

## **PART B**

### **AIM OF THE PROJECT : Micro-project on Bus Reservation System**

#### **Brief Description :**

- The project helps to access some vital process of Bus reservation System
- It helps Passenger to get Information about a bus without visiting the bus station
- The Project consist of 2 main module
  - Guest Login
  - User Login
- In Guest login Only general Information about a bus can be obtained
- In user login you can book a ticket and can also view other general information about a bus.
- The User Login is fully secured with Password to access it.

#### **Aim of micro project:**

The Micro-Project Aims :-

- That By using java Applications & software can be easily developed
- At Detail study of each concept of JAVA
- TO make some process of bus Reservation system flexible for Passengers/Users
- To Reduce time ,effort and manual work
- To Provide facilities such as
  - Route & other Information
  - Book ticket
  - Seat Availability

#### **Course Outcome integrated :**

- Develop Program Using OOP methodology in java
- Implement Exception Handeling

### **Actual procedure followed :**

1. **Group Formation:-** JPR is a subject which teaches us some important concept of Java Programing .The basic aim of micro- project is to accelerate the attainment of the variouse outcome in the course.In the first 2 weeks of December the subject was introduced .The syllabus as well as detail of micro-project was discussed.The group of 3members were formed and the group leaders were selected.The schedule of Plan "A","B"& "PRESENTATION" were finalized.The variouse micro-project topics related to subject was discussed our guide gave us the opportunity to select the topic of our choice.
2. **Finalization Of Micro-Project:-**After attending the lectures for 2 weeks.We selected the topic for micro-project.We discussed the topic with our Guide regarding the concept which we are going to apply in the project.We individually tried to explain the basic platform of project.
3. **Planning:-** After finalization of the project we started working on the project.we started the planning phase.We discussed among ourselves regarding the resources such as software requirements,compiler.In this week we completed 'PART A PLAN' of the micro-project which is nothing but a initial description about the project.We submitted it to the guide.
4. **Module Distribution &Analysis Part:-** Once the planning was over regarding resource's etc..According to members we distributed the module among us .We started the analysis of project.
5. **Design Part :-**In this Part We added some white spaces and borders at some places in the project. With the help of this our project got a new look.
6. **Implementation :-** In the week we actually started the technical phase .The coding for each module was done each member was writing code according to module assigned to them.the testing of code was done to achieve the requirementof project.finally the project was within the schedule time.
7. **Presentation :-**In this week we have to presented the micro-project in front of the guide.Each member of group presented their own parts with confidence in front of guide.She asked us variouse queries regarding the topics.We presented the details of each concept of java that we used in the project. She asked us to do variouse changes regarding some topics.
8. **Submission:-**This week was submission week.We submitted our project along with 'Part A & B Plan' to the guide.We also submitted the hard copies and soft copies of project to the guide

**Actual resources used :**

SR NO	NAME OF RESOURCES USED	SPECIFICATION	QUANTITY	REMARKS
1	COMPUTER	<b>PROCESSOR</b> -AMD <b>HARD DISK</b> -2 TB <b>RAM</b> -16GB <b>OPERATING SYSTEM</b> - WINDOWS 10 PRO	1 1 1 1	HARDWARE & SOFTWARE USED
2	Java	jdk1.6.0_45		Software consisting java tools
3	PROGRAMMING LANGUAGE	java		PROGRAMMING LANGUAGE

**Output of the micro project :**

The output of the project is according to following index :

SR NO	CONTENT
1	CODING
2	CODE OUTPUT
3	REFERENCES

## CODING

# Abc.java

```
import Passenger.*;

import Login.*;

import java.io.*;

import Bus.*;

import System.*;

public class Abc{

    int option1;

    void get(){

        BufferedReader
br=new
BufferedReader(new
InputStreamReader(System.in));

System.out.println("\n
\n      Please
Choose The Operation
To Be Performed :-")
System.out.println("\n
\n      1. Route &
Other Details");
System.out.println("\n
\n      2. Seat
Avability");

System.out.println("\n
\n      3. Book
Tickets");

System.out.println("\n
\n      4. Exit");

try{

System.out.print("\n\n
\n      Enter Options
:");
option1=Integer.parseInt(br.readLine())
} catch(Exception E)
System.out.println
```

```

        }
    }

    public static void
    main(String
    args[])throws
    Exception

    {

        First_stage f=new
        First_stage();

        Login l=new Login();

        Passenger_details
        A=new
        Passenger_details();

        Second_stage s=new
        Second_stage()

        Thrid_stage t=new
        Thrid_stage();

        Route R=new
        Route();

        Abc d=new Abc();

        l.get();

        for (int x=1;x==1;)
        d.get();
        System.out.println("\n
        -----
        -----
        -----
        -----
        -----");
    }
}

