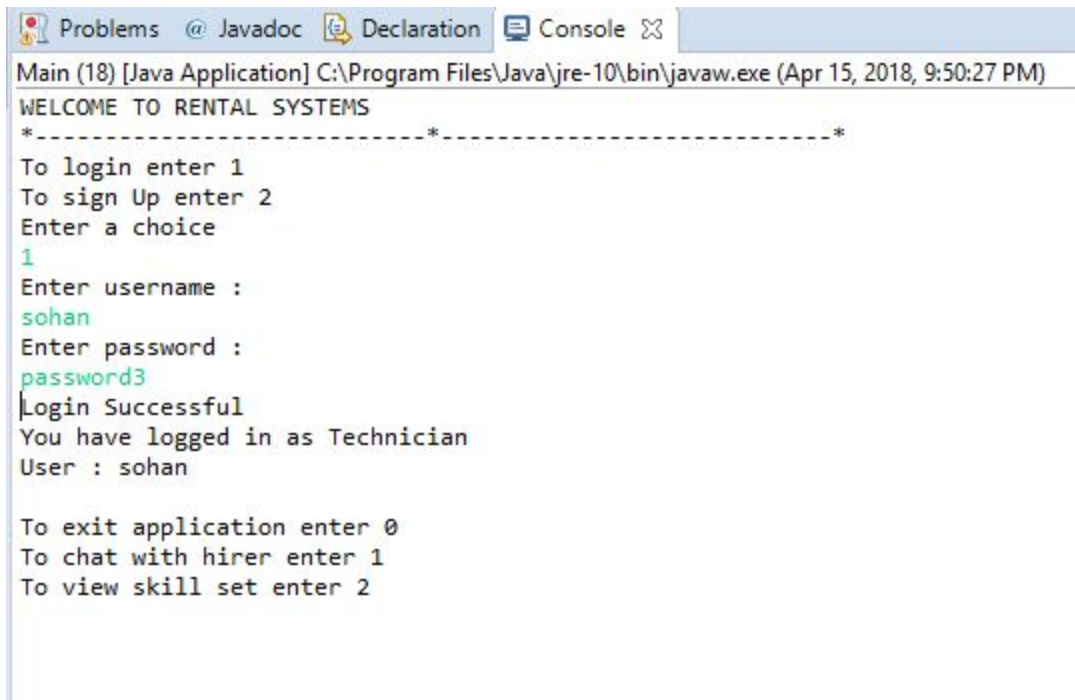
This class contains all the details of users. There are two main functionalities, Login and SignUp.

Login : With the help of this functionality, the user logs in the system. To login user needs to enter a username (unique) and password.

User will be shown the functionalities of Hirer / Owner / Technician accordingly.

SignUp : If a new wants to use the RENTAL SYSTEM, he/she is firstly asked to register in the system with the necessary details such as name,email-id,password,address etc. After entering all the required details, the user is successfully registered in the system.

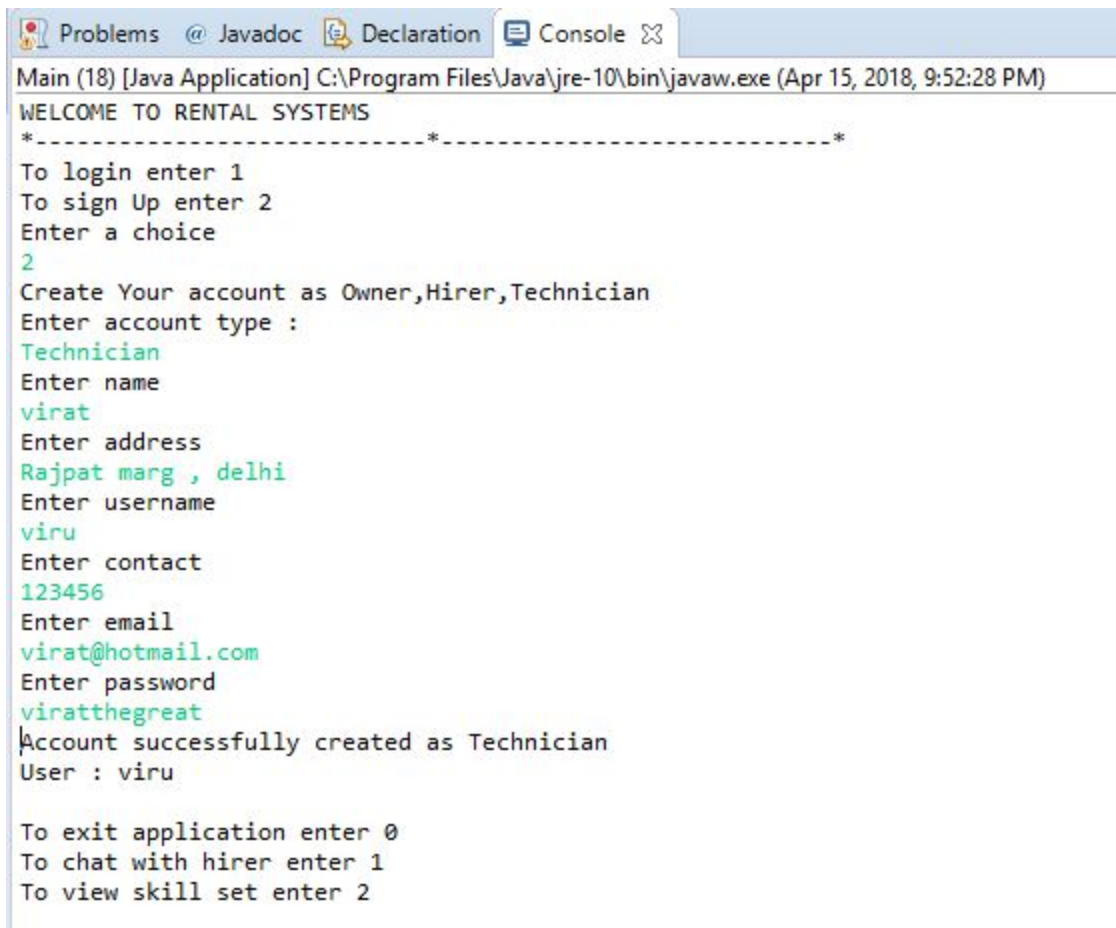
Login by user



```
Problems  @ Javadoc  Declaration  Console  ✕
Main (18) [Java Application] C:\Program Files\Java\jre-10\bin\javaw.exe (Apr 15, 2018, 9:50:27 PM)
WELCOME TO RENTAL SYSTEMS
*-----*-----*
To login enter 1
To sign Up enter 2
Enter a choice
1
Enter username :
sohan
Enter password :
password3
Login Successful
You have logged in as Technician
User : sohan

To exit application enter 0
To chat with hirer enter 1
To view skill set enter 2
```

