RAILWAY MANAGEMENT SYSTEM

An Railway Management system is developed. It has following functionalities Ticket booking , berth selecting , cancelling ticket , Status Enqiury , List of all Trains.

Implementation:

List of Packages and Classes used along with the Files.

List of Packages used:

- ❖ rms

List of Interfaces used:

- ❖ Runnable

List of Classes used:

- ❖ RailwayManagementsystem
- ❖ TicketBooking
- ❖ Trains
- ❖ MyThread
- ❖ MyThread1
- ❖ StatusEnquiry
- ❖ Railway

Files:

- ❖ Timings.txt
- ❖ Enquiry.txt

Source Code:

Package rms:

```java
package rms;

import java.util.*;

public class Rm

{

    public void berth()

    {

        int option;

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

```
        System.out.println("1-lower berth,2-middle berth,3-upper
berth");

        System.out.println("enter berth");

        option=s.nextInt();

        switch(option)

        {

             case 1:

                  System.out.println("lower berth");

                  break;

             case 2:

                  System.out.println("Middle Berth");

                  break;

             case 3:

                  System.out.println("Upper Berth");

                  break;

             case 4:

                  System.exit(0);

                  break;

        }


    }


}
```

Files:
Timings.txt:

Name-janshathabdhi-7789
Time-5:00
Name-shathabdhi-7569
Time-10:30
Name-pinakini-75963
Time-16:45
Name-rajadhani-5623
Time-21:25
Name-Venkatadri-4356
Time-2:00

Name-Howrah Mail-8922
Time-18:00
Name-Konark-8564
Time-12:30
Name-Circar-3908
Time-15:40

Enquiry.txt:

Dear passengers, Janshathabdhi Express will be arrived shortly on platform no 3....!!

Dear passengers, Shathabdhi Express will be arrived shortly on platform no 6....!!

Dear passengers, Sorry for inconvenience... Howrah Mail train will be late for 15 minutes...!!

Dear passengers, Pinakini train will be arrived on platform no 1....!!

Dear passengers, Rajadhani Express is ready to leave from platform no 4....!!

Dear passengers, Train number 8564 Konark Express from vijayawada to delhi is on platform no 2...!!

Railway.class:

```java
import java.util.*;

import java.io.*;

import rms.Rm;

class RailwayManagementSystem

{


    String trainName;

    String trainNumber;

    String stationName;

    String stationCode;

    String trainType;

    int totalSeats;

    int availableSeats=5;


    public RailwayManagementSystem(String trainName, String
trainNumber, String stationName, String stationCode, String trainType,
int totalSeats, int availableSeats)

    {
```

```java
        this.trainName = trainName;
            this.trainNumber = trainNumber;
            this.stationName = stationName;
            this.stationCode = stationCode;
            this.trainType = trainType;
            this.totalSeats = totalSeats;
            this.availableSeats = availableSeats;


    }
    public static void cancelTicket()
    {


        Scanner s = new Scanner(System.in);
        System.out.print("\nEnter your name: ");
        String name = s.nextLine();
        System.out.print("Enter your age: ");
        int age = s.nextInt();
        System.out.print("Enter the train number: ");
        int trainNo = s.nextInt();
        System.out.print("Enter the number of tickets: ");
        int noOfTickets = s.nextInt();


        System.out.println("\nYour ticket is cancelled
successfully!");

        System.out.print("Your ticket details: \nName: " + name +
"\nAge: " + age + "\nTrain Number: " + trainNo + "\nNumber of Tickets:
" + noOfTickets);


    }


}
```

```java
class TicketBooking extends RailwayManagementSystem

{

     String name;

     String source;

     String destination;

     int ticketPrice;


     public TicketBooking(String trainName, String trainNumber, String
stationName, String stationCode, String trainType, int totalSeats, int
availableSeats, String name,String source, String destination, int
ticketPrice)

     {

     super(trainName, trainNumber, stationName, stationCode,
trainType, totalSeats, availableSeats);

          this.name = name;

          this.source = source;

          this.destination = destination;

          this.ticketPrice = ticketPrice;