```

```
switch(d.option1){
    case 1:
        R.get();
        break;
    case 2:
        s.get4();
        s.get5();
        System.out.println("\n
-----
-----
-----
-----
-----\n");
        break;
    case 3:
        if(l.option!=2)
        {
            f.get();
            f.get1();
            A.get();
            A.display();
            A.get1();
            System.out.println("\n
-----
-----
-----
-----
-----\n");
            s.get();
        }
    }
}
```

[illegible]

[illegible]

```

        try{
System.out.print("\n
                        Enter Option :
");
option=Integer.parseInt
t(br.readLine());

        switch (option)

{ case 1
Login_info();
break :case 2:
System.out.println("\n
_____
_____
_____
_____
_____
_____
_____
_____
_____
\n");

System.out.println("\nPl
ease Enter Some Valid
Information :");

```

```
System.out.println("\t\t\t\t\tInvalid Input!!");  
  
System.out.println("\n  
!!!!!!!!!!!!!  
!!!!!!!!!!!!!  
!!!!!!!!!!!!!  
!!!!!!!!!!!!!  
!!!!!!!!!!!!!  
!!!!!!!!!!!!!  
!!!!!!!!!!!!!  
!!!!!!!!!!!!!  
!!!!!!!!!!!!!  
!!!!!!!!!!!!!  
!!!!!!!!\n");  
}}catch(Exception E )  
System.out.println("\n\nEntered String Value  
!!!\n      Please Enter  
Proper Integer  
Value...");  
System.out.println("\nRestarting System...");  
get();  
} }
```

```
package System;

import java.io.*;

import Bus.*;

import Passenger.*;

public class
Second_stage{

String ans2;

int Lower,Upper;

int Window,Normal;

Passenger_details
A=new
Passenger_details();

public void
get()throws Exception

{
BufferedReader
br=new
BufferedReader(new
InputStreamReader(Sy
stem.in));
System.out.print("\n
Do You Want
```

```
To Select Seats Of Your  
Choice [y/n] : ");  
ans2=br.readLine():  
if(ans2.equalsIgnoreCa  
se("y")) {  
System.out.println("\n  
\n      Please  
Provide The Number  
Of Seats For The Given  
Type ....\n");} }
```

```
System.out.print("\n
        Enter The
Number Of Lower
Berths : ");

Lower=Integer.parseInt(br.readLine());

System.out.print("\n
        Enter The
Number Of
UpperBerths : ");
Upper=Integer.parseInt(br.readLine());
```

```
{
System.out.println("\n
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-!!\n\n");
System.out.println("\n
Number Of Berths
```

[illegible]

```
{
System.out.println("\n
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-!!-!!-!!-!!-!!-!!-!!-
!!-!!-!!-
!!\n");System.out.pri
ntln("\n Number Of
Berths Selected Is
Greater Than Number
Of Passenger");
```

```
get2();

System.out.println("\n
    Note :- The
    Seats May Be
    Allocated If Aavailable
    !!!" ); } }
```

```
get30;
```

 $\{\}$ 

```
get10;
```

```
System.out.println("\n
    The Seat
```

```

Avability For Given
Bus Is As
Follows.....\n");

if(First_stage.BusNo==
1221)

{B1.seats();} else
if(First_stage.BusNo==
1222)

{ B2.seats();}

else
if(First_stage.BusNo==
1223) {B3.seats();}
else
if(First_stage.BusNo==
1224)

{B4.seats();}

else
if(First_stage.BusNo==
1225)

{ B5.seats(); }

else
if(First_stage.BusNo==
1226)

{B6.seats();} else
if(First_stage.BusNo==
1227)

{B7.seats();} else
if(First_stage.BusNo==
1228)

{ B8.seats();}

else{System.out.println
("\n\n Bus Number
Not Valid !!!");

get4();

get5();

}}

public void get6(){

Bus1 B1=new Bus1();