SignUp of a new user



```
Problems @ Javadoc Declaration Console
Main (18) [Java Application] C:\Program Files\Java\jre-10\bin\javaw.exe (Apr 15, 2018, 9:52:28 PM)
WELCOME TO RENTAL SYSTEMS
*-----*
To login enter 1
To sign Up enter 2
Enter a choice
2
Create Your account as Owner,Hirer,Technician
Enter account type :
Technician
Enter name
virat
Enter address
Rajpat marg , delhi
Enter username
viru
Enter contact
123456
Enter email
virat@hotmail.com
Enter password
viratthegreat
Account successfully created as Technician
User : viru

To exit application enter 0
To chat with hirer enter 1
To view skill set enter 2
```

- **Class *HIRER***

This class extends user class and has 3 main functionalities.

Functionalities :

1. **Get Product List** : This function shows all the products that are available to hirer.

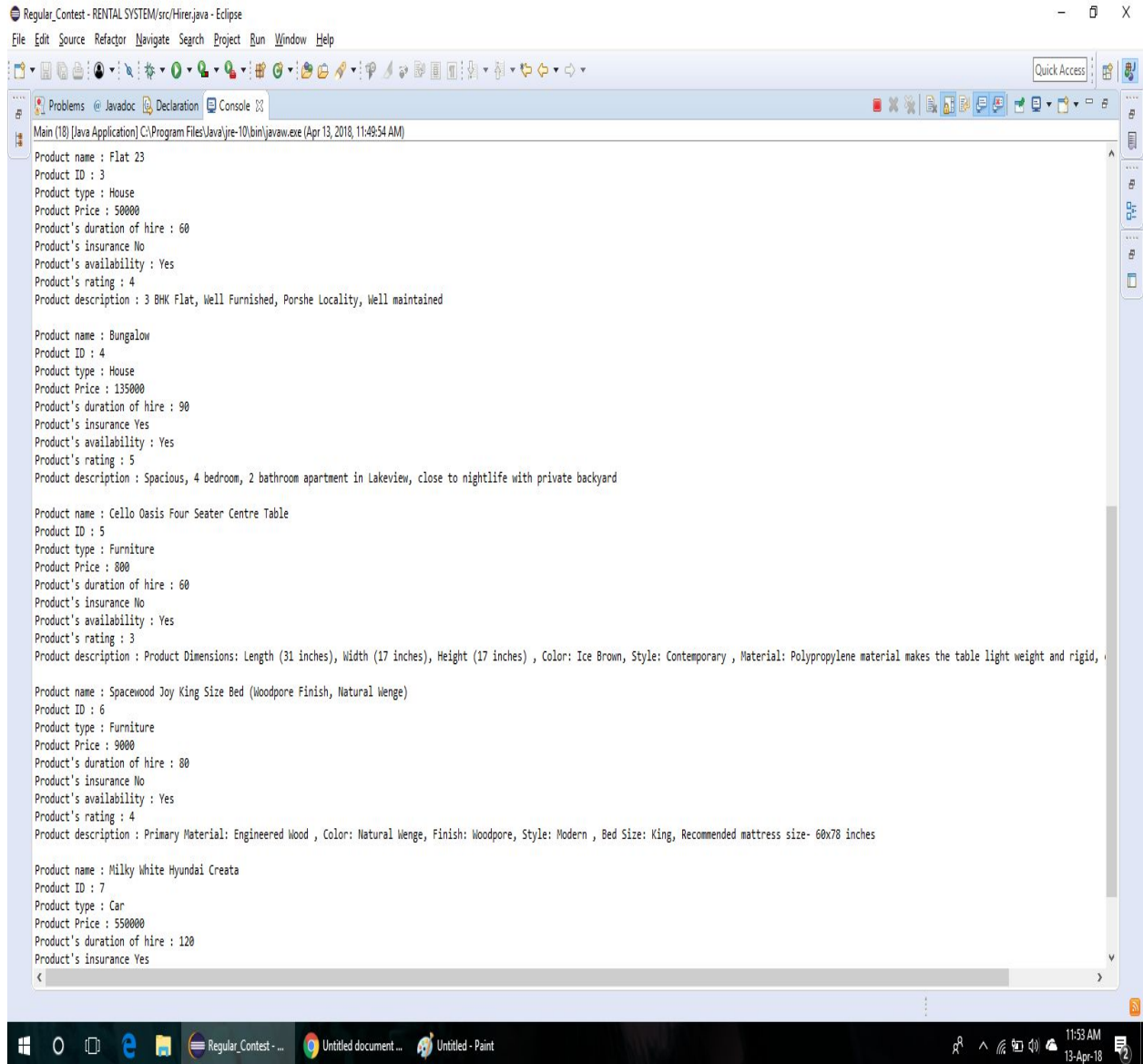
```
Problems @ Javadoc Declaration Console
Main (18) [Java Application] C:\Program Files\Java\jre-10\bin\javaw.exe (Apr 15, 2018, 8:59:58 PM)
WELCOME TO RENTAL SYSTEMS
*-----*
To login enter 1
To sign Up enter 2
Enter a choice
1
Enter username :
mohan
Enter password :
password2
Login Successful
You have logged in as Hirer
User : mohan
To exit application enter 0
To get Products List enter 1
To get Products according to a type enter 2
To enter a chat with Owner enter 3
To do payment enter 4
To view availability of Technician enter 5
*-----*
1
Products List
size 7
Product name : Red Ford Fiesta
Product ID : 1
Product type : Car
Product Price : 150000
Product's duration of hire : 20
Product's insurance Yes
Product's availability : Yes
Product's rating : 3
Product description : Petrol, 2014 Model, 80,000 kms driven, Good Condition

Product name : White Hyundai Verna
Product ID : 2
Product type : Car
Product Price : 450000
Product's duration of hire : 30
Product's insurance No
Product's availability : Yes
Product's rating : 4
Product description : Diesel, 2015 Model, 95,000 kms driven, Good Condition

Product name : Flat 23
Product ID : 3
Product type : House
```

