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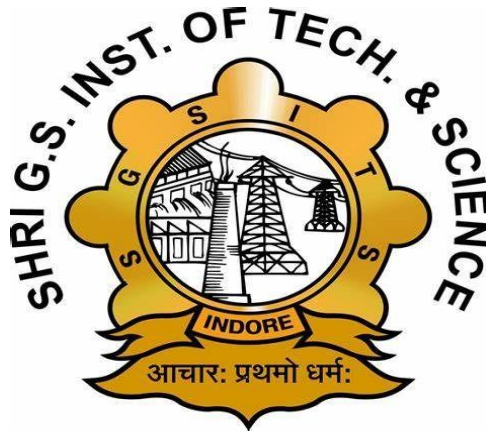
Online Train Ticket Booking System

MASTER OF COMPUTER APPLICATION

2020-21

CT20001 - Object Oriented Programming Using JAVA

Submitted To:-
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Recommendation :-

The project report entitled "Online Train Ticket Booking System" submitted by Chandra Shekhar Rawat student of MCA second year in the session 2019-22, towards partial fulfillment of the degree of Master of Computer Applications of Rajiv Gandhi Proudyogiki Vishwavidhyalaya, Bhopal, is a satisfactory account of {his/her/their} work and is recommended for the award of degree.

Mr. Upendra Singh
(Project Guide)
Department of Comp. Tech. & Application

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Acknowledgement

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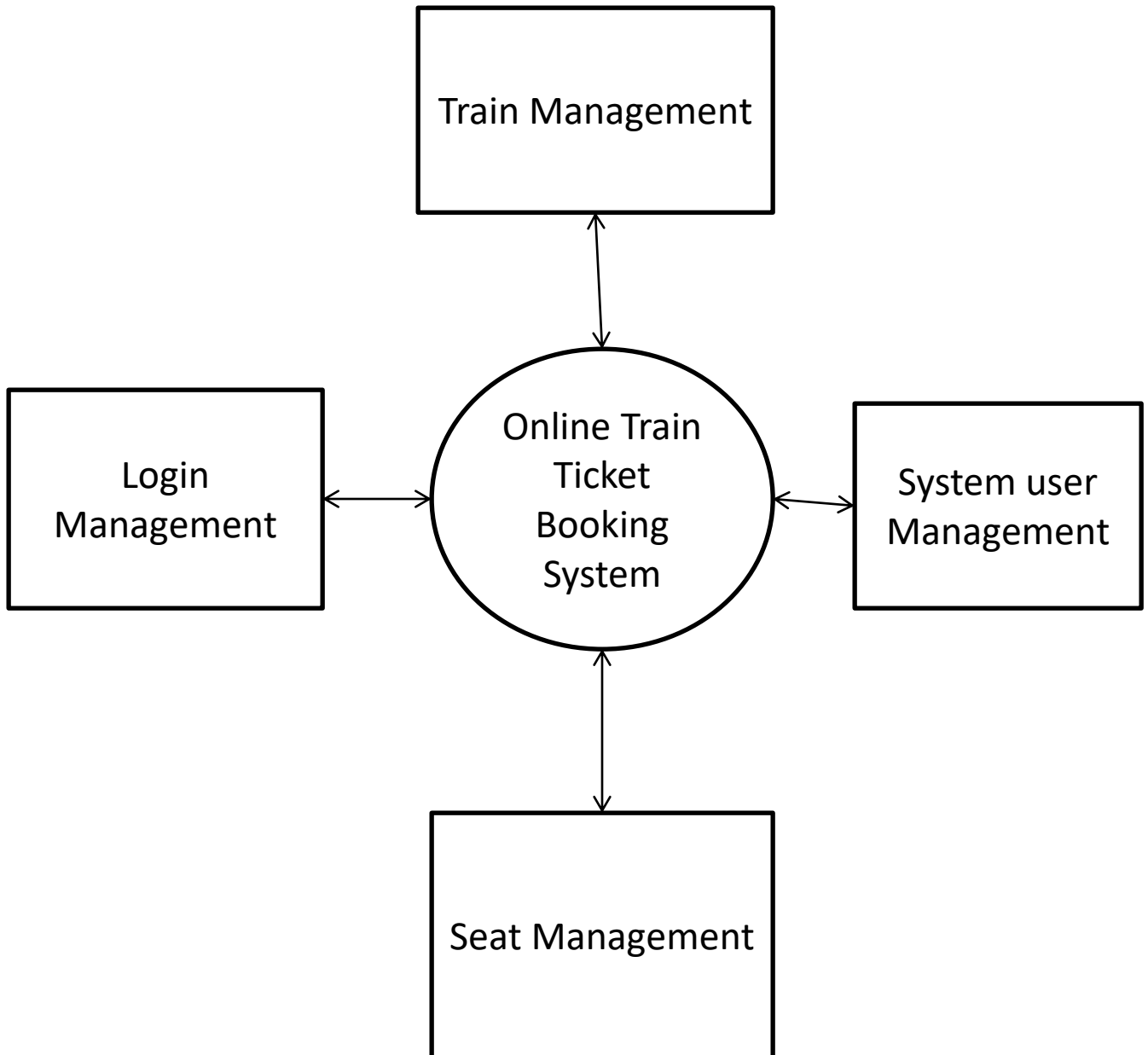
__Introduction__