```

```

Bus2 B2=new
Bus2();

Bus3 B3=new Bus3();

Bus4 B4=new Bus4();

Bus5 B5=new Bus5();

Bus6 B6=new Bus6();

Bus7 B7=new Bus7

Bus8 B8=new Bus8();

System.out.println("\n
The Seat
Avability For Given
Bus Is As
Follows.....\n");

if(First_stage.BusNo==
1221)

{B1.window=B1.windo
w-Window;
B1.normal=B1.normal-
Normal;
B1.seats=B1.seats-
A.num;}else
if(First_stage.BusNo==
1222)

{
B2.window=B2.windo
w-Window;
B2.normal=B2.normal-
Normal;

B2.seats=B2.seats-
A.num;}

else
if(First_stage.BusNo==
1223)

{
B3.upper=B3.upper-
Upper;

B3.lower=B3.lower-
Lower;

B3

```

```

else
if(First_stage.BusNo==
1224)

{
B4.window=B4.windo
w-Window
B4.normal=B4.normal-
Normal;

B4.seats=B4.seats-
A.num;}

else
if(First_stage.BusNo==
1225)

{
B5.window=B5.windo
w-Window;

B5.normal=B5.normal-
Normal;

B5.seats=B5.seats-
A.num;}

}else
if(First_stage.BusNo==
1226)

{
B6.window=B6.windo
w-Window;

B6.normal=B6.normal-
Normal;

B6.seats=B6.seats-
A.num;}

else
if(First_stage.BusNo==
1227)

{
B7.window=B7.windo
w-Window;

B7.normal=B7.normal-
Normal;

```

```

B7.seats=B7.seats-
A.num;}

else
if(First_stage.BusNo==
1228)

{
B8.window=B8.windo
w-Window;

B8.normal=B8.normal-
Normal;

B8.seats=B8.seats-
A.num;

}}

Thrid_stage.java

package System;

import Passenger.*;

import Login.*;

import java.io.*;

import Bus.*;

public class
Thrid_stage{

int
ticket,wallet=20000;

String ans4,ans5;

Passenger_details
A=new
Passenger_details();

First_stage f= new
First_stage();

public void get(){

if(f.BusNo==1221) {

ticket=A.num*Bus1.cos
t;

System.out.println("Th
e Amount Payable For

```





```
String
ans=br.readLine();

if(ans.equalsIgnoreCase("y"))
{
    get();
    display();
}
else
if(ans.equalsIgnoreCase("n"))
{
    else
    {
        System.out.println("\n
        Invalid Input
        !\n\n Please
        Provide Correct
        Input....\n");

        get();
    } } }
```

#### Bus1.java

```
package Bus;

public class Bus1{

    String
    origin,destination,type,
    Atime,Dtime,duration;

    public static int seats;

    public static int
    window=17,normal=1
    8,number;

    public static int cost;

    public Bus1()

    {number=1221;

    origin="Mumbai";
```

```
destination="Pune";

    type="Shivneri";

    Atime="12:00";

    Dtime="15:30";

    duration="3 Hours 30
    mins";

    cost=460; }

    public void display(){
    System.out.println("\n
    \n      |Bus No.|
    Origin |Destination |
    Bus Type      |
    Dept. | Arr. | Journey
    Duration| Cost
    |");System.out.println(
    "      -----
    -----
    -----
    -----");

    system.out.println("
    |
    "+number+" |
    "+origin+" |
    "+destination+" |
    "+type+"      |
    "+Atime+" | "+Dtime+"
    | "+duration+" |
    "+cost+" Rs |");
    }
```

```
}

    public void seats(){

    seats=window+normal
    ;

    System.out.println("\n
    \nBusNo |
    Total
    |Window|
    Normal |");

    System.out.println("
    -----
```

```
-----");

    System.out.println("
    "+number+"
    |
    "+seats+"      |
    "+window+"
    |
    "+normal+"      |");

    }
```

