# LAB 6-7 CS2131

HTTPS://GITHUB.COM/ARYAN2504/MINI-HOTEL-MANAGEMENT-CS2131

Entire package and files are available at this link.

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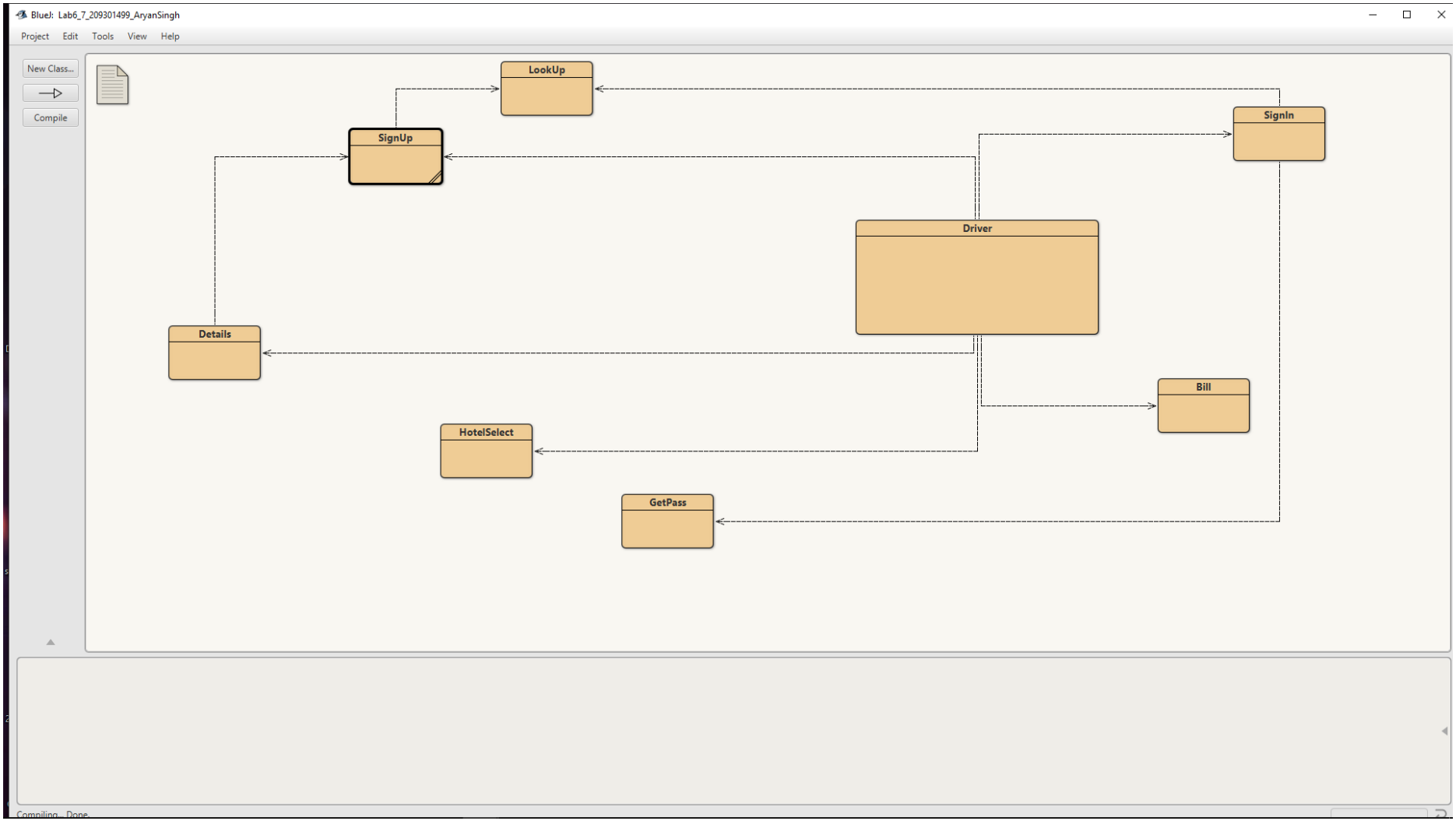
Users want to book hotel. For the same they must sign up with Name, age, id, and password which shall be stored in file. As soon as users sign in, their id and password shall be verified first, after successful sign in user selects city (fetch from files) and dates which shows him list of all hotels in the city with availability and prices. When user selects any hotel, System ask him for more details like number of rooms, number of persons, name, and age of every person, system also ask that whether he is one of the travelers or not, if yes then his details are automatically included in the traveler list (use inheritance). Finally, system generates bill for the booking with unique booking Id and a discount of Rs. 1000 if net amount exceeds Rs. 10000. (use Exception handling for wrong inputs).