2. **Get Products according to type** : Shows products list of a particular type

For example, type can be Car,Furniture, etc.



The screenshot shows the Eclipse IDE interface with the console window open. The console displays the output of a Java application, listing details for seven different products. Each product entry includes its name, ID, type, price, duration of hire, insurance status, availability, rating, and a detailed description.

```
Regular_Context - RENTAL SYSTEM/src/Hirer.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Main (18) [Java Application] C:\Program Files\Java\jre-10\bin\javaw.exe (Apr 13, 2018, 11:49:54 AM)

Product name : Flat 23
Product ID : 3
Product type : House
Product Price : 50000
Product's duration of hire : 60
Product's insurance No
Product's availability : Yes
Product's rating : 4
Product description : 3 BHK Flat, Well Furnished, Porshe Locality, Well maintained

Product name : Bungalow
Product ID : 4
Product type : House
Product Price : 135000
Product's duration of hire : 90
Product's insurance Yes
Product's availability : Yes
Product's rating : 5
Product description : Spacious, 4 bedroom, 2 bathroom apartment in Lakeview, close to nightlife with private backyard

Product name : Cello Oasis Four Seater Centre Table
Product ID : 5
Product type : Furniture
Product Price : 800
Product's duration of hire : 60
Product's insurance No
Product's availability : Yes
Product's rating : 3
Product description : Product Dimensions: Length (31 inches), Width (17 inches), Height (17 inches) , Color: Ice Brown, Style: Contemporary , Material: Polypropylene material makes the table light weight and rigid,

Product name : Spacewood Joy King Size Bed (Woodpore Finish, Natural Wenge)
Product ID : 6
Product type : Furniture
Product Price : 9000
Product's duration of hire : 80
Product's insurance No
Product's availability : Yes
Product's rating : 4
Product description : Primary Material: Engineered Wood , Color: Natural Wenge, Finish: Woodpore, Style: Modern , Bed Size: King, Recommended mattress size- 60x78 inches

Product name : Milky White Hyundai Creta
Product ID : 7
Product type : Car
Product Price : 550000
Product's duration of hire : 120
Product's insurance Yes
```

Get Products according to a particular order

- Sorted according to price

```
Enter type
Car
To sort products according to price enter 1
To sort products according to rating enter 2
1
Car Products sorted according to Price :
Product name : Red Ford Fiesta
Product price : 150000
Product ID : 1
*-----*
Product name : White Hyundai Verna
Product price : 450000
Product ID : 2
*-----*
Product name : Milky White Hyundai Creta
Product price : 550000
Product ID : 7
*-----*
To exit application enter 0
To get Products List enter 1
To get Products according to a type enter 2
To enter a chat with Owner enter 3
*-----*
```

