



University Management System

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University Management System (UMS):

Introduction:

University management system consists of further four major projects:

- i. Login/Signup and Course Registration.
- ii. Transport management system.
- iii. Cafe management system.
- iv. Library management system.

University management system allows you to create a new account and signup. You can register your all courses of Computer Science department here. Data will be stored in files at backend which you can read or write. You can buy books online in it as well. All the available books will be shown to you which you can borrow and then return. It also offers you to buy café items online. You can have multiple type of food to eat with good quality. You can buy soft drinks, cold drinks, coffees etc. Your bill will be displaced once you finish with your process of buying and the data will be stored in files at backend. You can also book your transport online where you will be given a unique id and all the routes will be shown to you.

Task Distribution:

- ✓ Transport management system done by **Shahzaneer Ahmed**.
- ✓ Login/signup validation, course registration done by **Qasim Ali**
- ✓ Library management system done by **Daoud Hussain**.
- ✓ Café Management system done by **Sameem Amjad**.
- ✓ Logic building done **combined**.
- ✓ Final compilation done by **Qasim Ali**.
- ✓ Report done **Daoud Hussain**.
- ✓ Formating done by **Shahzaneer Ahmed**.
- ✓ Final testing done by **Sameem Amjad**.
- ✓ Group led by **Qasim Ali**.

Features of Project:

- ✓ Privacy protected project that you can only use after correct credentials (ie, password and id's)
- ✓ Use of Modules to make the main program shorter and easier to understand
- ✓ Data stored in files in order to store permanently unlike the arrays.
- ✓ Properly indented code
- ✓ Easy logic designing to make code much easier for any new reader or coder.
- ✓ Uses of methods for the implementation of different tasks.

Modules Used in Project:

The Program uses modules to make main program shorter and easier to understand. Each module has a function of its own which is called upon whenever necessary. They are as follows:

Signup/ Login:

New user will create their account and after creating their account they can sign in with their respective id's and credentials. Following is the code of login/signup module.

```
// Registration Method..
public static void registration() {

    System.out.println("\n*****
*****\n");
    System.out.println("\tRegistration Form\n");

System.out.println("*****
**\n");
    input.nextLine();

    // Student name validation
    while(true) {
        System.out.print("Enter Your Name : ");
        name = input.nextLine().toUpperCase();
        if(name.length() >= 3 && name.matches("^[a-zA-Z
]*$")) {
            break;
        }
        else{
            System.out.println("\tTry again! Invalid
data ");
        }
    }

    // Password validation
    while(true) {
        System.out.print("Enter Your Password(at least 8
characters) : ");
        password = input.nextLine();
        if(password.length() >= 8) {
            break;
        }
        else{
            System.out.println("\tTry again! your
password must contain at least 8 characters ");
        }
    }

    // Degree validation
    while(true) {
        System.out.print("Enter your Degree(BSCS) : ");
        degree = input.nextLine().toUpperCase();
        if(degree.toUpperCase().compareTo("BSCS") == 0) {
            break;
        }
        else{
            System.out.println("\tTry again! Enter
valid degree name!");
        }
    }
}
```

```

        // Gender validation
        while(true) {
            System.out.print("Enter Your Gender(Male/Female) : ");
            gender = input.nextLine().toUpperCase();
            if(gender.compareTo("MALE")==0 ||
gender.compareTo("FEMALE")==0) {
                break;
            }
            else{
                System.out.println("\tTry Again! Enter
valid data!");
            }
        }

        // Date of Birth Validation
        while(true) {
            System.out.print("Enter Your Date of Birth(DD-MM-
YYYY) : ");
            dateOfBirth = input.nextLine();
            if(Pattern.matches("(^[0-9]|[12][0-9]|3[01])[-
/.](0[1-9]|1[012])[-/.](19|20)\\d\\d$",dateOfBirth)){
                break;
            }
            else{
                System.out.println("\tTry Again! Enter
date in valid format!");
            }
        }

        // Student CNIC Validation
        while(true) {
            System.out.print("Enter Your CNIC number : ");
            studentCnic = input.nextLine();
            if(Pattern.matches("\\d{5}-\\d{7}-
\\d{1}",studentCnic)){
                break;
            }
            else{
                System.out.println("\tTry Again! Enter
valid CNIC!");
            }
        }

        // Gmail Validation
        while(true) {
            System.out.print("Enter Your Email
Address(xxxx@gmail.com) : ");
            gmail = input.nextLine();
            if(Pattern.matches("^[\\w.+\\-
]+@gmail\\.com$",gmail)){
                break;
            }
            else{
                System.out.println("\tTry Again! Enter
valid email ID.");
            }
        }