Simple Train Ticket Booking System is based on the concept of booking train tickets. There's login system available for this system. This mini project contains limited features, but the essential one.
Talking about the features of this simple system, the user can book train ticket. For this, the user has to use login system, and select a stations but this project
only available two stations (Gwalior and Indore). Then the user has to select trains and after this select journey date, select seat number, select berth, and enter
the name and after this, the booking is done.
The system does not create an external file to store the user's data permanently and temporary. This system is in JAVA programming language, different variables, different classes, use inheritance etc.

Data Flow Diagram

Train Management

Login Management

Online Train Ticket Booking System

System user Management

Seat Management

Class Diagram

Select_stations
current : String journey : String
select_stations()

Choose_journey
choice : char train : int date : String name : String seat : String no : int
choose_journey() select_date() select_seat() current_time()

User_ID_password
str1 : String str2 : String
userID_password()
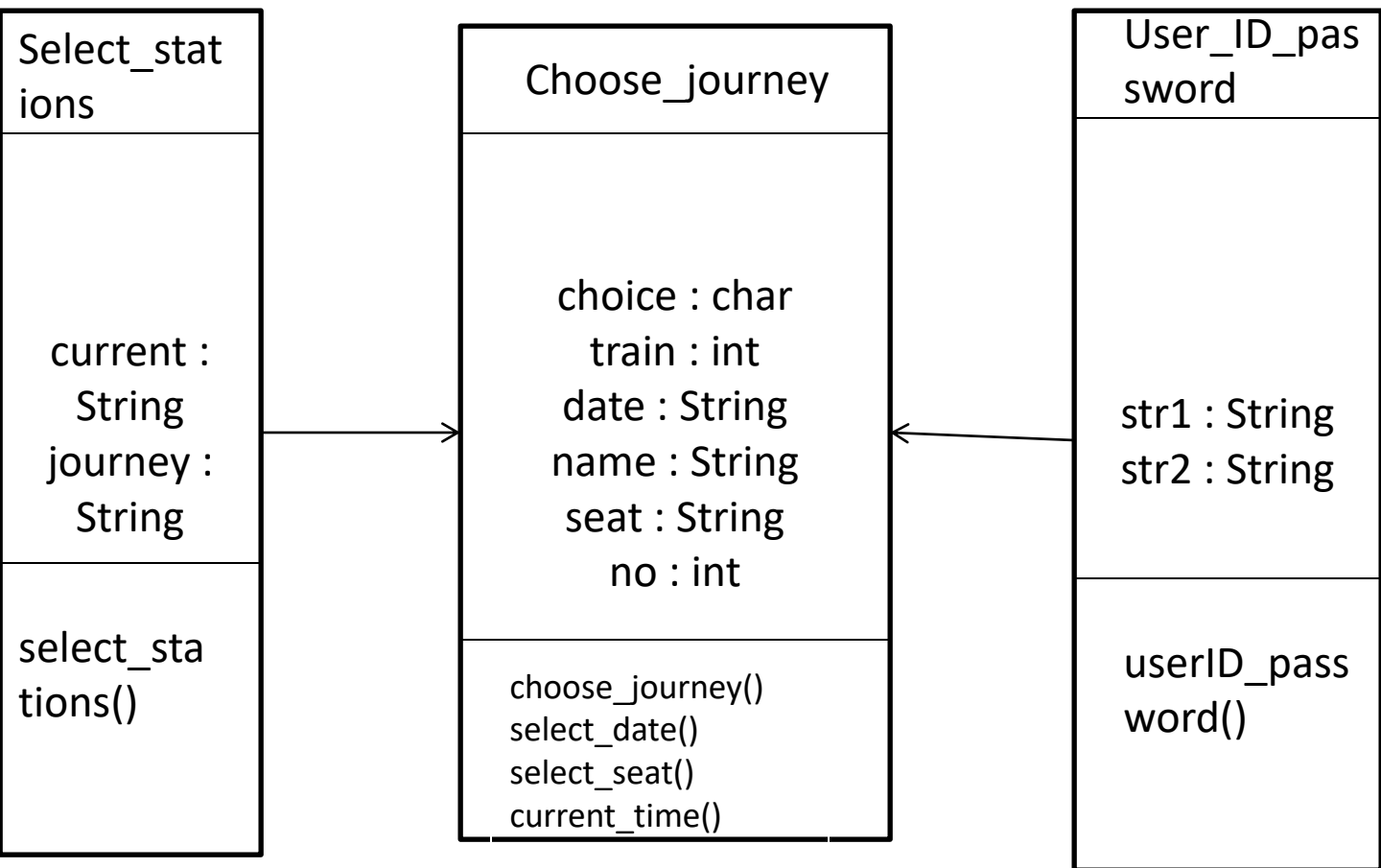
Code

```java
package com.ottbs;
import java.util.*;
import java.text.SimpleDateFormat;
import java.time.format.DateTimeFormatter;

class UserId_password {                              //create class UserId_password
    int userid_password() {                          //create method userid_password()
        String str1 = "Chandu123", str2 = "Rawat#12345";
        Scanner input=new Scanner(System.in);
        System.out.println("Enter your user name:-");
        str1 = input.nextLine();
        System.out.println("Enter your password:-");
        str2 = input.nextLine();
        do {
            if (str1.equals("Chandu123") && str2.equals("Rawat#12345")) {
//check username and password is correcct or not
                return 0;
            } else {
                System.out.println("Your username and password is wrong try again!");
                System.out.println("Enter your user name:-");
                str1 = input.nextLine();
                System.out.println("Enter your password:-");
                str2 = input.nextLine();
            }
        } while (true);                              //infinite loop
    }
}
```

```java
class Select_Stations extends UserId_password{
//create class Select_Stations and inherit the class UserId_password
    int select_stations() {                              //create method
select_stations()
        String current="gwalior",journey="indore";
        Scanner input=new Scanner(System.in);

        System.out.println("*********************************!WEL
COME TO ONLINE TRAIN TICKET BOOKING
SYSTEM!*********************************");
        System.out.println("Enter your current station:-");
        current = input.nextLine();
        System.out.println("Enter your journey station:-");
        journey = input.nextLine();
        do {
//only two stations are available GWALIOR & INDORE
            if (current.equals("gwalior") && journey.equals("indore") ||
current.equals("indore") && journey.equals("gwalior")) {
//check stations are available or not
                return 0;
            } else {
                System.out.println("Not available -> Enter available station");
                System.out.println("Enter your current station:-");
                current = input.nextLine();
                System.out.println("Enter your journey station:-");
                journey = input.nextLine();
            }
        }while(true);                                     //infinite loop
    }
}
```

```java
class Choose_journey extends Select_Stations{
//create class Choose_journey and inherit the class Select_Stations
    static char choice;
    void choose_journey() {                                    //create choose_journey() method
        System.out.println("These trains are running between these two stations :-");
        do{
            int train;
            Scanner input=new Scanner(System.in);

            System.out.println("======================================================================");
            System.out.println("||          S.No.    Train No.    Train Name              ||");
            System.out.println("||          1.      21116        Intercity Express        ||");
            System.out.println("||          2.      45768        Ratlam-jhansi Express    ||");
            System.out.println("||          3.      56398        Taj Express              ||");
            System.out.println("||          4.      86723        Jhelum Express           ||");

            System.out.println("======================================================================");
            System.out.println("Select the serial number you want:-");
            train = input.nextInt();
            switch (train) {                                    //switch case start
                case 1:
                    System.out.println("21116-Intercity Express!");
                    System.out.println("Timing => 8:00 pm to 8:00 am");
                    System.out.println("Fare => ₹320");
                    selectDate();                               //call selectDate() method
                    selectSeat();                               //call selectSeat() method
                    break;
                case 2:
                    System.out.println("45678-Ratlam Jhansi Express!");
                    System.out.println("Timing => 6:30 pm to 6:30 am");