#### Bus2.java

```
package Bus;

public class Bus2{

    String
    origin,destination,type,
    Atime,Dtime,duration;

    public static int seats;
    public static int
    window=17,normal=1
    8,number;

    public static
    int cost;

    public
    Bus2(){

    number=1222;

    origin="Mumbai";
```

```
destination="Pune";

    type="Ashwamedh";

    Atime="20:00";

    Dtime="11:30";

    duration="3 Hours 30
    mins";

    cost=600; }public
    void display(){
    System.out.println("
    |
    "+number+" |
    "+origin+" |
    "+destination+" |
    "+type+"      |
    "+Atime+" | "+Dtime+"
    | "+duration+" |
    "+cost+" Rs |");

    public void seats(){

    seats=window+normal
    ;

    System.out.println("\n
    \nBusNo |
    Total
    |Window|
    Normal |");

    System.out.println("
    -----
```

```
|
    "+number+" |
    "+origin+" |
    "+destination+" |
    "+type+"      |
    "+Atime+" | "+Dtime+"
    | "+duration+" |
    "+cost+" Rs |");}
```

```
public void seats(){

    seats=window+normal
    ;

    System.out.println("\n
    \n      BusNo |
    Total      |
    Window     |
    Normal     |");

    System.out.println("
    -----
    -----
    -----");
```

```
System.out.println("\n
    \n      BusNo |
    Total      |
    Window     |
    Normal     |");
```

```
System.out.println("
    -----
    -----
    -----");
```

```
System.out.println("
    "+number+"
    |
    "+seats+"      |
    "+window+"
    |
    "+normal+"      |");

    }
```

#### Bus3.java

```
package Bus;

public class Bus3{

    String
    origin,destination,type,
    Atime,Dtime,duration;

    public static
    int seats;

    public static
    int
```

```
if(destination.equalsIg  
noreCase("Banglore"))
```

```

if(BusNo!=1225 && {
BusNo!=1226)
{System.out.println("\n
Bus Number
Not Valid !!");

get1();}
}if(destination.equalsIg
noreCase("Nashik"))

{[if (BusNo!=1227
&& BusNo!=1228) {
System.out.println("\n
Bus Number
Not Valid !!");

get1();}} }}

```

### Route.java

```

package Bus

public class Route {

String
origin,destination,type,
Atime,Dtime,duration;

int seats,number;

public static
int cost;

```

```

public void display()

{ System.out.println("
|
"+number+" |
"+origin+" |
"+destination+" |
"+type+" |
"+Atime+" | "+Dtime+"
| "+duration+" |
"+cost+" Rs |");

}

public void get(){

Bus1 B1=new Bus1();

Bus2 B2=new Bus2();

Bus3 B3=new Bus3();

Bus4 B4=new Bus4();

Bus6 B6=new Bus6();

Bus5 B5=new Bus5();

Bus7 B7=new Bus7();

Bus8 B8=new Bus8();

```

```

/*System.out.println("
|Bus No.|
Origin |Destination |
Bus Type |
Dept. | Arr. | Journey
Duration| Cost |");

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

*/B1.display();

B2.display();

B3.display();

B4.display();

B6.display();

B5.display();

B7.display();

B8.display();

System.out.println("\n
\n_____

```

```

_____
_____
_____
_____
_____
\n\n");

System.out.println("
Redirecting
To Main Menu...");

System.out.println("\n
\n_____
_____
_____
_____
_____
\n\n");