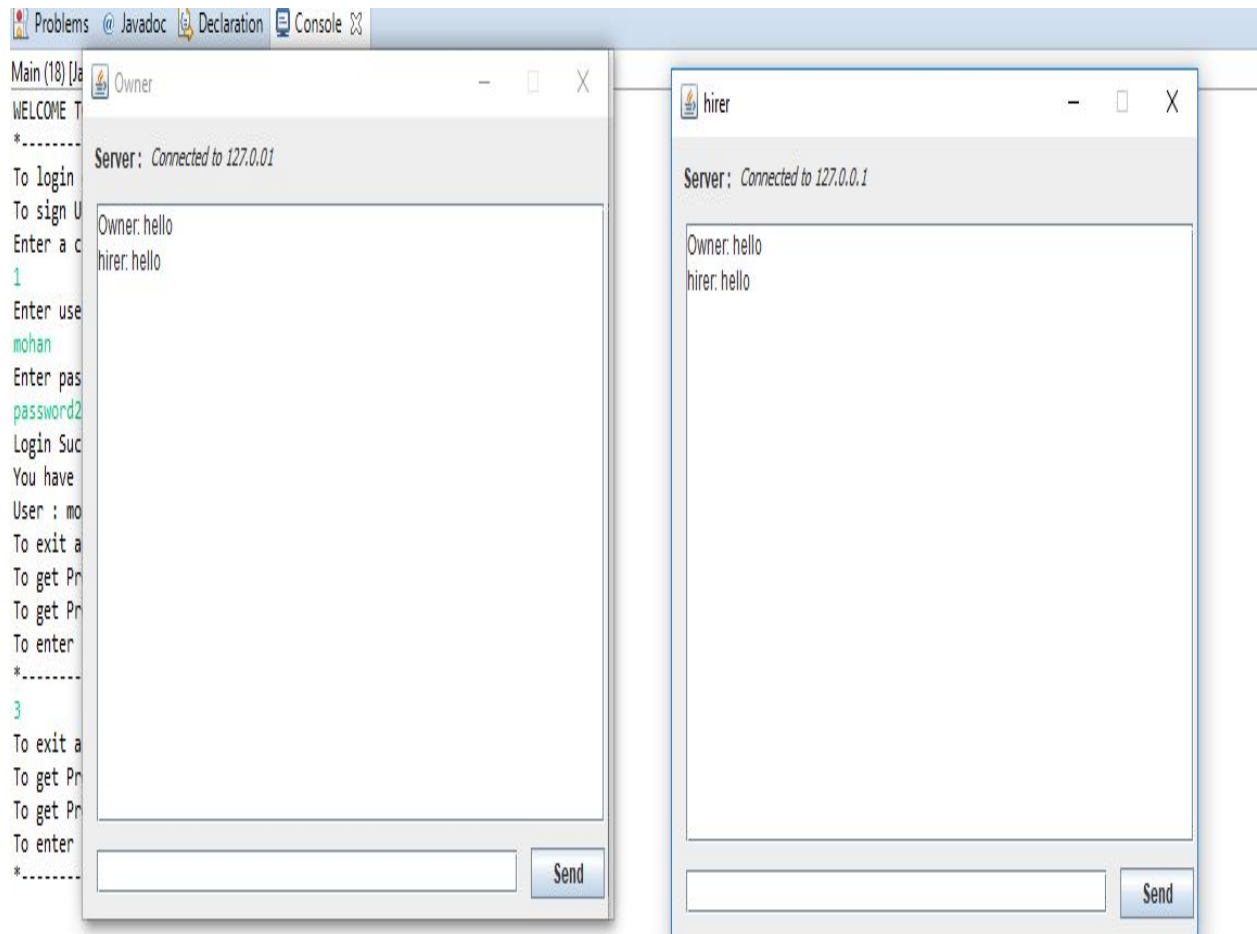
<

- Sorted according to rating

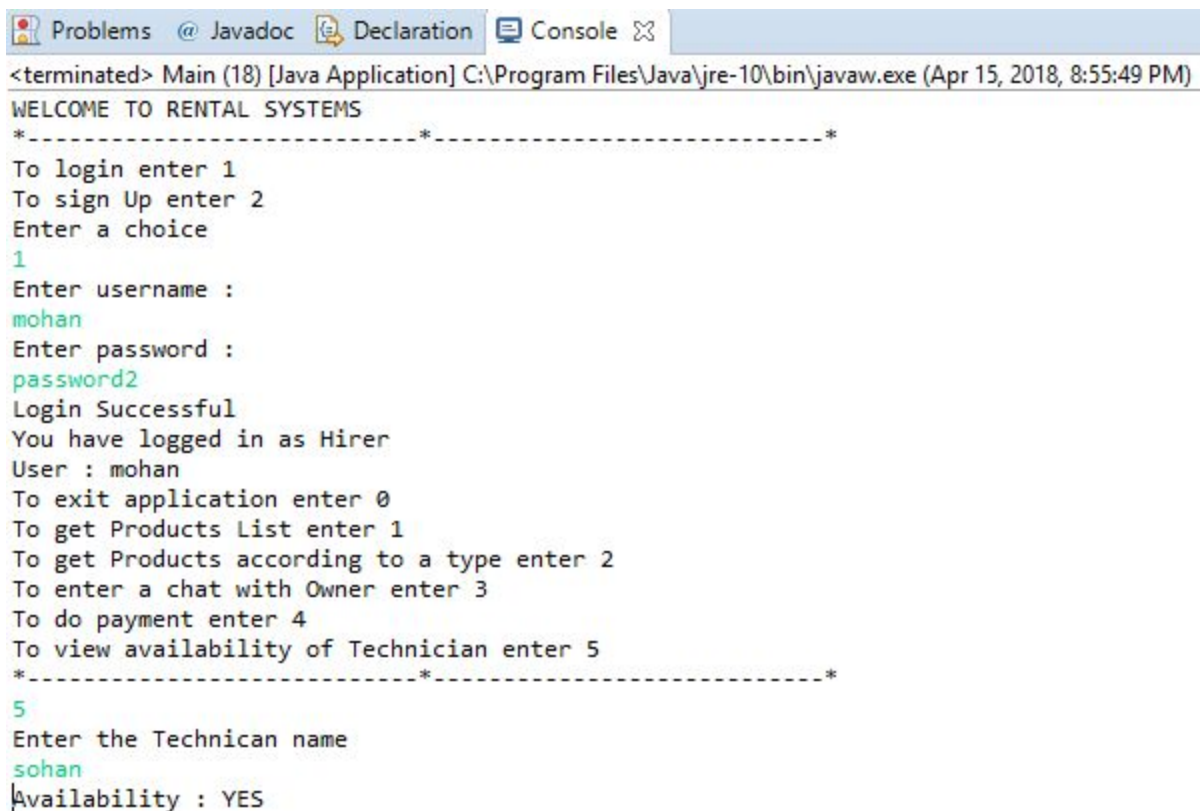
```
Enter type
Furniture
To sort products according to price enter 1
To sort products according to rating enter 2
2
Furniture Products sorted according to Rating :
Product name : Spacewood Joy King Size Bed (Woodpore Finish, Natural Wenge)
Product rating : 4
Product ID : 6
*-----*
Product name : Cello Oasis Four Seater Centre Table
Product rating : 3
Product ID : 5
*-----*
To exit application enter 0
To get Products List enter 1
To get Products according to a type enter 2
To enter a chat with Owner enter 3
*-----*
```

