**IBM CAREER EDUCATION**

**MAIN PROJECT**

**DOMAIN NAME: JAVA**

**Car Rental System**

**Submitted By,**

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**FLOWCHART**

Start**Car Rental System**

Init()

Menu()

Login()

URegistration()

Choice

Choice

Root()

Guest()

Choice

DeleteData()

InsertData()

Display()

Select()

If vehicle id available

Recipt()

Choice

End

# SOFTWARE SPECIFICATIONS

* OPERATING SYSTEM : Linux / Windows / IOS
* ENVIRONMENT : Eclipse Oxygen

# HARDWARE SPECIFICATIONS

|  |  |  |
| --- | --- | --- |
|  PROCESSOR | : | INTEL i3 @ 2.30GHz |
|  RAM | : | 8 GB RAM |
|  MONITOR | : | 15” COLOR |
|  HARD DISK | : | 40 GB |

**DESCRIPTION**

**INTRODUCTION:**

This system is based on a concept to rent cars and generate rental invoice of a rental company. Before stepping into the main system a user has to pass through a login system to get access, then only the user can select cars with a different model and rent for certain days. This project contains limited features, but the essential ones.

**DESCRIPTION:**

This project once logged in displays the various models along with their respective details which are available to rent. The user can select any model and rent it for a number of days if it is available. Then the receipt is printed and program ends. It also contains thee feature for root login which allows root to enter new data or delete old data. Along with login a new user registration page is also available.

**PROS:**

. Helps users rent car anytime any day from wherever they are.

**CONS:**

. This system only works in runtime i.e. any new data entered or old data deleted will only stay for the duration of the program once it is finished everything will be reset.

# PICTURES

**Car Rental System**

**AIM:**

To create a car rental system that allows users to login and rent a vehicle and print a receipt at the end.

**PROGRAM:**

**import** java.util.Scanner;

**public** **class** Car\_rental\_system2 {

**static** String[][] *User* = **new** String[15][7];

**static** String[][] *Data* = **new** String[15][6];

**static** Scanner *sc*=**new** Scanner(System.***in***);

**static** **int** *st\_u*=0;

**static** **int** *u*;

**static** **int** *st\_d*=0;

**public** **static** **void** Init()

{

*Data*[0][0]="001";

*Data*[1][0]="002";

*Data*[2][0]="003";

*User*[0][0]="Manush";

*User*[1][0]="Arman";

*Data*[0][1]="Toyota Altis";

*Data*[1][1]="Honda Jazz";

*Data*[2][1]="Tata Nano";

*User*[0][1]="Pandya";

*User*[1][1]="Mardhani";

*Data*[0][2]="GJ01RH1234";

*Data*[1][2]="GJ01RH4231";

*Data*[2][2]="GJ01RH5678";

*User*[0][2]="manushpandya14@gmail.com";

*User*[1][2]="Armanmardhani@gmail.com";

*Data*[0][3]="500";

*Data*[1][3]="600";

*Data*[2][3]="300";

*User*[0][3]="abc";

*User*[1][3]="xyz";

*Data*[0][4]="30";

*Data*[1][4]="50";

*Data*[2][4]="20";

*User*[0][4]="xyz";

*User*[1][4]="abc";

*Data*[0][5]="Available";

*Data*[1][5]="Available";

*Data*[2][5]="Available";

*User*[0][5]="Ahmedabad";

*User*[1][5]="Ahmedabad";

*User*[0][5]="1234";

*User*[1][5]="1234";

*st\_u*=2;

*st\_d*=3;

}

**public** **static** **void** Display()

{

System.***out***.println("Vehicles available for rent....");

**for**(**int** i=0; i<*st\_d*; i++)

{

**for**(**int** j=0; j<7; i++)

{

System.***out***.println("ID\t MODEL\t REG\_NO\t DEPOSIT\t RATE\t AVAILABLE");

System.***out***.println(*Data*[i][j]+"\t ");

}

}

*Select*();

}

**public** **static** **void** Select()

{

System.***out***.println("Enter id of vehicle you wish to rent: ");

String id=*sc*.next();

**int** r=1;

String av="Available";

