**OOPS FISAC Assignment-1  
  
Group 4**

Roll No RegNo Group Members Contributions-

17 210911068 Zaid Khan Writing Main() class

18 210911070 Neelam Sandeep Documentation and Prints

19 210911072 Daksh Dadhania Complete BusTicketReservation() Class

and Added Login System for Users

20 210911076 Ojas Parashar Documenting and figured BusDetails,

Timings and fare price

21 210911084 PVS Prasanth Writing the project

Common Contribution- Outputs and Testing.

Everyone has tested and taken outputs separately. (to be submitted separately)

Code link-

<https://drive.google.com/drive/folders/1CtwNYhss4xcqsMSdADp41Yr95o6-MiQH?usp=sharing>



import java.io.\*;  
import java.util.ArrayList;  
import java.util.Objects;  
import java.util.Scanner;  
class Login {  
 static ArrayList<String> Username= new ArrayList<>();  
 static ArrayList<String> Password= new ArrayList<>();  
 Login(String User, String Pass){  
 Username.add(User);  
 Password.add(Pass);  
 }  
  
 static boolean check\_User(String User, String pass){  
 if(Username.contains(User) && Password.contains(pass)){  
 return true;  
 }  
 return false;  
 }  
  
}  
  
public class busreservationandticketing {  
 public static void BUSR() throws IOException {  
 BufferedReader in = new BufferedReader(new InputStreamReader(System.in));  
  
 String yn,search,again,choice;  
 int to=0,y=1,z=0,end=0,r=1;  
 int available[] = new int[6];  
 int ticketI[][] = new int [100][3];  
 String ticketS[][] = new String[100][3];  
 double ticketD[][] = new double [100][3];  
 double pay[] = new double[20];  
 double change[] = new double[20];  
  
  
  
  
 //"available[]" is the SEAT AVAILABLE//  
 //store 20 seats every destination [1-5]//  
 for(int o=1; o<=5; o++){  
 available[o]=20;  
 }  
  
 //if user and password are correct proceed to MAIN MENU//  
 for(int x=1; x==1;){  
 //the MAIN MENU//  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\*\*\*\*\* BUS RESERVATION AND TICKETING SYSTEM-MANIPAL \*\*\*\*\*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\* [1] Destination/ Timings available \*\*");  
 System.out.println("\*\* [2] Passenger Booking \*\*");  
 System.out.println("\*\* [3] Billing/ Payment Gateway \*\*");  
 System.out.println("\*\* [4] View \*\*");  
 System.out.println("\*\* [5] Exit \*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  
  
 for(x=1; x==1;){  
 System.out.print("ENTER CHOICE: ");  
 choice=in.readLine();  
  
 //if CHOICE is "1" display the DESTINATION//  
 switch (choice) {  
 case "1":  
 //the DESTINATION DETAILS//  
 //display the "Destination", every destination "Fare", and the "Seat" available//  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\*\*\* SOURCE -> DESTINATION | Timings | FARE | SEAT \*\*\*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\*\*\* 1.)MANIPAL -> MUMBAI Bus Depot | 9:55 PM - 3:07 PM 17hr 12min | Rs. 3600 | " + available[1] + " \*\*\*\*");  
 System.out.println("\*\*\*\* 2.)MANIPAL -> BANGALORE Bus Depot | 8:30 PM - 4:52 AM 8hr 22min | Rs. 1300 | " + available[2] + " \*\*\*\*");  
 System.out.println("\*\*\*\* 3.)MANIPAL -> DELHI Bus Depot | 9:55 PM - 8:32 AM 1day 11hr | Rs. 4500 | " + available[3] + " \*\*\*\*");  
 System.out.println("\*\*\*\* 4.)MANIPAL -> AHMEDABAD Bus Depot | 9:55 PM - 5:35 AM 1day 8hr | Rs. 4000 | " + available[4] + " \*\*\*\*");  
 System.out.println("\*\*\*\* 5.)MANIPAL -> CHENNAI Bus Depot | 8:55 PM - 11:00 AM 14hr 5min | Rs. 1950 | " + available[5] + " \*\*\*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  
 System.out.println("PWD, STUDENT, & SENIOR CITIZEN with 20% DISCOUNT!!!\n");  
 x = 0;  
 break;  
  