BlueJ: Lab6_7_209301499_AryanSingh
Project
Edit
Tools
View
Help
New Class...
Compile
LookUp
SignIn
SignUp
Driver
Details
Bill
HotelSelect
GetPass
Compiling... Done.

# Driver Class

In charge of running other classes

```java
package Lab6_7_209301499_AryanSingh;

import java.util.*;
import java.io.*;

public class Driver
{
    public static void main(String args[]) throws IOException
    {
        Scanner sc = new Scanner (System.in);

        System.out.println("Welcome to BHOYO ROOMS!!\n\nEnter your choice:\n1. Existing
User\n2. New User");
        int user_type = sc.nextInt();
        boolean flag1 = false, flag1x = false;

        SignIn ob1 = new SignIn();
        SignUp ob2 = new SignUp();

        if (user_type == 1)
        {
            while (flag1 == false)
            {
                flag1 = ob1.input();
```

```
        }}
    else if (user_type == 2)
     {
         ob2.beginSignUp();
         System.out.println("\nKindly sign in with your credentials");

         while (flag1x == false)
         {
             flag1x = ob1.input();
         }
     }

     else
        System.out.println("Invalid Choice");


     HotelSelect ob3 = new HotelSelect();
     int rent = ob3.HotelInterface();

     Details ob4 = new Details();
     ob4.input();

     Bill ob5 = new Bill();
     ob5.calc(ob4.rooms_count , rent);
}}
```

# Sign In

Allows the existing user to sign in.

```java
package Lab6_7_209301499_AryanSingh;

import java.util.*;

public class SignIn
{
    static boolean input()
    {
        Scanner ob = new Scanner(System.in);

        System.out.println("\n\nEnter your ID");
        String id = ob.nextLine();

        System.out.println("Enter password: ");
        String pass = ob.nextLine();

        LookUp x = new LookUp();
        GetPass y = new GetPass();
        int id_freq = 0;


        try
        {
            id_freq = x.frequency(id);
        }
```

```
        catch (Exception e)
        {
          System.out.println("Unexcpected error occurred!");
        }

        String password = y.get_pass(id);
        boolean truth = pass.equals(password);
        if ( id_freq == 1 && truth)
        {
            System.out.println("Credentials Verified\n WELCOME!!!!");
            return true;
        }
        else
        {
            System.out.println("Unable to verify the credentials");
            return false;
        }

    }
}
```

# Sign Up

Allows the new user to sign up.

```java
package Lab6_7_209301499_AryanSingh;

import java.util.*;
import java.lang.*;
import java.io.*;

public class SignUp
{
    static String name;
    static int age;

    static void beginSignUp()
    {
        Scanner sc = new Scanner(System.in);

        System.out.println("Enter your name");
        name = sc.nextLine();

        System.out.println("Enter your age");
        age = sc.nextInt();

        SignUp ob = new SignUp();
        String id = ob.id_input();
```

```
        String pass = ob.pass_input();

        ob.write_credentials(id,pass);
    }

    void write_credentials(String id, String pass)
    {
        try
        {
            FileWriter fwrite = new FileWriter("D:user_details.txt");

            fwrite.write(id+" "+pass);

            fwrite.close();    // Closing the stream

            System.out.println("Successfully Signed Up");
        } catch (IOException e)
        {
            System.out.println("Unexpected error occurred");
            e.printStackTrace();
        }
    }

    String id_input()
    {
```

```
        Scanner sc = new Scanner(System.in);

        SignUp ob = new SignUp();

        System.out.println("Enter a valid user id\nIt will be required every time you log
in\nOnly use alpahanumeric characters");
        String id = sc.nextLine();

        boolean id_flag = check_id(id);
        if (id_flag != true)
        {
            id_input();
        }

        return id;
    }

    boolean check_id(String id)
    {
        int len  = id.length();
        int c = 0;

        if (id.charAt(0) >= 'a' && id.charAt(0) <= 'z')
        {
            if(id.matches("[a-z0-9]+") && isUnique(id))
```

```
                return true;
            else
            {
                System.out.println("Invalid id");
                return false;
            }
        }
        else
        {
            System.out.println("Invalid id");
            return false;
        }
    }

    boolean isUnique(String id)
    {
        int freq = 0;
        try
        {
            LookUp ob1 = new LookUp();
            freq = ob1.frequency(id);

        }
        catch (Exception e)
        {
```

```
            System.out.println("IO Exception");
        }

        if (freq == 0)
            return true;
        else
            return false;
    }

    String pass_input()
    {
        Scanner sc = new Scanner(System.in);

        SignUp ob = new SignUp();

        System.out.println("Enter a valid password\nIt will be required every time you log
in");
        System.out.println("Only alpahanumeric characters are allowed with at least");
        System.out.println("One uppercase letter");
        System.out.println("One lowercase letter");
        System.out.println("and One number");

        String pass = sc.nextLine();

        boolean pass_flag = check_pass(pass);
```

```
        if (pass_flag != true)
        {
            pass_input();
        }

        return pass;
    }

    boolean check_pass(String pass)
    {
        int len  = pass.length();
        int cu = 0, cn = 0, cl = 0;

        for(int i = 0; i < len; i++)
        {
            if (Character.isUpperCase(pass.charAt(i)))
                cu++;
            if (Character.isLowerCase(pass.charAt(i)))
                cl++;
            if (Character.isDigit(pass.charAt(i)))
                cn++;
        }

        if (cu > 0 && cn > 0 && cl > 0)
```

```
            return true;
        else
        {
            System.out.println("Invalid Password");
            return false;
        }
    }
}
```