     }


    // Method to book the ticket
     public void bookTicket()
     {

          int no=0;

          if(availableSeats>no)

          {

               Scanner s = new Scanner(System.in);

               System.out.print("\nEnter your name: ");

               String name = s.nextLine();

               System.out.print("Enter your age: ");

               int age = s.nextInt();

               System.out.print("Enter the train number: ");
```

```java
                int trainNo = s.nextInt();

                System.out.println("Enter your source place:");

                String source=s.next();

                System.out.println("Enter your destination:");

                String dest=s.next();

                System.out.println("Enter no of tickets:");

                no=s.nextInt();

                availableSeats=availableSeats-no;

                System.out.println("\nYour ticket is booked
successfully!");

                System.out.print("Your ticket details: \nName: " + name
+ "\nAge: " + age + "\nTrain Number: " + trainNo +
"\nSource:"+source+"\nDestination:"+dest);


            }

            else
            {

                    System.out.println("Sorry! No tickets
available.");

            }

        }

}


class MyThread implements Runnable
{

     String train;

     int tno;

     Thread t;

     MyThread(String tname,int i)

     {

          tno=i;

          train=tname;
```

```
            t=new Thread(this,"Thread"+tno);

            t.start();

       }

       public void run()

       {

            try

            {

                 Reader r=new FileReader(train);

                 BufferedReader br=new BufferedReader(r);

                 String s=br.readLine();

                 while(s!=null)

                 {

                      System.out.println("Train "+s);

                      s=br.readLine();

                      Thread.sleep(1000);

                 }

            }

            catch (Exception e)

            {

                 System.out.println(e);

            }

       }

}


class Trains

{

     public void list()

     {

          Scanner sc=new Scanner(System.in);

          System.out.println("Enter File name:");
```

```
            String file1=sc.nextLine();

            new MyThread(file1,1);

        }

}

class MyThread1 implements Runnable

{

        String  status;

        int sno;

        Thread t1;

        MyThread1(String st,int n)

        {

            sno=n;

            status=st;

            t1=new Thread(this,"Thread"+sno);

            t1.start();

        }

        public void run()

        {

            try

            {

                Reader r1=new FileReader(status);

                BufferedReader br1=new BufferedReader(r1);

                String s1=br1.readLine();

                while(s1!=null)

                {

                    System.out.println(s1);

                    s1=br1.readLine();

                    Thread.sleep(1000);

                }

            }
```

```
            catch (Exception e)

            {

                System.out.println(e);

            }

      }

}

class StatusEnquiry

{

      public void status()

      {

            Scanner sc=new Scanner(System.in);

            System.out.println("Enter File name:");

            String file1=sc.next();

            new MyThread1(file1,1);

      }

}

public class Railway

{

      private static ArrayList<String>comments=new ArrayList<>();

      static ArrayList<String>train=new ArrayList<>();

      public static void main(String args[])

      {

            System.out.println("\t\t\tWelcome to Railway Management
System!!!!!");

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

            Scanner sc=new Scanner(System.in);

            rms.Rm b=new rms.Rm();

            TicketBooking tb = new TicketBooking("Rajdhani
Express","12345","New Delhi","NDL", "Express",100,90,"John Doe","New
Delhi","Mumbai",1000);

            Trains l=new Trains();
```

```java
StatusEnquiry st=new StatusEnquiry();

while(true)

{

        System.out.println("\nPlease select an option: ");

        System.out.println("1. Book a Ticket");

        System.out.println("2. Berth Booking");

        System.out.println("3. Cancel a Ticket");

        System.out.println("4. Enquiry");

        System.out.println("5. List all Trains");

        System.out.println("6. Exit");

        int option =sc.nextInt();

        try{

            switch(option)

            {

                case 1:

                    tb.bookTicket();

                    comments.add("Happy Journey...VISIT

                                    AGAIN");

                    System.out.println();