 //if CHOICE is "2" proceed to Ticket Booking//  
 case "2":  
 int print = 1;  
  
  
 //display first the Destination Details//  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\*\*\* SOURCE -> DESTINATION | Timings | FARE | SEAT \*\*\*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\*\*\* 1.)MANIPAL -> MUMBAI Bus Depot | 9:55 PM - 3:07 PM 17hr 12min | Rs. 3600 | " + available[1] + " \*\*\*\*");  
 System.out.println("\*\*\*\* 2.)MANIPAL -> BANGALORE Bus Depot | 8:30 PM - 4:52 AM 8hr 22min | Rs. 1300 | " + available[2] + " \*\*\*\*");  
 System.out.println("\*\*\*\* 3.)MANIPAL -> DELHI Bus Depot | 9:55 PM - 8:32 AM 1day 11hr | Rs. 4500 | " + available[3] + " \*\*\*\*");  
 System.out.println("\*\*\*\* 4.)MANIPAL -> AHMEDABAD Bus Depot | 9:55 PM - 5:35 AM 1day 8hr | Rs. 4000 | " + available[4] + " \*\*\*\*");  
 System.out.println("\*\*\*\* 5.)MANIPAL -> CHENNAI Bus Depot | 8:55 PM - 11:00 AM 14hr 5min | Rs. 1950 | " + available[5] + " \*\*\*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  
 System.out.println("PWD, STUDENT, & SENIOR CITIZEN with 20% DISCOUNT!!!\n");  
  
 if ((available[1] == 0) && (available[2] == 0) && (available[3] == 0) && (available[4] == 0) && (available[5] == 0)) {  
 System.out.println("Sorry, We don't have available seats for all Destination!");  
 x = 0;  
  
 }  
  
  
 //inputting of Passenger's Name//  
 else {  
 for (x = 1; x == 1; ) {  
 System.out.print("\nENTER PASSENGER'S NAME: ");  
 ticketS[z][0] = in.readLine();  
  
 x = 0;  
  
 //if Passenger's Name already used, display error and go back to Inputting//  
 for (int l = 0; l < z; l++) {  
 if (ticketS[l][0].equalsIgnoreCase(ticketS[z][0])) {  
 System.out.println("Sorry, Passenger's name have already used!");  
 x = 1;  
 }  
 }  
 }  
  
 //inputting of Destination//  
 //integers Only [1-5]//  
 for (x = 1; x == 1; ) {  
 System.out.print("ENTER DESTINATION [number]: ");  
 to = Integer.parseInt(in.readLine());  
  
 //if Inputted integers are "<1" or ">5", display error and go back to Inputting//  
 if (to < 1 || to > 5) {  
 System.out.println("Invalid Input!");  
 x = 1;  
 }  
 //if available seat is equal to "Zero", display error and go back to Inputting//  
 for (int d = 1; d <= 5; d++) {  
 if (to == d) {  
 if (available[to] == 0) {  
 System.out.println("Sorry, We don't have available seat!");  
 }  
 x = 0;  
 }  
 }  
 }  
  
 //convert the integer to string//  
 String dest[] = {" ", "MUMBAI", "BANGALORE", "DELHI", "AHMEDABAD", "CHENNAI"};  
 double fare[] = {0, 3600,1300, 4500, 4000, 1950};  
  
 //converted integer to string, transfer to storage array//  
 ticketS[z][1] = dest[to];  
 ticketD[z][0] = fare[to];  
  
 //inputting for Number of Passenger's//  
 for (x = 1; x == 1; ) {  
 System.out.print("HOW MANY PASSENGERS ARE YOU?: ");  
 ticketI[z][0] = Integer.parseInt(in.readLine());  
  
 //subtract the available seat by the number inputted//  
 for (int p = 1; p <= 5; p++) {  
 if (to == p) {  
 print = 1;  
 available[to] = available[to] - ticketI[z][0];  
  