**for**(**int** i=0; i<7; i++)

{

**if**(*Data*[i][0].equals(id))

{

**if**(*Data*[i][5].equals(av))

*Recipt*(i);

}

**else**

r=0;

}

**if**(r==0)

System.***out***.println("Vehicle id not found please check id:");

}

**public** **static** **void** Recipt(**int** n)

{

System.***out***.println("Enter date of renting: ");

String sdate=*sc*.next();

System.***out***.println("Enter date of return: ");

String rdate=*sc*.next();

System.***out***.println("Enter licence number: ");

String lno=*sc*.next();

System.***out***.println("Confirm booking?(y/n)");

String confirm=*sc*.next();

**if**(confirm=="y"||confirm=="Y")

{

System.***out***.println("==============================Recipt=========================");

System.***out***.println("Name: "+*User*[*u*][0]+" "+*User*[*u*][1]);

System.***out***.println("Vehicle id: "+*Data*[n][0]);

System.***out***.println("model: "+*Data*[n][1]);

System.***out***.println("Reg\_no: "+*Data*[n][2]);

System.***out***.println("Deposit: "+*Data*[n][3]);

System.***out***.println("Rate: "+*Data*[n][4]);

System.***out***.println("Pickup date: "+sdate);

System.***out***.println("Return date: "+rdate);

System.***out***.println("Licence number: "+lno);

System.***out***.println("Please pay the deposit while picking up the vehicle from our center. It is mandatory to keep your driving license in hand while picking up and driving the vehicle."

+ "\n Thank you for renting car using our software, we look forward to see you again. - group 4");

*Data*[n][5]="not Available";

}

}

**public** **static** **void** Uregistration()

{

System.***out***.println("----------------NEW USER REGISTRATION--------------");

System.***out***.println("Enter First name: ");

*User*[*st\_u*][0]=*sc*.nextLine();

System.***out***.println("Enter Last name: ");

*User*[*st\_u*][1]=*sc*.nextLine();

System.***out***.println("Enter email id: ");

*User*[*st\_u*][2]=*sc*.nextLine();

System.***out***.println("Address line 1: ");

*User*[*st\_u*][3]=*sc*.nextLine();

System.***out***.println("Area: ");

*User*[*st\_u*][4]=*sc*.nextLine();

System.***out***.println("City: ");

*User*[*st\_u*][5]=*sc*.nextLine();

System.***out***.println("Password: ");

*User*[*st\_u*][6]=*sc*.nextLine();

*st\_u*++;

*Display*();

}

**public** **static** **void** Menu()

{

System.***out***.println("---------------MENU---------------");

System.***out***.println("1: Login\n2: Register");

**int** a=*sc*.nextInt();

**switch**(a)

{

**case** 1: *Login*();

**break**;

**case** 2: *Uregistration*();

**break**;

**default**: System.***out***.println("Error!! Check choice again..");

}

}

**public** **static** **void** InsertData()

{

System.***out***.println("---------------Enter new vehicle data-------------");

System.***out***.println("Vehicle id: ");

*Data*[*st\_d*][0]=*sc*.next();

System.***out***.println("Vehicle model: ");

*Data*[*st\_d*][1]=*sc*.next();

System.***out***.println("Vehicle Reg\_no: ");

*Data*[*st\_d*][2]=*sc*.next();

System.***out***.println("Deposit amount: ");

*Data*[*st\_d*][3]=*sc*.next();

System.***out***.println("Rate: ");

*Data*[*st\_d*][4]=*sc*.next();

*Data*[*st\_d*][5]="Available";

*st\_d*++;

*Display*();

}

**public** **static** **void** DeleteData()

{

System.***out***.println("-------------------Delete Vehicle data------------");

System.***out***.println("Enter id of vehicle whos data is to be deleted: ");

String id=*sc*.next();

**int** r=1;

**for**(**int** i=0; i<*st\_d*; i++)

{

**if**(id.equals(*User*[i][0]))

{

**for**(**int** j=0; j<7; j++)

{

*User*[i][j]=**null**;

}

}

**else**

r=0;

}

**if**(r==0)

{

System.***out***.println("Vehicle data not found please check if you have entered correct id... ");

System.***out***.println("Do you wish to retry?(y/n)");

String confirm=*sc*.next();