                    System.out.println("Fare => ₹220");
                    selectDate();                               //call selectDate() method
                    selectSeat();                               //call selectSeat() method
                    break;
```

```java
        case 3:
                System.out.println("56398-Taj Express!");
                System.out.println("Timing => 6:50 pm to 6:50 am");
                System.out.println("Fare => ₹300");
                selectDate();                                    //call selectDate() method
                selectSeat();                                    //call selectSeat() method
                break;
            case 4:
                System.out.println("86723-Jhelum Express!");
                System.out.println("Timing => 7:15 pm to 6:00 am");
                System.out.println("Fare => ₹350");
                selectDate();                                    //call selectDate() method
                selectSeat();                                    //call selectSeat() method
                break;
            default:
                System.out.println("Invalid serial no.");        //if you enter wrong case number then print invalid serial no.
        }
        System.out.println();
        System.out.println("Do you want to continue,if yes then press (y) or (Y) otherwise press (n) or (N)!");
        choice=input.next().charAt(0);
    }while(choice=='y'||choice=='Y');                            //infinite loop
    }
```

```java
void selectDate() {                                    //create selectDate() method
    Scanner input=new Scanner(System.in);              //create Scanner class to take input from user
    System.out.println("Enter the date");
    do{
        String date = input.nextLine();
        DateTimeFormatter formatter = DateTimeFormatter.ofPattern("dd/MM/yyyy");     //create object for DateTimeFormatter class
        try {                                     //try block
            formatter.parse(date);                      //call DateTimeFormatter class
            break;
        } catch (Exception e) {                          //if you enter invalid date then execute catch block
            System.out.print("Invalid date ");
            System.out.println("-> Enter the valid date");
        }
    }while(true);                                    //infinite loop
}
void selectSeat() {                                  //create selectSeat() method
    String name;
    Scanner input=new Scanner(System.in);
    System.out.println("Enter your name");
    name=input.nextLine();
    System.out.println("Which berth do you want?");
    System.out.println("UPPER  ||  MIDDLE  ||  LOWER");
    String seat = input.nextLine();
    System.out.println("Enter the seat number! -> GREATER than 0 and SMALLER than or equal to 30");
    int no = input.nextInt();
    if (no > 0 && no < 30)                             //sitting arrangement
        if (no % 8 == 1 || no % 8 == 4) {               // you can enter only 1 to 30 seat number
            System.out.println("Seat no.= " + no);
            System.out.println("You got lower berth!");
            System.out.print(name+" ");
            current_time();                            //call current_time() method
        }
        else if (no % 8 == 2 || no % 8 == 5) {
            System.out.println("Seat no.= " + no);
            System.out.println("You got middle berth!");
            System.out.print(name+" ");
            current_time();                            //call current_time() method
        }
        else if (no % 8 == 3 || no % 8 == 6) {
            System.out.println("Seat no.= " + no);
            System.out.println("You got upper berth!");
            System.out.print(name+" ");
            current_time();                            //call current_time() method
        }
```

```java
     else if (no % 8 == 7) {
                System.out.println("Seat no.= " + no);
                System.out.println("You got side lower berth!");
                System.out.print(name+" ");
                current_time();                            //call current_time()
     method
            }
            else {
                System.out.println("Seat no.= " + no);
                System.out.println("You got side upper berth!");
                System.out.print(name+" ");
                current_time();                            //call current_time()
     method
            }
          else {
              System.out.println("Seat no.= " + no);
              System.out.println("Invalid seat number!");              //if you
     enter smaller than 0 and greater than 30 then print invalid seat number
          }
     }
     void current_time() {                                //create current_time()
     method
          SimpleDateFormat sdf=new SimpleDateFormat("dd/MM/yyyy -
     h:mm a");   //create object for SimpleDateFormat class
          Date date=new Date();                                //create object
     for Date class
          System.out.print("your ticket has *******BOOKED******* at this
     date and time -> ");
          System.out.println(sdf.format(date));                        //print
     date and time format
     }
}
public class Online_Train_Ticket_Booking_System {
   public static void main(String[] args) {              //main method
       Choose_journey object=new Choose_journey();          //create
   Choose_journey object and call methods through object reference
       object.userid_password();
       object.select_stations();
       object.choose_journey();
   }
}
```