 //if the subtracted available seat is "<0", display error//  
 //add the inputted number to the subtracted seat, to back the original seat//  
 //display the available seat and back to the inputting//  
 if (available[to] < 0) {  
 System.out.print("Sorry, We don't have seat available for " + ticketI[z][0] + " person\n");  
 available[to] = available[to] + ticketI[z][0];  
 System.out.print("We only have " + available[to] + " seat available\n");  
 x = 1;  
 print = 0;  
 } else {  
 x = 0;  
 }  
 }  
 }  
  
 }  
  
 //inputting for Number of Discounted Passenger's//  
 for (x = 1; true; ) {  
 System.out.print("HOW MANY PASSENGERS HAVE DISCOUNT?: ");  
 ticketI[z][1] = Integer.parseInt(in.readLine());  
  
 if (ticketI[z][1] > ticketI[z][0]) {  
  
 System.out.println("Invalid Input!");  
 System.out.println("No. of Passengers are only " + ticketI[z][0] + "!");  
 x = 1;  
 } else {  
 break;  
 }  
 }  
  
  
 //print out of passengers details....  
 if (print == 1) {  
 System.out.println("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\* PASSENGER'S DETAILS \*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("PASSENGER'S NAME: " + ticketS[z][0]);  
 System.out.println("PASSENGER'S DESTINATION : " + ticketS[z][1]);  
 System.out.println("FARE PRICE: Rs. " + ticketD[z][0]);  
 System.out.println("NO. OF PASSENGERS: " + ticketI[z][0]);  
 System.out.println("NO. OF PASSENGERS WITH DISCOUNT: " + ticketI[z][1]);  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  
 ticketS[z][2] = "0";  
 double discount = (ticketD[z][0] - (ticketD[z][0] \* 0.2)) \* ticketI[z][1];  
 ticketD[z][2] = ((ticketI[z][0] - ticketI[z][1]) \* ticketD[z][0]) + discount;  
 x = 0;  
 }  
 z++;  
 }  
 break;  
 case "3":  
  
  
 for (x = 1; x == 1; ) {  
  
 System.out.print("ENTER PASSENGER'S NAME: ");  
 search = in.readLine();  
  
  
 int s = 1;  
 for (int b = 0; b < z; b++) {  
 if (search.equalsIgnoreCase(ticketS[b][0])) {  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\* PASSENGER'S DETAILS \*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("PASSENGER'S NAME: " + ticketS[b][0]);  
 System.out.println("PASSENGER'S DESTINATION : " + ticketS[b][1]);  
 System.out.println("FARE PRICE: Rs." + ticketD[b][0]);  
 System.out.println("NO. OF PASSENGERS: " + ticketI[b][0]);  
 System.out.println("NO. OF PASSENGERS WITH DISCOUNT: " + ticketI[b][1]);  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 s = 0;  
  
 if (ticketS[b][2].equals("x")) {  
 System.out.println("Passenger's Already Paid!");  
 x = 0;  
 } else {  
 ticketS[b][2] = "x";  
  
  
 for (x = 1; x == 1; ) {  
 System.out.println("\nPASSENGER'S TOTAL FARE: Rs. " + ticketD[b][2]);  
 System.out.print("ENTER AMOUNT TO PAY: ");  
 pay[b] = Double.parseDouble(in.readLine());  
 change[b] = pay[b] - ticketD[b][2];  
  
 if (change[b] < 0) {  
 System.out.println("Invalid Input!");  
 x = 1;  
 } else {  
 System.out.println("CHANGE: Rs. " + change[b]);  
 System.out.println("");  
 x = 0;  
 }  
 }  
 }  
 }  
 }  
 if (s == 1) {  
 System.out.println("\nPASSENGER'S NAME NOT FOUND!\n");  
 for (int q = 1; q == 1; ) {  
  
 System.out.print("Do you wish to continue with this transaction? [Y/N]: ");  
 again = in.readLine();  
  
 if (again.equalsIgnoreCase("y")) {  
 q = 0;  
 } else if (again.equalsIgnoreCase("n")) {  
 q = 0;  
 x = 0;  
  