# Look Up

Used for verification of id and password.

```java
package Lab6_7_209301499_AryanSingh;

import java.util.*;
import java.io.*;

public class LookUp
{
    static int frequency(String str) throws IOException
    {
        int count  = 0;
        String[] words = null;
        String s;

        File file = new File("D:user_details.txt"); //Creation of File Descriptor of the input file

        FileReader reader = new FileReader(file);  //Creation of File Reader object

        BufferedReader br = new BufferedReader(reader); //Creation of BufferedReader object

        while((s=br.readLine())!=null)   //Reading Content from the file
        {
            words=s.split(" ");  //Split the word using space
```

```
            for (String word : words)
            {
                if (word.equals(str))   //Search for the given word
                {
                    count++;    //Incrementing count
                }
            }
        }

        reader.close();

        return count;
    }
}
```

# Get Pass

Is used to get the password from the files to verify the entered Password.

```java
package Lab6_7_209301499_AryanSingh;

import java.util.*;
import java.io.*;
import java.lang.*;

public class GetPass
{
    String get_pass(String id)
    {
        String pass = null;
        try
        {
            File file = new File("D:user_details.txt");

            Scanner reader = new Scanner(file);

            int i = 0;

            while (reader.hasNextLine())
            {
                String str = reader.nextLine();
                str.trim();
                int x = str.indexOf(" ");
                if (str.substring(0,x).equals(id))
```

```
                {
                    pass = str.substring(x + 1, str.length());
                    break;
                }
            }
        }
        catch (FileNotFoundException exception)
        {
            System.out.println("Unexcpected error occurred!");
        }

        return pass;
    }
}
```

# Hotel Select

Is used select the city and the hotel the user wants to stay in.

```java
package Lab6_7_209301499_AryanSingh;

import java.util.*;
import java.io.*;
import java.lang.*;

public class HotelSelect
{
    static boolean display_flag = false;
    static int HotelInterface()
    {
        int rentInt = 0;

        System.out.println("\nSelect a Hotel from the following list: ");

        try
        {
            File file = new File("D:hotels and details.txt");

            Scanner reader = new Scanner(file);

            int i = 1;
            String selected = null;

            while (reader.hasNextLine())
```

```
            {
                String data = reader.nextLine();
                System.out.print(i+". ");
                System.out.println(data);
                i++;
            }

            Scanner ob = new Scanner(System.in);
            System.out.println("\nEnter your choice: ");
            int choice = ob.nextInt();

            try (BufferedReader br = new BufferedReader(new FileReader("D:hotels and
details.txt")))
            {
                for (int j = 0; j < choice - 1; j++)
                    br.readLine();
                selected = br.readLine();
            }
            catch(IOException e)
            {
                System.out.println(e);
            }

            selected.trim();
            String hotel_name = selected.substring(0 , selected.indexOf(" ", 0));
```

```
            String rent = selected.substring(selected.indexOf("$") + 1 ,selected.indexOf("/")
);
            rentInt = Integer.parseInt(rent);

            reader.close();

        }
        catch (FileNotFoundException exception)
        {
            System.out.println("Unexcpected error occurred!");
        }
        return rentInt;

    }
}
```