Output

```
"C:\Program Files\Java\jdk-14.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2020.2.1\lib\idea_rt.jar=62264:C:\Program Files\JetB
Enter your user name:-
Chandu123
Enter your password:-
Rawat#12345
****************************************!WELCOME TO ONLINE TRAIN TICKET BOOKING SYSTEM!****************************************
Enter your current station:-
gwalior
Enter your journey station:-
indore
These trains are running between these two stations :-
======================================================================
||              S.No.    Train No.    Train Name                     ||
||              1.       21116        Intercity Express              ||
||              2.       45768        Ratlam-jhansi Express          ||
||              3.       56398        Taj Express                    ||
||              4.       86723        Jhelum Express                 ||
======================================================================
Select the serial number you want:-
1
21116-Intercity Express!
```

```
21116-Intercity Express!
Timing => 8:00 pm to 8:00 am
Fare => ₹320
Enter the date
22/12/2020
Enter your name
chandra shekhar rawat
Which berth do you want?
UPPER  ||  MIDDLE  ||  LOWER
upper
Enter the seat number! -> GREATER than 0 and SMALLER than or equal to 30
2
Seat no.= 2
You got middle berth!
chandra shekhar rawat your ticket has *******BOOKED******* at this date and time -> 20/01/2021 - 11:47 PM

Do you want to continue,if yes then press (y) or (Y) otherwise press (n) or (N)!
n

Process finished with exit code 0
```