<

3) **Chat with Owner** : This function allows Hirer to chat with Owner. This function opens GUI chat-app in which we have created a server and two clients. Server is hosted on local-host.



4) **getAvailabilityOfTechnician**: This method takes input as Technician username and outputs whether the technician is available to attend the hirer or not i.e. availability is “YES” or “NOT”.

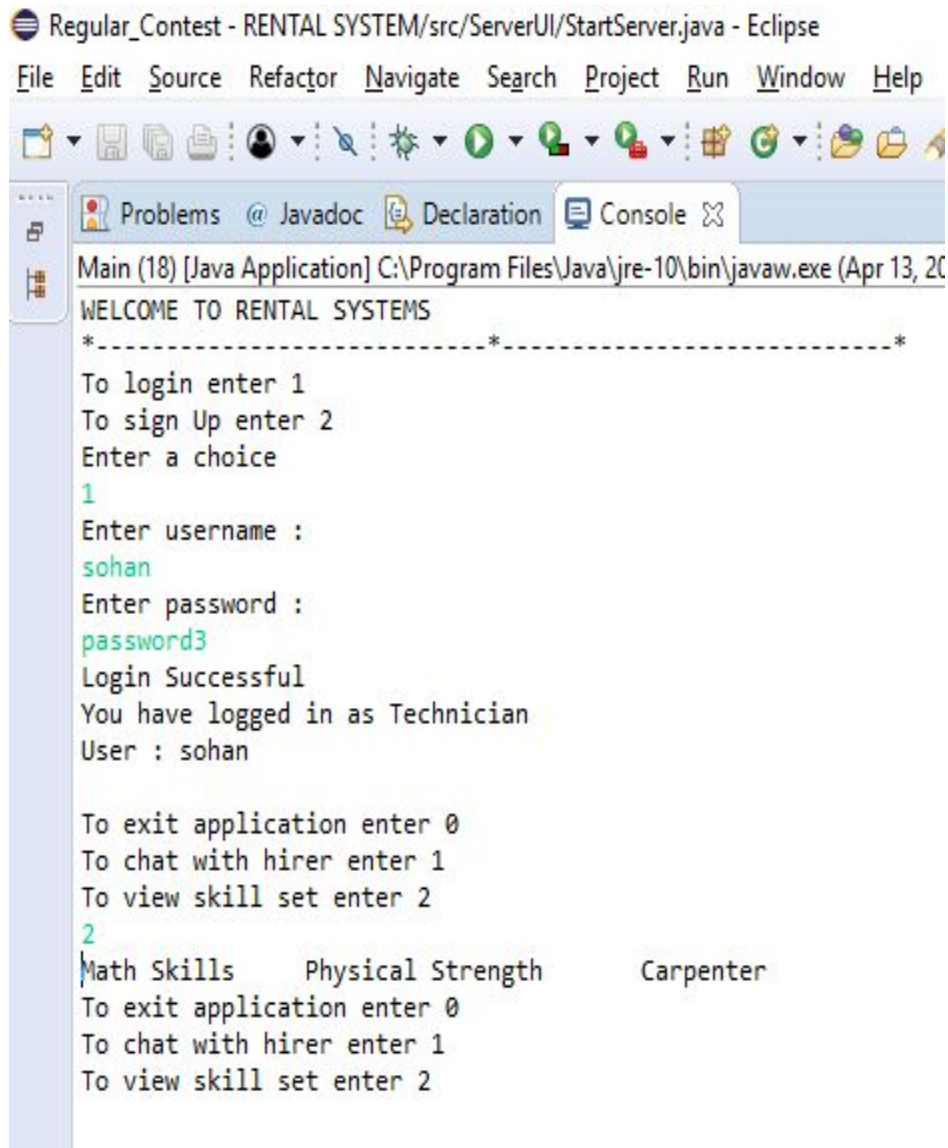


```
<terminated> Main (18) [Java Application] C:\Program Files\Java\jre-10\bin\javaw.exe (Apr 15, 2018, 8:55:49 PM)
WELCOME TO RENTAL SYSTEMS
*-----*
To login enter 1
To sign Up enter 2
Enter a choice
1
Enter username :
mohan
Enter password :
password2
Login Successful
You have logged in as Hirer
User : mohan
To exit application enter 0
To get Products List enter 1
To get Products according to a type enter 2
To enter a chat with Owner enter 3
To do payment enter 4
To view availability of Technician enter 5
*-----*
5
Enter the Technican name
sohan
Availability : YES
```

- ***Class Technician :***

This class extends user class and has 2 main functionalities.
Functionalities are :