```

```

    }

    }

    // contact Number Validation
    while(true) {
        System.out.print("Enter Your contact Number(03xx-
xxxxxxx) : ");

        contactNumber = input.nextLine();
        if(Pattern.matches("03\\d{2}-
\\d{7}",contactNumber) && contactNumber.length()==12) {
            break;
        }
        else{
            System.out.println("\tTry Again! Enter
valid contact Number!");
        }
    }

    // Father Name.
    while(true) {
        System.out.print("Enter Your Father's Name : ");
        fatherName = input.nextLine().toUpperCase();
        if(fatherName.length()>=3 &&
fatherName.matches("[a-zA-Z ]*$")) {
            break;
        }
        else{
            System.out.println("\tTry Again! Enter
valid data.");
        }
    }

    // Father CNIC Validation
    while(true) {
        System.out.print("Enter Your Father CNIC number :
");

        fatherCnic = input.nextLine();
        if(Pattern.matches("\\d{5}-\\d{7}-
\\d{1}",fatherCnic)){
            break;
        }
        else{
            System.out.println("\tTry Again! Enter
valid CNIC number.");
        }
    }

    // Random Registration Number Generation
    String[] system = {"FA", "SP"};
    int r = ((int) (Math.random()*150));
    String regNumber = system[(int) (Math.random()*2)] + "21-
BCS-" + (r<10?("00"):(r<100?("0"):(""))+r;
    while(true) {
        try{
            File file = new
File("roll_numbers/ids.txt");
            Scanner sc = new Scanner(file);

```

```

        while(sc.hasNextLine()){
            String line = sc.nextLine();
            if(line.compareTo(regNumber)==0){
                continue;
            }
        }
        sc.close();
        FileWriter fileWriter = new
FileWriter("roll_numbers/ids.txt",true);
        fileWriter.write(regNumber+"\n");
        fileWriter.close();
        break;
    }
    catch(Exception e){
        System.out.print(e);
    }
}

// Storing data to the file

try{
    File file = new
File("students_data/"+regNumber+".txt");
    boolean value = file.createNewFile();
    if(value){
        try{
            FileWriter fileWriter = new
FileWriter("students_data/"+regNumber+".txt");
            fileWriter.write("name:"+name);

            fileWriter.write("\npassword:"+password);

            fileWriter.write("\nregNumber:"+regNumber);

            fileWriter.write("\ndegree:"+degree);

            fileWriter.write("\ngender:"+gender);

            fileWriter.write("\ndateOfBirth:"+dateOfBirth);
            fileWriter.write("\ngmail:"+gmail);

            fileWriter.write("\nstudentCnic:"+studentCnic);

            fileWriter.write("\ncontactNumber:"+contactNumber);

            fileWriter.write("\nfatherName:"+fatherName);

            fileWriter.write("\nfatherCnic:"+fatherCnic);
            fileWriter.close();

            System.out.println("\n*****
*****\n");

            System.out.println("Hi! "+name+",
Your Registration number is "+regNumber);
            System.out.println("\tRegistered
Successfully!\n");