# Details

Used to get details from the user and use them for various operations

```java
package Lab6_7_209301499_AryanSingh;

import java.util.*;

public class Details
{
    int rooms_count = 0;
     void input()
    {
        Scanner ob = new Scanner(System.in);

        int  i = 1;

        System.out.println("Enter the number of rooms you want to book");
        rooms_count = ob.nextInt();

        System.out.println("Enter the number of people");
        int people_count = ob.nextInt();


        System.out.println("Are you one of the people:\n1.Yes\n2.No\n");
        int check = ob.nextInt();

        if (check == 1)
        {
```

```
        people_count -= 1;
        i++;
    }

    ob.nextLine();

    String names[] = new String[people_count + 1];
    String ages[] = new String[people_count + 1];

    if (check == 1)
    {
        SignUp obj = new SignUp();
        names[0] = obj.name ;
        ages[0] = String.valueOf(obj.age);
    }

    while( i <= people_count + 1)
    {
        System.out.println("Person "+i+" name: ");
        names[i - 1] = ob.nextLine();
        System.out.println("Person "+i+" age: ");
        ages[i - 1] = ob.nextLine();
        i++;
    } }}
```

.

# Bill

Used to calculate and display the bill.

```java
package Lab6_7_209301499_AryanSingh;

public class Bill
{
    double calc (int rooms_no , int rent)
    {
        double amount = rooms_no * rent;
        System.out.println("Amount without discount is $"+amount);
        if (amount > 100000)
        {
            amount = amount - 1000;
        }
        System.out.println("Amount after discount is $"+amount);

        return amount;
    }
}
```

# Booking Id

Used to generate a unique booking id and store it with necessary details.

```java
package Lab6_7_209301499_AryanSingh;
import java.lang.*;
import java.io.*;

public class Booking_Id
{
    void id_generator(String name,String id, String city, double amount)
    {
        try
        {
            FileWriter fwrite = new FileWriter("D:bookings.txt");

            String r = String.valueOf(Math.random()*10000000);

            String b_id = "_BHOYO_"+r;

            fwrite.write(b_id+"\t"+name+"\t"+city+"\t"+amount);

            fwrite.close();
        }
        catch (IOException e)
        {
            System.out.println("Unexpected error occurred");  }}}
```