**if**(confirm=="y"||confirm=="Y")

*DeleteData*();

}

}

**public** **static** **void** Root()

{

*Display*();

System.***out***.println("1: Insert vehicle data \n2: Delete vehicle data \n3: Exit");

**int** choice=*sc*.nextInt();

**switch**(choice)

{

**case** 1: *InsertData*();

**break**;

**case** 2: *DeleteData*();

**break**;

**case** 3: **break**;

**default**: System.***out***.println("Incorrect choice please try again!!");

*Root*();

}

}

**public** **static** **void** Guest(String user,String pass)

{

**int** r=1;

**for**(**int** i=0; i<*st\_u*; i++)

{

**if**(*User*[i][2].equals(user)&&*User*[i][5].equals(pass))

{

System.***out***.println("Login succesful!!");

*Display*();

r=0;

}

}

**if**(r==1)

{

System.***out***.println("ERROR: Incorrect username or password!!");

System.***out***.println("Do you wish to retry?(y/n)");

String confirm=*sc*.next();

**if**(confirm=="y"||confirm=="Y")

*Login*();

}

}

**public** **static** **void** Login()

{

System.***out***.println("--------------LOGIN-----------------");

System.***out***.println("Email id: ");

String user=*sc*.next();

System.***out***.println("Password: ");

String pass=*sc*.next();

**if**(user.equals("root")&&pass.equals("root"))

*Root*();

**else**

*Guest*(user,pass);

}

**public** **static** **void** main(String[] args) {

*Init*();

String choice;

**do** {

*Menu*();

System.***out***.println("Do you wish to rent more vehicles?");

choice=*sc*.next();

}**while**(choice=="y"||choice=="Y");

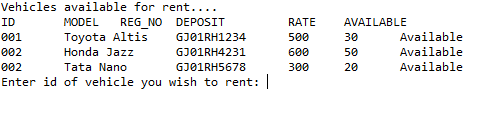
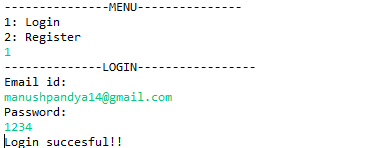
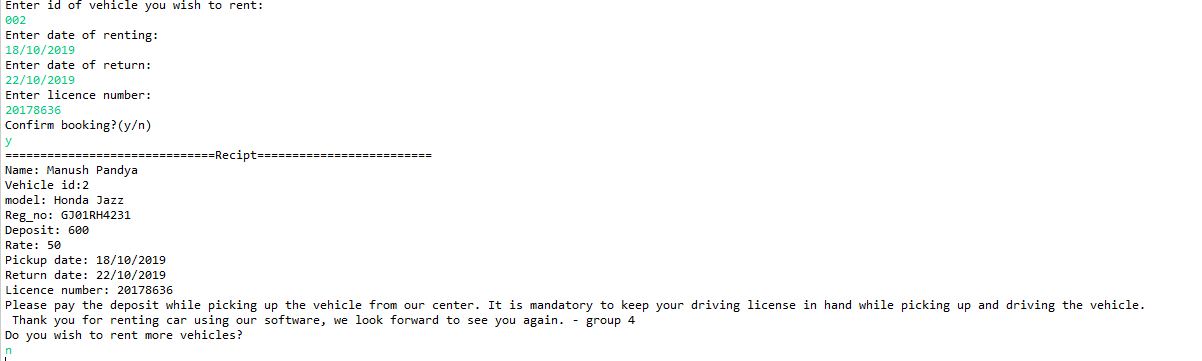
}

}

**EXPLANATION ABOUT PROJECT:**

This project starts with INit() called to initialize values that later goes on to menu(). Then you get a choice to select login or register and the program functions as per your choice. Register takes values from user and stores in array. Once logged in user gets shown all models available for renting and they have to select one. Once selected additional details are asked from user and invoice is printed and program ends.

**OUTPUT SCREENSHOTS:**



**REFERENCES:**

1. <https://www.w3schools.com/java/>
2. <https://www.tutorialspoint.com/java/index.htm>
3. <https://www.geeksforgeeks.org/java-tutorials/>

**CONCLUSION:**

Thus we conclude that we have created a car rental system using concepts of OOP using java.