```

```

System.out.println("*****\n");

        }
        catch (Exception e) {
            System.out.println("Errored
occured!");
        }
    }
    else {
        System.out.println(regNumber+" already
exists!");
    }
}
catch (Exception e) {
    System.out.println("Errored occured!");
}
Choices();

}

// LOGIN-FORM
public static void login() {

System.out.println("\n*****\n");

        System.out.println("\tLOGIN FORM\n");

System.out.println("*****\n");

        input.nextLine();

        // Password validation
        boolean userExisted = false;
        while (true) {
            // RegNumber validation checking..
            while (true) {
                System.out.print("Enter Registration
Number (XXXX-XXX-XXX) : ");
                regNumber =
input.nextLine().toUpperCase();
                if (Pattern.matches("SP\\d{2}-\\w{3}-
\\d{3}|FA\\d{2}-\\w{3}-\\d{3}", regNumber) ||
regNumber.compareTo("ADMIN") == 0) {
                    break;
                }
                else {
                    System.out.print("Invalid ID! Try
Again....\n");
                }
            }

            System.out.print("Enter Your Password : ");

```



```

        password = input.nextLine();
        if (regNumber.compareTo("ADMIN")==0 &&
password.compareTo("admin")==0) {
            admin.Admin.main();
            break;
        }
        else{
            File myfile = new
File("students_data/"+regNumber+".txt");

            if(myfile.exists()){
                try{
                    Scanner sc = new
Scanner(myfile);

                    while(sc.hasNextLine()){
                        String line =

                        String key =

                        String value =

                        line.substring(0,line.indexOf(":"));

                        line.substring(line.indexOf(":")+1,line.length());

                        if(key.compareTo("password")==0 && value.compareTo(password)==0){
                            userExisted
= true;

                            break;
                        }

                        if(key.compareTo("name")==0) {

                            stdName =

                            value;

                        }

                        }

                        sc.close();
                    }
                    catch (Exception e) {
                        System.out.print(e);
                    }

                    if(userExisted) {

                        System.out.println("\n*****
*****\n");

                        System.out.println("\tWelcome "+stdName);

                        System.out.println("\n*****
*****");

                        management(regNumber);
                        break;
                    }
                    else{

                        System.out.println("\nInvalid Credentials! Try Again!");

                    }

                }
            }
        }
    }
}
else{

```

```

        didn't exists!");
    }
}

}

}

// LOGIN-FORM ENDS

```

Output Login/Registration:

```
*****
Registration Form
*****

Enter Your Name : Sameem Amjad
Enter Your Password(at least 8 characters) : !@#$%^&*()
Enter your Degree(BSCS) : bscs
Enter Your Gender(Male/Female) : male
Enter Your Date of Birth(DD-MM-YYYY) : 19-01-2002
Enter Your CNIC number : 37201-5783035-6
Enter Your Email Address(XXXX@gmail.com) : qa62488@gmail.com
Enter Your contact Number(03xx-xxxxxxx) : 0331-81810176
    Try Again! Enter valid contact Number!
Enter Your contact Number(03xx-xxxxxxx) : 0331-8181017
Enter Your Father's Name : Amjad Hussain
Enter Your Father CNIC number : 37201-5783035-3

Hi! SAMEEM AMJAD, Your Registration number is FA21-BCS-043
    Registered Successfully!

*****

LOGIN FORM

*****

Enter Registration Number(XXXX-XXX-XXX) : fa21-bcs-043
Enter Your Password : !@#$%^&*()
```

Course Registration:

Students can register your course with provided registration number. You can check your credit hours information in this module. Your data will be stored at backend in file as a record keeping. Your information will also contain such as subject name and teacher name.

Code:

```

static void manage(String regNumber){

    System.out.println("\n*****\n");
    System.out.println("\tCourse Registration\n");

System.out.println("*****\n");

    // Checking that courses registered or not.
    try{
        File myfile = new File("students_data/"+ regNumber + ".txt");
        Scanner sc = new Scanner(myfile);
        while(sc.hasNextLine()){
            String line = sc.nextLine();
            if(line.contains("Courses")){
                System.out.print("Courses already registered!\n");
                break;
            }
        }
    }
    catch(Exception e){
        System.out.println(e);
    }

    // Semester Entry and vallidation
    while(true) {
        try{
            System.out.print("Enter your semester(1 for first
semester ..'1-8') : ");
            semester = input.next();
            if(Integer.parseInt(semester)<=8 &&
Integer.parseInt(semester)>0) {
                break;
            }
            else{
                System.out.println("Invalid input, Try again!");
                input.nextLine();
            }
        }
        catch(Exception e){
            System.out.println("Invalid input, Try again!");
            input.nextLine();
        }
    }

    File myfile = new File("courses/"+ semester + ".txt");

    // finding total_courses in file
    int total_courses = 0;
    try{
        Scanner sc = new Scanner(myfile);
        while(sc.hasNextLine()){
            String line = sc.nextLine();
            total_courses++;