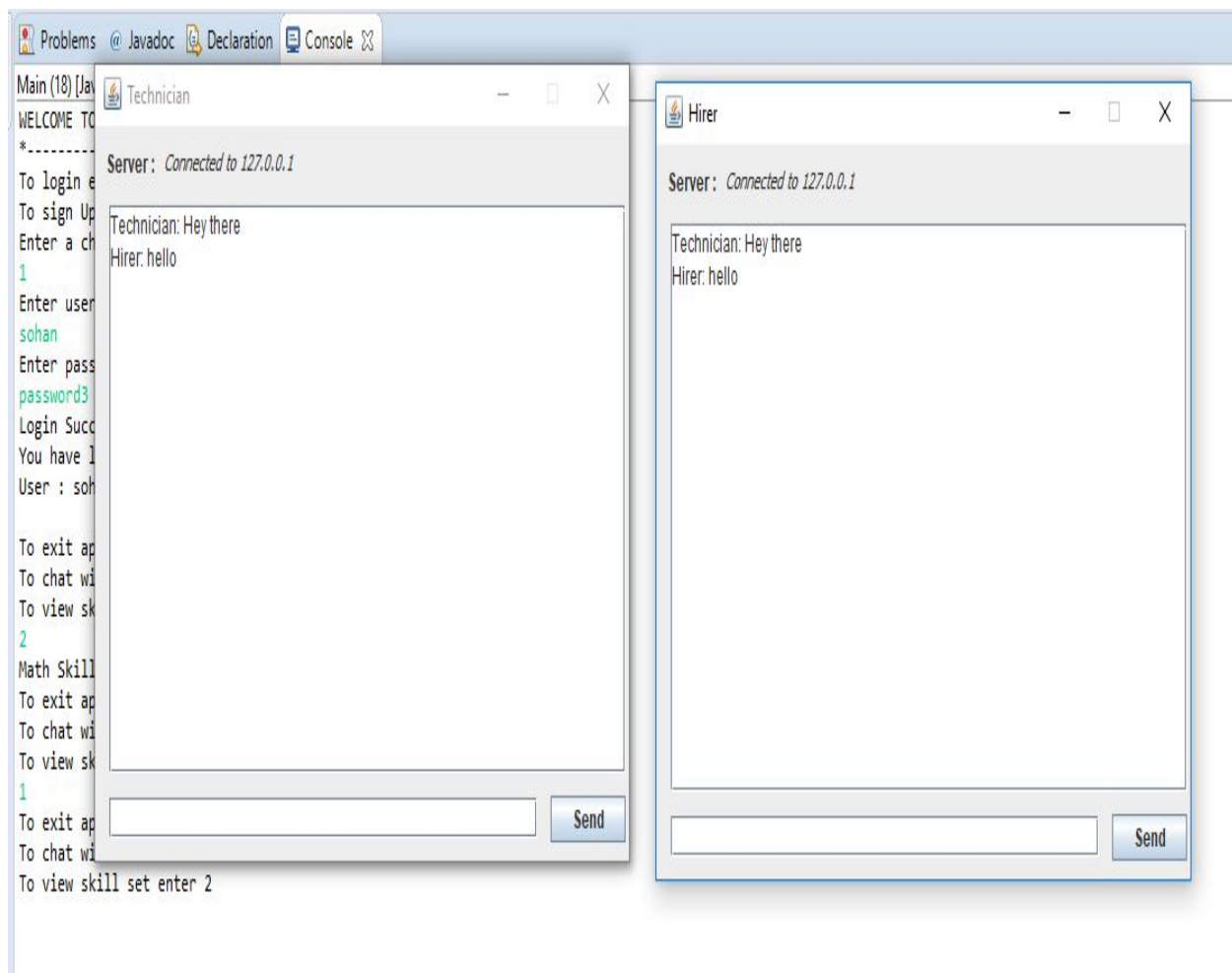
1. **To add skill set of Technician** : This functionality allows technician to add another skill to his skill-set.



```
Regular_Constest - RENTAL SYSTEM/src/ServerUI/StartServer.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Problems @ Javadoc Declaration Console
Main (18) [Java Application] C:\Program Files\Java\jre-10\bin\javaw.exe (Apr 13, 2020)
WELCOME TO RENTAL SYSTEMS
*-----*
To login enter 1
To sign Up enter 2
Enter a choice
1
Enter username :
sohan
Enter password :
password3
Login Successful
You have logged in as Technician
User : sohan

To exit application enter 0
To chat with hirer enter 1
To view skill set enter 2
2
Math Skills      Physical Strength      Carpenter
To exit application enter 0
To chat with hirer enter 1
To view skill set enter 2
```