                    System.out.println(comments);

                    break;

                case 2:

                    b.berth();

                    break;

                case 3:

                    tb.cancelTicket();

                    break;

                case 4  :

                    st.status();

                    break;
```

```
                        case 5:

                              l.list();

                              break;


                        case 6:

                              System.exit(0);

                              break;


                        default:

                              System.out.println("You have selected an
invalid option. Please try again!");

                        }

            }

            catch(Exception e)

            {

                  System.out.println("Error: " + e.getMessage());

                  }

            }

      }

}
```

Output:

```
F:\Home Assignment>javac Railway.java

F:\Home Assignment>java Railway
                    Welcome to Railway Management System!!!!!
                    ----------------------------------------------------------
Please select an option:
1. Book a Ticket
2. Berth Booking
3. Cancel a Ticket
4. Enquiry
5. List all Trains
6. Exit
1

Enter your name: HASITHA
Enter your age: 18
Enter the train number: 8564
Enter your source place:
Vij
Enter your destination:
Hyd
Enter no of tickets:
1

Your ticket is booked successfully!
Your ticket details:
Name: HASITHA
Age: 18
Train Number: 8564
Source:Vij
Destination:Hyd
[Happy Journey...VISIT AGAIN]
```

```
Please select an option:
1. Book a Ticket
2. Berth Booking
3. Cancel a Ticket
4. Enquiry
5. List all Trains
6. Exit
2
1-lower berth,2-middle berth,3-upper berth
enter berth
1
lower berth
```

```
F:\Home Assignment>javac Railway.java

F:\Home Assignment>java Railway
                   Welcome to Railway Management System!!!!!
            -----------------------------------------------------------
Please select an option:
1. Book a Ticket
2. Berth Booking
3. Cancel a Ticket
4. Enquiry
5. List all Trains
6. Exit
1

Enter your name: HEMA
Enter your age: 16
Enter the train number: 7789
Enter your source place:
VIJ
Enter your destination:
CHENNAI
Enter no of tickets:
1

Your ticket is booked successfully!
Your ticket details:
Name: HEMA
Age: 16
Train Number: 7789
Source:VIJ
Destination:CHENNAI
[Happy Journey...VISIT AGAIN]
```

```
Please select an option:
1. Book a Ticket
2. Berth Booking
3. Cancel a Ticket
4. Enquiry
5. List all Trains
6. Exit
2
1-lower berth,2-middle berth,3-upper berth
enter berth
2
Middle Berth
```

```
F:\Home Assignment>javac Railway.java

F:\Home Assignment>java Railway
                    Welcome to Railway Management System!!!!!
               -------------------------------------------------------
Please select an option:
1. Book a Ticket
2. Berth Booking
3. Cancel a Ticket
4. Enquiry
5. List all Trains
6. Exit
1

Enter your name: MOUNIKA
Enter your age: 19
Enter the train number: 7569
Enter your source place:
VIJ
Enter your destination:
BANGLORE
Enter no of tickets:
1

Your ticket is booked successfully!
Your ticket details:
Name: MOUNIKA
Age: 19
Train Number: 7569
Source:VIJ
Destination:BANGLORE
[Happy Journey...VISIT AGAIN]
```

```
Please select an option:
1. Book a Ticket
2. Berth Booking
3. Cancel a Ticket
4. Enquiry
5. List all Trains
6. Exit
2
1-lower berth,2-middle berth,3-upper berth
enter berth
3
Upper Berth
```

```
Please select an option:
1. Book a Ticket
2. Berth Booking
3. Cancel a Ticket
4. Enquiry
5. List all Trains
6. Exit
3


Enter your name: MOUNIKA
Enter your age: 19
Enter the train number: 7569
Enter the number of tickets: 1


Your ticket is cancelled successfully!
Your ticket details:
Name: MOUNIKA
Age: 19
Train Number: 7569
Number of Tickets: 1
```

```
4
Enter File name:
Enquiry.txt

Please select an option:
1. Book a Ticket
2. Berth Booking
3. Cancel a Ticket
4. Enquiry
5. List all Trains
6. Exit
Dear passengers, Janshathabdhi Express will be arrived shortly on platform no 3....!!