```

```

    }
}
catch(Exception e){
    System.out.print(e);
}

// Declaring the array size
courseDetails = new String[total_courses][4];

// Storing data in a file.
int[] space = {15,30,15,30};
try{
    Scanner sc = new Scanner(myfile);
    int i=0,j=0;
    System.out.print("\n\n");
    System.out.printf("%-5s%-15s%-30s%-15s%-30s\n", "ID", "Course_Code", "Course_Title", "Credit_Hours", "Instructor");
    System.out.println("-----");
    while(sc.hasNextLine()){
        System.out.printf("%-5d", i);
        String line = sc.nextLine();
        String[] data = line.split(",", 4);
        for(String item: data){
            System.out.printf(("%-"+space[j]+"s"), item);
            courseDetails[i][j] = item;
            j++;
        }
        i++;
        j=0;
        System.out.println();
    }
}
catch(Exception e){
    System.out.print(e);
}

// Course Registration

while(true){
    try{
        System.out.print("Enter the ID's of courses you want to register(comma separated) : ");
        String[] ids = input.next().split(",");
        for(String e:ids){
            if(Integer.parseInt(e)>courseDetails.length-1 && Integer.parseInt(e)<0){
                continue;
            }
        }
    }
    try{

```

```

        FileWriter fileWriter = new
FileWriter("students_data/" + regNumber + ".txt", true);

        fileWriter.write("\nCourses:");
        int j=0;
        for(String id:ids){
            int i=0;
            for(String
d:courseDetails[Integer.parseInt(id)]){
                fileWriter.write(d);
                if(i<3){
                    fileWriter.write(",");
                }
                i++;
            }
            if(j<ids.length-1){
                fileWriter.write(" | ");
            }
            j++;
        }

        fileWriter.close();
        System.out.println("Courses Registered
Successfully!");
        break;
    }
    catch(Exception e){
        System.out.print(e);
    }
}
catch(Exception e){
}
}
}

```

Course Registration Output:

```

Course Registration

*****

Enter your semester(1 for first semester ..1-8) : 2

ID   Course_Code   Course_Title   Credit_Hours
Instructor
-----
0    HUM102          RWS            3 (3 0)       HYBRID
1    EEE241          DLD            4 (3 1)       Dr.
Ahsan Khawaja
2    MTH104          Calculus       3 (3 0)       Dr.
Muhammad Yousaf

```

3	CSC102	DS	3 (3 0)	Ms.
	Memoona Malik			
4	CSC110	PPIT	3 (3 0)	Mr.
	Anwar Shoukat			
5	CSC103	PF	4 (3 1)	Mr.
	Rizwan Rashid			

Enter the ID's of courses you want to register(comma separated) : **0,1,2,3**
 Courses Registered Successfully!

Cafe management System:

Display menu with Food and drink selection:

This project will display the menu where you can select the food and drink. Food is further divided into two categories Fast and Desi food and drinks can contain soft drinks, coffee and juices.