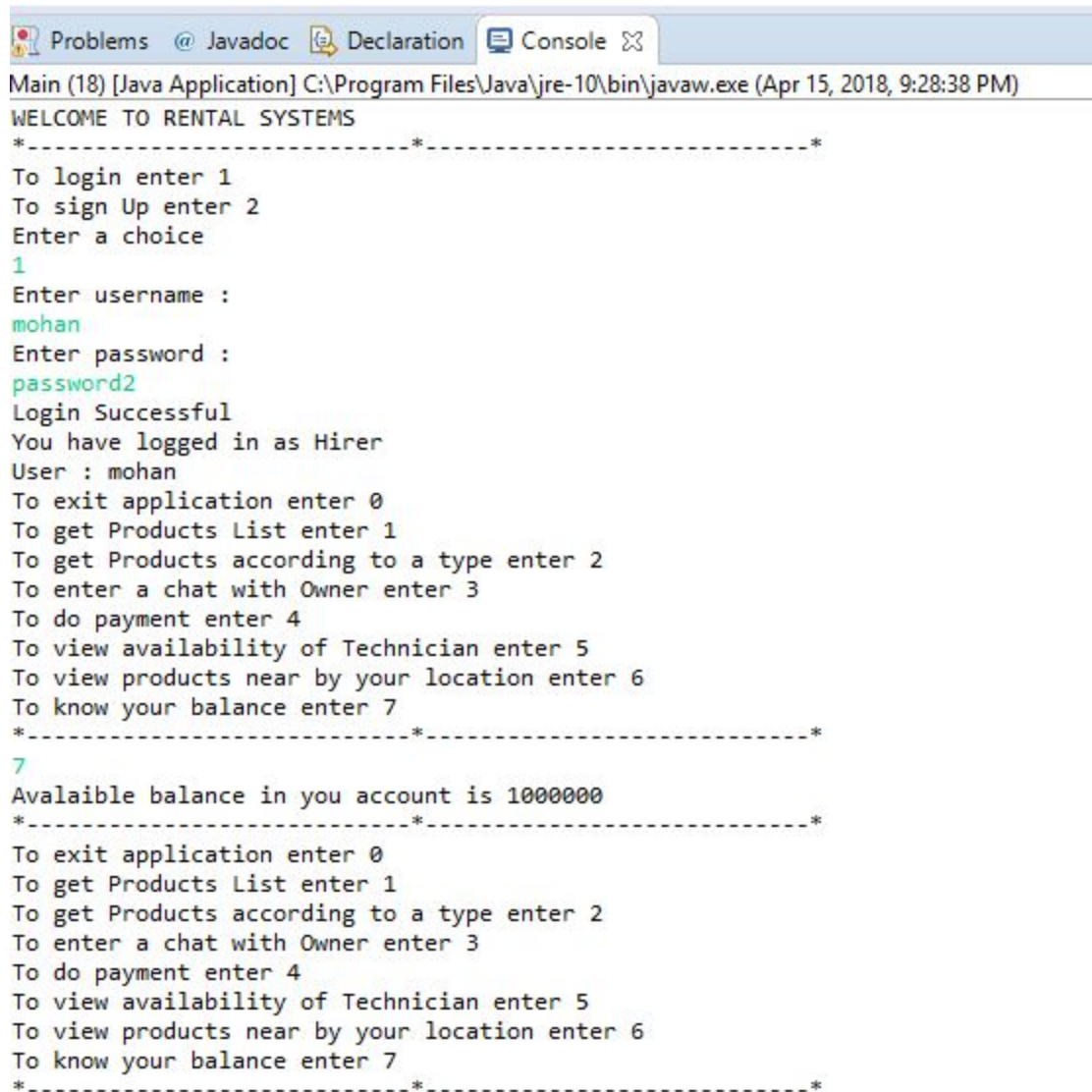
2. **Chat with hirer** : This method allows technician and hirer to chat with each other.



- **Class Bank Account** : This class manages Owner's and Hirer's bank account and stores all transactions that are done by the user. The attributes of this class include Account number, amount, bank name, branch code ,etc.

This class has corresponding functionalities :

1. **checkBalance** : This method returns the available balance in the user's bank account.



```

Main (18) [Java Application] C:\Program Files\Java\jre-10\bin\javaw.exe (Apr 15, 2018, 9:28:38 PM)
WELCOME TO RENTAL SYSTEMS
*-----*
To login enter 1
To sign Up enter 2
Enter a choice
1
Enter username :
mohan
Enter password :
password2
Login Successful
You have logged in as Hirer
User : mohan
To exit application enter 0
To get Products List enter 1
To get Products according to a type enter 2
To enter a chat with Owner enter 3
To do payment enter 4
To view availability of Technician enter 5
To view products near by your location enter 6
To know your balance enter 7
*-----*
7
Avalaible balance in you account is 1000000
*-----*
To exit application enter 0
To get Products List enter 1
To get Products according to a type enter 2
To enter a chat with Owner enter 3
To do payment enter 4
To view availability of Technician enter 5
To view products near by your location enter 6
To know your balance enter 7
*-----*

```

2. **printReceipt** : This method takes transaction ID as input and prints the report of the transaction. The report includes whether the transaction was successful or not and between whom the transaction was done.

```
Problems @ Javadoc Declaration Console
Main (18) [Java Application] C:\Program Files\Java\jre-10\bin\javaw.exe (Apr 15, 2018, 9:41:52 PM)
WELCOME TO RENTAL SYSTEMS
*-----*
To login enter 1
To sign Up enter 2
Enter a choice
1
Enter username :
mohan
Enter password :
password2
Login Successful
You have logged in as Hirer
User : mohan
To exit application enter 0
To get Products List enter 1
To get Products according to a type enter 2
To enter a chat with Owner enter 3
To do payment enter 4
To view availability of Technician enter 5
To view products near by your location enter 6
To know your balance enter 7
to get the details of previous transactions enter 8
*-----*
8
Enter the transasction ID
2111000
Transaction was done between mohan and sohan
Transaction was done successfully
*-----*
To exit application enter 0
To get Products List enter 1
To get Products according to a type enter 2
To enter a chat with Owner enter 3
To do payment enter 4
To view availability of Technician enter 5
To view products near by your location enter 6
To know your balance enter 7
to get the details of previous transactions enter 8
*-----*
```

- ***Class Payment*** : This class helps to carry out the transaction between different users. This class takes owner and hirer user-id to make payment. This class provides user with different payment modes. Main functionalities of this class are :

1. **doPayment** : This method helps the user to carry out transactions smoothly. It provides user with different payment mode such as Net Banking, debit card , credit card and Paytm. The method asks the user to input the payee's and payer's account number and then, the transaction is initiated. After the transaction is done,it displays whether the transaction was successful or unsuccessful.