# Outputs

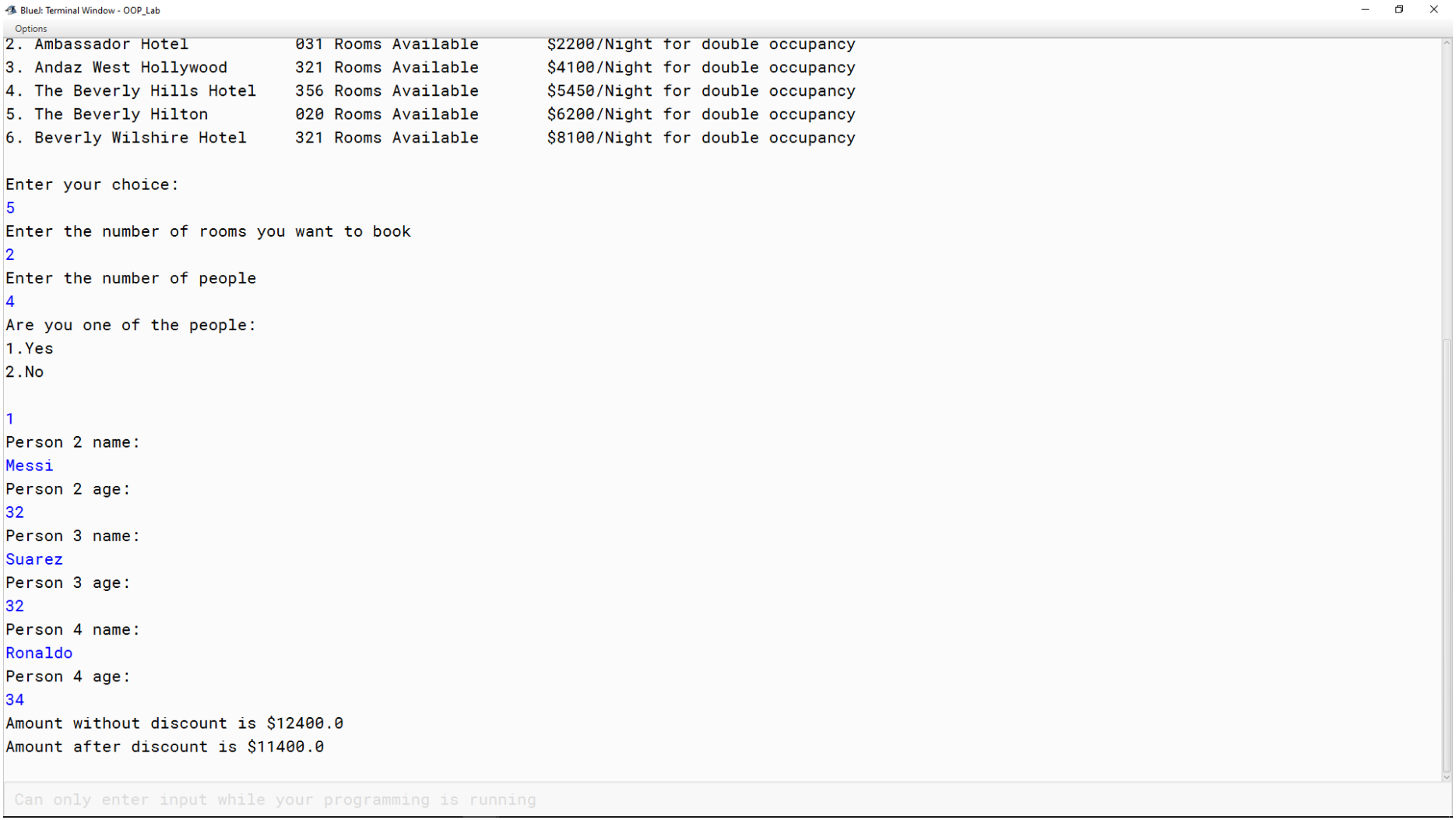

BlueJ: Terminal Window - OOP_Lab
Options
Welcome to BHOYO ROOMS!!
Enter your choice:
1. Existing User
2. New User
2
Enter your name
Neymar
Enter your age
30
Enter a valid user id
It will be required every time you log in
Only use alpahanumeric characters
njr11
Enter a valid password
It will be required every time you log in
Only alpahanumeric characters are allowed with at least
One uppercase letter
One lowercase letter
and One number
ImissBarca
Invalid Password
Enter a valid password
It will be required every time you log in
Only alpahanumeric characters are allowed with at least
One uppercase letter
One lowercase letter
and One number
ImissBarca11
Successfully Signed Up
Kindly sign in with your credentials
Type input and press Enter to send to program

BlueJ: Terminal Window - OOP_Lab

Options

```
Welcome to BHOYO ROOMS!!

Enter your choice:
1. Existing User
2. New User
1


Enter your ID
njr11
Enter password:
ImissBarca11
Credentials Verified
 WELCOME!!!!
Enter your choice of your city:
1. New York City
2. Los Angeles
2

Select a Hotel from the following list:
1. Alan Hotel                003 Rooms Available       $3200/Night for double occupancy
2. Ambassador Hotel          031 Rooms Available       $2200/Night for double occupancy
3. Andaz West Hollywood      321 Rooms Available       $4100/Night for double occupancy
4. The Beverly Hills Hotel   356 Rooms Available       $5450/Night for double occupancy
5. The Beverly Hilton        020 Rooms Available       $6200/Night for double occupancy
6. Beverly Wilshire Hotel    321 Rooms Available       $8100/Night for double occupancy

Enter your choice:
```

Type input and press Enter to send to program


BlueJ: Terminal Window - OOP_Lab
Options
2. Ambassador Hotel 031 Rooms Available $2200/Night for double occupancy
3. Andaz West Hollywood 321 Rooms Available $4100/Night for double occupancy
4. The Beverly Hills Hotel 356 Rooms Available $5450/Night for double occupancy
5. The Beverly Hilton 020 Rooms Available $6200/Night for double occupancy
6. Beverly Wilshire Hotel 321 Rooms Available $8100/Night for double occupancy
Enter your choice:
5
Enter the number of rooms you want to book
2
Enter the number of people
4
Are you one of the people:
1.Yes
2.No
1
Person 2 name:
Messi
Person 2 age:
32
Person 3 name:
Suarez
Person 3 age:
32
Person 4 name:
Ronaldo
Person 4 age:
34
Amount without discount is $12400.0
Amount after discount is $11400.0
Can only enter input while your programming is running