Code:

```
public static void myDrink(String regNumber){
    int drinks;
    MySoftDrinks drinkSoftobject = new MySoftDrinks();
    MyJuiceOrPlantDrink drinkJuiceOrPlantoObject = new
    MyJuiceOrPlantDrink();
    MyCoffee drinkCoffeeobject = new MyCoffee();
    while(true){
        System.out.println("Please Select a Drink you want to
        drink.\n1.Soft drinks\n2.Coffee\n3.Juice or Plant drinks\n0.Nothing \n");
        try{
            System.out.print("Enter Your Choice: ");
            drinks = input.nextInt();
            System.out.println();
            if(drinks==1){
                drinkSoftobject.main(regNumber);

                System.out.println("*****");
            }
            else if(drinks == 2){
                System.out.println("Please select your Coffee you
                want to drink");
                drinkCoffeeobject.main(regNumber);

                System.out.println("*****");
            }
            else if(drinks == 3){
                drinkJuiceOrPlantoObject.main(regNumber);

                System.out.println("*****");
            }
        }
    }
}
```

```

else if(drinks == 0){

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

break;

}
else

System.out.println("Please Choose Correct

Option");

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

}catch(Exception e){
System.out.println("Invalid Inputs");
input.nextLine();
continue;

}

}

public class FoodSelection{
static Scanner input = new Scanner(System.in);
public static void food(String regNumber){
int food;
MyFastFood foodFastobj = new MyFastFood();
MyDesiFood foodDesiobj = new MyDesiFood();
while(true){
System.out.println("1.Fast Food\n2.for Desi Food

\n0.Nothing\n");

try{

System.out.print("Enter Your Choice: ");
food = input.nextInt();
System.out.println();
if(food==1){
foodFastobj.main(regNumber);

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

}
else if(food == 2){
foodDesiobj.main(regNumber);

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

}
else if(food == 0){

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

break;

}
else

System.out.println("Please Choose Correct

Option");

```

```

        System.out.println("*****");
    }catch(Exception e){
        System.out.println("Invalid Inputs");
        input.nextLine();
        continue;
    }
    }
}

public class MyFastFood{
    public double subTotal;
    public static double runningTotal;
    private static double itemPrice;
    static boolean ordering = true;
    static Scanner input = new Scanner(System.in);
    static double quantity;
    static int foodItem =0;
    static int menuOption;
    static int t_amount=0;
    static double subtotal;
    static double returnitem;
    static java.util.Date date=new java.util.Date();
    public static void main(String regNumber) {
        input = new Scanner(System.in);
        double runningTotal=0;
        int item_return;
        try{
            File file = new File("cafe/CafeBills/FastFood/"+ regNumber
+".txt");

            boolean value = file.createNewFile();
            FileWriter bw = new FileWriter(file,true);
            bw.write("\nDate: "+date+"\n");
            while(ordering){
                menu();
                try{
                    System.out.print("Enter Your Choice: ");
                    menuOption = input.nextInt();
                    System.out.println();
                    switch(menuOption){
                        case 0:break;
                        case 1:
                            foodItem = 1;
                            System.out.println("You've
ordered a burger");

                            System.out.print("Enter quantity: ");
                            quantity = input.nextDouble();
                            runningTotal += itemPrice();

```



```

        System.out.println();
        bw.write("You've ordered a
burger\n"+"Quantity: "+quantity+"\n");

        System.out.println("\n1.Return\nPress any Integer except '1'");
        item_return = input.nextInt();
        if(item_return ==1){
            t_amount-=returnItem();
            bw.write("You've
returned a burger\n"+"Quantity: "+quantity+"\n");
        }
        else{
            break;
        }

        break;
        case 2:
            foodItem = 2;
            System.out.println("You've
ordered Zinger Burger");

            System.out.print("Enter quantity:
");

            quantity = input.nextDouble();
            runningTotal += itemPrice();
            System.out.println();
            bw.write("You've ordered Zinger
Burger\n"+"Quantity: "+quantity+"\n");

            System.out.println("\n1.Return\nPress any Integer except '1'");
            item_return = input.nextInt();
            if(item_return ==1){
                t_amount-=returnItem();
                bw.write("You've
returned a Zinger Burger\n"+"Quantity: "+quantity+"\n");
            }
            else{
                break;
            }

            break;
            case 3:
                foodItem = 3;
                System.out.println("You've
ordered a Shawarma");

                System.out.print("Enter quantity: ");
                quantity = input.nextDouble();
                runningTotal += itemPrice();
                System.out.println();