```

```

}

}

```

## CODE OUTPUT

```
Microsoft Windows [Version 10.0.17763.1039]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Heramb>E:

E:\>cd E:\Project

E:\Project>javac Abc.java

E:\Project>java Abc

-----
Welcome to MSRTC E-Ticketing System
-----

Please Choose Login Type :-

1. User Login
2. Guest Login

Enter Option : _

-----
Welcome to MSRTC E-Ticketing System
-----

Please Choose Login Type :-

1. User Login
2. Guest Login

Enter Option : 1

-----
Enter UserName: Heramb
Enter Password: 1234

-----
Welcome Heramb
-----

Please Choose The Operation to Be Performed :-

1. Route & Other Details
2. Seat Availability
3. Book Tickets
4. Exit

Enter Options : _
```

```
Command Prompt - java _Abc

3. Book Tickets
4. Exit

Enter Options : 1

-----

|Bus No.| Origin |Destination| Bus Type           | Dept. | Arr. | Journey Duration| Cost |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 1221 | Mumbai | Pune      | Shivneri           | 12:00 | 15:30 | 3 Hours 30 mins | 460 Rs |
| 1222 | Mumbai | Pune      | Ashwamedh          | 20:00 | 11:30 | 3 Hours 30 mins | 600 Rs |

|Bus No.| Origin |Destination| Bus Type           | Dept. | Arr. | Journey Duration| Cost |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 1223 | Mumbai | Ahmedabad | ShivShai (Sleeper) | 20:00 | 4:00  | 8 Hours          | 500 Rs |
| 1224 | Mumbai | Ahmedabad | Semi-Luxury         | 7:00  | 15:00 | 8 Hours          | 250 Rs |

|Bus No.| Origin |Destination| Bus Type           | Dept. | Arr. | Journey Duration| Cost |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 1226 | Mumbai | Banglore  | Night Express      | 10:00 | 4:00  | 18 Hours         | 150 Rs |
| 1225 | Mumbai | Banglore  | ShivShai           | 00:00 | 19:00 | 18 Hours         | 450 Rs |

|Bus No.| Origin |Destination| Bus Type           | Dept. | Arr. | Journey Duration| Cost |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 1227 | Mumbai | Nashik    | ShivShahi          | 17:00 | 21:00 | 4 Hours 30 mins | 250 Rs |
| 1228 | Mumbai | Nashik    | Ordinary            | 9:00  | 13:00 | 4 Hours          | 120 Rs |

-----

Redirecting To Main Menu...
```

```
Command Prompt - java _Abc

Redirecting To Main Menu...

Please Choose The Operation to Be Performed :-

1. Route & Other Details
2. Seat Availability
3. Book Tickets
4. Exit

Enter Options : 2

-----

Enter Bus No : 1221

The Seat Availability For Given Bus Is As Follows.....

|BusNo | Total | Window | Normal |
|-----|-----|-----|-----|
| 1221 | 35    | 17     | 18     |

-----
```

```

Command Prompt
Enter Bus No : 1221

The Seat Availability For Given Bus Is As Follows.....

BusNo | Total | Window | Normal |
-----|-----|-----|-----|
1221  | 35    | 17     | 18     |

Please Choose The Operation to Be Performed :-

1. Route & Other Details
2. Seat Availability
3. Book Tickets
4. Exit

Enter Options : 4

THANK YOU FOR USING THIS SERVICE
E:\Project>

```

```

Command Prompt - java Abc
Enter Option : 1
Enter Username : Heramb
Enter Password : 1234
Welcome Heramb
Please Choose The Operation to Be Performed :-
1. Route & Other Details
2. Seat Availability
3. Book Tickets
4. Exit
Enter Options : 3
-----
Enter Your Origin      : Mumbai
Enter Your Destination : Pune

|Bus No.| Origin | Destination | Bus Type | Dept. | Arr. | Journey Duration| Cost |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 1221 | Mumbai | Pune | Shivneri | 12:00 | 15:30 | 3 Hours 30 mins | 400 Rs |
| 1222 | Mumbai | Pune | Ashwamedh | 20:00 | 11:30 | 3 Hours 30 mins | 600 Rs |

Enter Bus No :
Type here to search

```

## REFERENCES

We do have used a few references during the process of building our project. The references used are from Websites, Books etc.

The references used are:

### WEBSITES:

- 1: [www.javapoint](http://www.javapoint.com) .com.
- 2: [www.tutorialspoint.com](http://www.tutorialspoint.com).
- 3: [www.quora.com](http://www.quora.com).

### REFERENCE BOOKS:

- 1: Programming with Java By Balagurusamy E.
- 2: Java Programming By Dr. Rajendra Kawale

### Skill developed/learning out of this micro project :

- Since we worked in a group, We developed the skill of 'TEAMWORK' in us
- We came to know how and when to use some of the important concept of java.
- We attained the satisfied level of programming