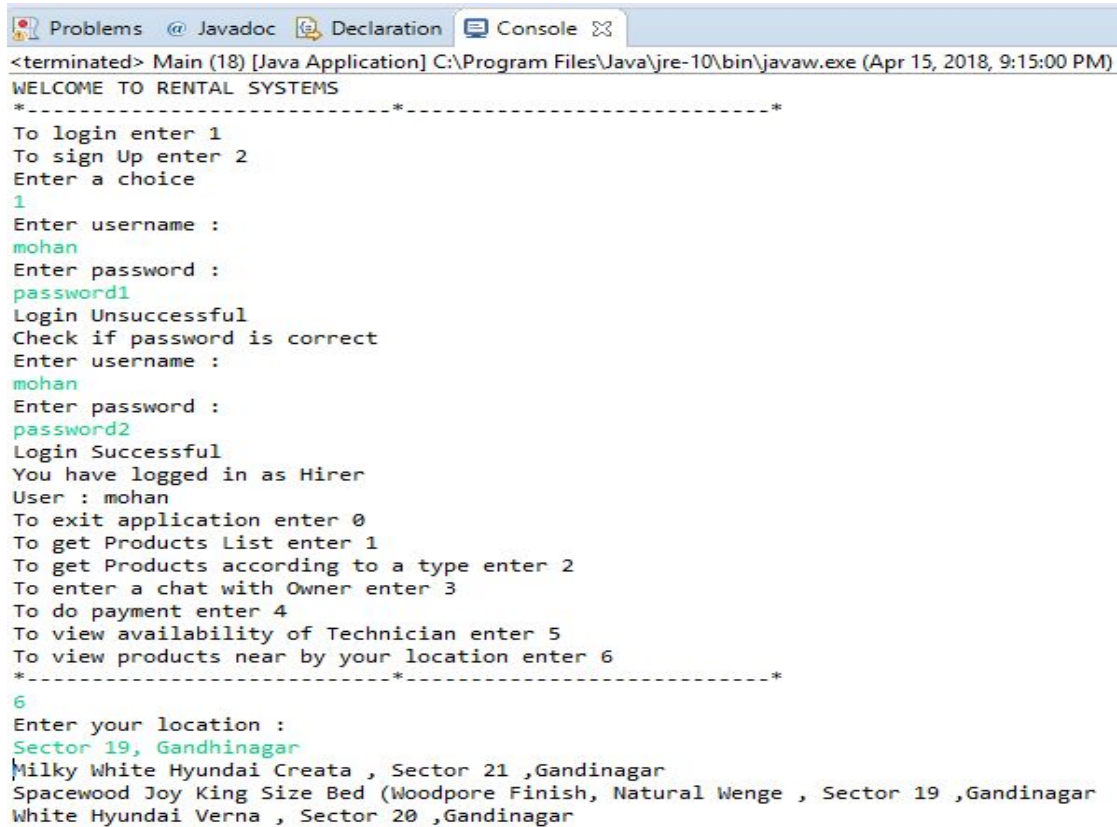
```
Problems @ Javadoc Declaration Console
<terminated> Main (18) [Java Application] C:\Program Files\Java\jre-10\bin\javaw.exe (Apr 15, 2018, 8:25:26 PM)
WELCOME TO RENTAL SYSTEMS
*-----*
To login enter 1
To sign Up enter 2
Enter a choice
1
Enter username :
mohan
Enter password :
password2
Login Successful
You have logged in as Hirer
User : mohan
To exit application enter 0
To get Products List enter 1
To get Products according to a type enter 2
To enter a chat with Owner enter 3
To do payment enter 4
*-----*
4
Select Mode Of Payment
1.Net Banking
2.Debit Card
3.Credit Card
4.Paytm
4
please provide a/c :
please provide payee a/c
125
412
Paytm 125 12 24 412 Approved
```

- ***Class Location :***

This class stores multiple location of user and provides the following functionalities :

1. **getAddressList** : This function takes input as username and outputs the address list of the user with the given username. So, that the user asking for the list gets to know which location is nearer to him.

2. **getProductsByLocation** : This functionality allows the hirer to search products that are nearby his location and are available for hire.



```
<terminated> Main (18) [Java Application] C:\Program Files\Java\jre-10\bin\javaw.exe (Apr 15, 2018, 9:15:00 PM)
WELCOME TO RENTAL SYSTEMS
*-----*
To login enter 1
To sign Up enter 2
Enter a choice
1
Enter username :
mohan
Enter password :
password1
Login Unsuccessful
Check if password is correct
Enter username :
mohan
Enter password :
password2
Login Successful
You have logged in as Hirer
User : mohan
To exit application enter 0
To get Products List enter 1
To get Products according to a type enter 2
To enter a chat with Owner enter 3
To do payment enter 4
To view availability of Technician enter 5
To view products near by your location enter 6
*-----*
6
Enter your location :
Sector 19, Gandhinagar
Milky White Hyundai Creta , Sector 21 ,Gandinagar
Spacewood Joy King Size Bed (Woodpore Finish, Natural Wenge , Sector 19 ,Gandinagar
White Hyundai Verna , Sector 20 ,Gandinagar
```