```

```

Shawarma\n"+"Quantity: "+quantity+"\n");

        bw.write("You've ordered a

        System.out.println("\n1.Return\nPress any Integer except '1'");
        item_return = input.nextInt();
        if(item_return ==1){
            t_amount-=returnItem();
            bw.write("You've

returned a Sharwarma\n"+"Quantity: "+quantity+"\n");
        }
        else{
            break;
        }
        break;
    case 4:
        foodItem = 4;
        System.out.println("You've

ordered a Pizza");
        System.out.print("Enter quantity: ");
        quantity = input.nextDouble();
        runningTotal += itemPrice();
        System.out.println();
        bw.write("You've ordered a

Pizza\n"+"Quantity: "+quantity+"\n");

        System.out.println("\n1.Return\nPress any Integer except '1'");
        item_return = input.nextInt();
        if(item_return ==1){
            t_amount-=returnItem();
            bw.write("You've

returned a Pizza\n"+"Quantity: "+quantity+"\n");
        }
        else{
            break;
        }
        break;
    case 5:
        foodItem = 5;

        System.out.println("You've

ordered a Sandwich");
        System.out.print("Enter quantity: ");
        quantity = input.nextDouble();
        runningTotal += itemPrice();
        System.out.println();
        bw.write("You've ordered a

Sandwich\n"+"Quantity: "+quantity+"\n");

```

```

        System.out.println("\n1.Return\nPress any Integer except '1'");
        item_return = input.nextInt();
        if(item_return ==1){
            t_amount-=returnItem();
            bw.write("You've
returned a Sandwich\n"+"Quantity: "+quantity+"\n");
        }
        else{
            break;
        }
        break;
    case 6:
        foodItem = 6;
        System.out.println("You've
ordered a Fries");

        System.out.print("Enter quantity: ");
        quantity = input.nextDouble();
        runningTotal += itemPrice();
        System.out.println();
        bw.write("You've ordered a
Fries\n"+"Quantity: "+quantity+"\n");

        System.out.println("\n1.Return\nPress any Integer except '1'");
        item_return = input.nextInt();
        if(item_return ==1){
            t_amount-=returnItem();
            bw.write("You've
returned a Fries\n"+"Quantity: "+quantity+"\n");
        }
        else{
            break;
        }
        break;
    case 7:
        foodItem = 7;
        System.out.println("You've
ordered a Deal A");

        System.out.print("Enter quantity: ");
        quantity = input.nextDouble();
        runningTotal += itemPrice();
        System.out.println();
        bw.write("You've ordered a Deal
A\n"+"Quantity: "+quantity+"\n");

        System.out.println("\n1.Return\nPress any Integer except '1'");

```

```

        item_return = input.nextInt();
        if(item_return ==1){
            t_amount-=returnItem();
            bw.write("You've
returned a Deal A\n"+"Quantity: "+quantity+"\n");
        }
        else{
            break;
        }
        break;
        case 8:
            foodItem = 8;
            System.out.println("You've
ordered a Deal B");

            System.out.print("Enter quantity: ");
            quantity = input.nextDouble();
            runningTotal += itemPrice();
            System.out.println();
            bw.write("You've ordered a Deal
B\n"+"Quantity: "+quantity+"\n");

            System.out.println("\n1.Return\nPress any Integer except '1'");
            item_return = input.nextInt();
            if(item_return ==1){
                t_amount-=returnItem();
                bw.write("You've
returned a Deal B\n"+"Quantity: "+quantity+"\n");
            }
            else{
                break;
            }
            break;
            case 9:
                foodItem = 9;
                System.out.println("You've
ordered a Deal C");

                System.out.print("Enter quantity: ");
                quantity = input.nextDouble();
                runningTotal += itemPrice();
                System.out.println();
                bw.write("You've ordered a Deal
C\n"+"Quantity: "+quantity+"\n");

                System.out.println("\n1.Return\nPress any Integer except '1'");
                item_return = input.nextInt();
                if(item_return ==1){
                    t_amount-=returnItem();