Dear passengers,  Shathabdhi Express will be arrived shortly on platform no 6....!!

Dear passengers, Sorry for inconvenience... Howrah Mail train will be late for 15 minutes...!!

Dear passengers, Pinakini train will be arrived on platform no 1....!!

Dear passengers, Rajadhani Express is ready to leave from platform no 4....!!

Dear passengers,  Train number 8564 Konark Express from vijayawada to delhi is on platform no 2...!!
```
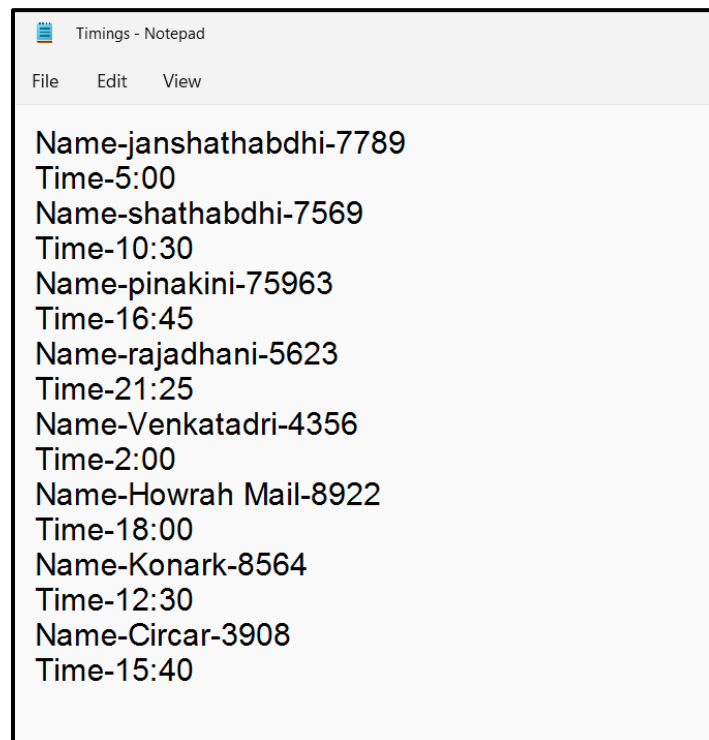
```
5
Enter File name:
Timings.txt

Please select an option:
1. Book a Ticket
2. Berth Booking
3. Cancel a Ticket
4. Enquiry
5. List all Trains
6. Exit
Train Name-janshathabdhi-7789
Train Time-5:00
Train Name-shathabdhi-7569
Train Time-10:30
Train Name-pinakini-75963
Train Time-16:45
Train Name-rajadhani-5623
Train Time-21:25
Train Name-Venkatadri-4356
Train Time-2:00
Train Name-Howrah Mail-8922
Train Time-18:00
Train Name-Konark-8564
Train Time-12:30
Train Name-Circar-3908
Train Time-15:40
6
```

Timings - Notepad

File   Edit   View

```
Name-janshathabdhi-7789
Time-5:00
Name-shathabdhi-7569
Time-10:30
Name-pinakini-75963
Time-16:45
Name-rajadhani-5623
Time-21:25
Name-Venkatadri-4356
Time-2:00
Name-Howrah Mail-8922
Time-18:00
Name-Konark-8564
Time-12:30
Name-Circar-3908
Time-15:40
```

Enquiry - Notepad

File   Edit   View

Dear passengers, Janshathabdhi Express will be arrived shortly on platform no 3....!!

Dear passengers, Shathabdhi Express will be arrived shortly on platform no 6....!!

Dear passengers, Sorry for inconvenience... Howrah Mail train will be late for 15 minutes...!!

Dear passengers, Pinakini train will be arrived on platform no 1....!!

Dear passengers, Rajadhani Express is ready to leave from platform no 4....!!

Dear passengers, Train number 8564 Konark Express from vijayawada to delhi is on platform no 2...!!

Result:

Thus Railway Management System is developed using java.