 } else {  
 System.out.println("\nInvalid input!\n");  
 }  
  
  
 }  
 }  
 }  
  
 break;  
 case "4":  
  
  
 for (int sx = 1; sx <= 3; ) {  
 System.out.print("SEARCH PASSENGER'S NAME: ");  
 search = in.readLine();  
  
 int s = 1;  
 for (x = 0; x <= z; x++) {  
 if (search.equalsIgnoreCase(ticketS[x][0])) {  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\* PASSENGER'S DETAILS \*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("PASSENGER'S NAME: " + ticketS[x][0]);  
 System.out.println("PASSENGER'S DESTINATION : " + ticketS[x][1]);  
 System.out.println("FARE PRICE: Rs." + ticketD[x][0]);  
 System.out.println("NO. OF PASSENGERS: " + ticketI[x][0]);  
 System.out.println("NO. OF PASSENGERS WITH DISCOUNT: " + ticketI[x][1]);  
 System.out.println("TOTAL FARE PRICE: Rs. " + ticketD[x][2]);  
 if (ticketS[x][2].equals("x")) {  
 System.out.println("PAY: Rs. " + pay[x]);  
 System.out.println("CHANGE: Rs. " + change[x]);  
 System.out.println("STATUS: PAID");  
 } else {  
 System.out.println("STATUS: NOT PAID");  
 }  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  
 s = 0;  
 sx = 4;  
 }  
 }  
  
  
 if (s == 1) {  
 System.out.println("Passenger's Name not found!");  
 sx++;  
 }  
  
 }  
 break;  
 case "5":  
 end = 1;  
 x = 0;  
 System.out.println("Thank You!");  
 break;  
 default:  
 System.out.println("Invalid Input!");  
 x = 1;  
 break;  
 }  
 }  
  
 for(y=1; y==1;){  
 if(end==1){  
 break;  
 }  
 System.out.print("Do you want to go back to menu? [Y/N]: ");  
 yn = in.readLine();  
  
 if (yn.equalsIgnoreCase("y")){  
 x=1;  
 y=0;  
 }  
 else if (yn.equalsIgnoreCase("n")){  
 System.out.println("\nThank You!!!");  
 break;  
 }  
 else{  
 System.out.println("Invalid Input!!!");  
 y=1;  
 }  
 }  
 }  
  
  
  
  
  
 }  
 public static void main(String[] args) throws IOException {  
 Scanner sc=new Scanner(System.in);  
 BufferedReader in = new BufferedReader(new InputStreamReader(System.in));  
  
 System.out.println(" BUS RESERVATION SYSTEM-MANIPAL ");  
 System.out.println(" LOGIN PAGE ");  
  
  
 System.out.println("1.USER LOGIN\n2.CREATE ACCOUNT\n3.EXIT");  
 int ch = sc.nextInt();  
 String user,password,repass;  
 while (ch == 1 | ch == 2 ) {  
 switch (ch) {  
  
 case 1: {  
 System.out.println("USER LOGIN");  
 System.out.print("Enter Username: ");  
 user = in.readLine();  
 System.out.print("Enter Password: ");  
 password = in.readLine();  
 if (Login.check\_User(user, password)) {  
 System.out.println("WELCOME " + user);  
 BUSR();  
 }  
 else{  
 System.out.println(user+"- this doesn't exist in our database !! OR Your Password is incorrect !!");  
 System.out.println();  
 }  
 break;  
 }  
 case 2: {  
 System.out.println("CREATE ACCOUNT");  
 System.out.print("Enter Username: ");  
 user = in.readLine();  
 System.out.println("Enter Password: ");  
 password = in.readLine();  
 System.out.println("Reenter the Password: ");  
 repass = in.readLine();  
 if (Objects.equals(repass, password)) {  
 Login cl = new Login(user, password);  
 System.out.println("Account created !!");  
 System.out.println();  
 }  
 else{  
 System.out.println("Passwords don't match !! Make your account again !!");  
 System.out.println();  
 }  
 break;  
 }  
 }  
 System.out.println("1.USER LOGIN\n2.CREATE ACCOUNT\n3.EXIT");  
 ch = sc.nextInt();  
 }  
  
 sc.close();  
  
  
 }  
}