```

```

        returned a Deal C\n"+"Quantity: "+quantity+"\n");
        }
        else{
            break;
        }
        break;
        default:
            System.out.println("Invalid
option.");
    }
    if(menuOption==0){
        break;
    }
}
catch(Exception e){
    System.out.println("Invalid Inputs");
    input.nextLine();
}

}
bw.write("Total Amount: "+FastfoodBill()+"\n");
bw.close();

}
catch(Exception e){
    System.out.println(e);
}

}

```

Output:

Welcome To Comsats University Cafe									
What would you like to Eat and Drinks									
1.Food					2.Drinks				
-----					-----				
1.Fast Food	Prices	2.Desi Food	Prices	1.Soft Drinks	Prices	2.Coffee	Prices	3.Juice and Plant Drinks	Prices
1.Burger	80	1. Haleem	120	1.Coca-Cola	120	1.Black Coffee	120	1.Mango Flavour	50
2.Zinger Burger	250	2. Rogan Gosht	250	2.Pepsi	100	2.Cold Coffee	100	2.Orange Flavour	40
3.Shawarma	120	3. Matar Paneer	150	3.Fanta				3.Pineapple Flavour	70
4.Pizza	350	4. Aloo Ka Paratha	100	4.Dew				4.Grape Flavour	50
5.Sandwich	70	5. Spicy Sweet Potatoes	80	5.String				5.Mineral Water	30
6.Fries	50	6. Chole Palak	110	6.Sprite					
		7. Mash ki Dal	130						
		8. Biryani	200						
		9. Chicken Quorma	180						
		10.Samosa	25						

Prices and bills:

Bill of everything will be calculated when you order it and then will also be stored on backend as a record keeping.

```
public static void menu(){
    System.out.println("\n1.Burger(80 Rs)\n2.Zinger
Burger(250Rs)\n3.Shawarma(120)\n4.Pizza(350)\n5.Sandwich(70)\n6.Fries(50)\n7.Deal
A(Small Pizza\t Zinger sharwarma\t 1 litre Pepsi)\n8.Deal B(Medium Pizza\t 2 Zinger
Burger\t 1 litre Pepsi)\n9.Deal C(Large Pizza \t 2 Zinger Burger \t 1 Chicken Shawarma\t 1
litre Pepsi)\n0.Nothing\n");
}

    public static double itemPrice() {
        if (foodItem == 1) {
            itemPrice = 80;
        }
        if (foodItem == 2) {

            itemPrice = 250;
        }
        if (foodItem == 3) {

            itemPrice = 120;
        }
        if (foodItem == 4) {

            itemPrice = 350;
        }
        if (foodItem == 5) {

            itemPrice = 70;
        }
        if (foodItem == 6) {

            itemPrice = 50;
        }
        if (foodItem == 7) {

            itemPrice = 550;
        }
        if (foodItem == 8) {

            itemPrice = 850;
        }
        if (foodItem == 9) {

            itemPrice = 1050;
        }
    }
```

```

        subTotal();
        return itemPrice;
    }
    public static double subTotal() {
        subtotal = quantity * itemPrice;
        t_amount+=subtotal;
        return subtotal;
    }
    public static double returnItem(){
        itemPrice();
        returnitem = (quantity * itemPrice);
        return returnitem;
    }
    public static int FastfoodBill(){
        return(t_amount);
    }
    public class MyFinalBill{
        static java.util.Date date=new java.util.Date();
        static String name;
        public static int finalBill(String regNumber,int amount){
            File file = new File("students_data/"+ regNumber + ".txt");
            try{
                Scanner sc = new Scanner(file);
                String[] line = sc.nextLine().split(":");
                name = line[1];
            }
            catch(Exception e){
                System.out.print("Error occured!");
            }

            MyFastFood fastfoodobject = new MyFastFood();
            int num = fastfoodobject.FastfoodBill();

            MyDesiFood desifoodobject = new MyDesiFood();
            int num2 = desifoodobject.DesifoodBill();

            MySoftDrinks softDrinkobject = new MySoftDrinks();
            int num3 = softDrinkobject.SoftDrinkbill();

            MyCoffee coffeeobject = new MyCoffee();
            int num4 =coffeeobject.CoffeeBill();

            MyJuiceOrPlantDrink juiceOrPlantDrinkobject = new
MyJuiceOrPlantDrink();
            int num5 = juiceOrPlantDrinkobject.JuiceORPlantbill();

            int TotalAmount= num+num2+num3+num4+num5;
            if(amount>=TotalAmount){

```

```

        System.out.println("\n\n");
        System.out.println("\t\t\t-----");
        System.out.println("\t\t\tDate: "+date);
        System.out.println("\t\t\tName: "+name);
        System.out.println("\t\t\tStudent ID: "+regNumber);
        System.out.println("\t\t\t-----Thanks For Coming-----");
        System.out.println("\t\t\t-----Your Bill Is-----\n");
        System.out.printf("\t\t\tFast food Bill          %d \n",num);
        System.out.printf("\t\t\tDesi food Bill          %d \n",num2);
        System.out.printf("\t\t\tSoft Drinks Bill          %d \n",num3);
        System.out.printf("\t\t\tCoffee Bill          %d \n",num4);
        System.out.printf("\t\t\tJuices Bill          %d \n",num5);
        System.out.printf("\t\t\tTotal Bill          %d
\n",(num+num2+num3+num4+num5));
        try{
            File file1 = new File("cafe/CafeBills/FinalBills/"+
regNumber + ".txt");

            boolean value = file1.createNewFile();
            FileWriter billObj = new FileWriter(file1,true);
            billObj.write("Date: "+date+"\n");
            billObj.write("-----\n");
            billObj.write("Name : "+ name +"\n");
            billObj.write("Student ID : "+ regNumber +"\n");
            billObj.write("-----\n");
            billObj.write("-----Thanks For Coming-----\n");
            billObj.write("-----Your Bill Is-----\n");
            billObj.write("Fast food Bil          "+num +"\n");
            billObj.write("Desi food Bil          "+num2+"\n");
            billObj.write("Soft Drinks Bil          "+num3+"\n");
            billObj.write("Coffee Bil          "+num4+"\n");
            billObj.write("Juices Bil          "+num5+"\n");
            billObj.write("Total Bill          "+TotalAmount+"\n");
            billObj.write("-----\n");
            billObj.write("-----\n\n");
            billObj.close();
        }
        catch(Exception e){
            System.out.println("invalid");
        }
    }
    else{
        System.out.println("Sir, You don't have enough Account
Balance");

        return amount;
    }
    return 0;
}

public static void main(String regNumber) {

```



```

        input = new Scanner(System.in);
        double runningTotal=0;
        int item_return;
        try{
            File file = new
File("cafe/CafeBills/MySoftDrinks/"+regNumber+".txt");
            boolean value = file.createNewFile();
            FileWriter bw = new FileWriter(file,true);
            bw.write("\nDate: "+date+"\n");
            while(ordering){
                menu();
                try{
                    System.out.println("Select your Soft Drink
\n0.Nothing");

                    System.out.print("Enter Your Choice: ");
                    menuOption = input.nextInt();
                    System.out.println();
                    switch(menuOption){
                        case 0:break;
                        case 1:
                            foodItem = 1;
                            System.out.println("You've
ordered a Coca-Cola");

                            System.out.print("Enter quantity: ");
                            quantity = input.nextDouble();
                            runningTotal += itemPrice();
                            System.out.println();
                            bw.write("You've ordered a Coca-
Cola\n"+"Quantity: "+quantity+"\n");

                            System.out.println("\n1.Return\nPress any Integer except '1'");
                            item_return = input.nextInt();
                            if(item_return ==1){
                                t_amount-=returnItem();
                                bw.write("You've
returned a Coca-Cola\n"+"Quantity: "+quantity+"\n");
                            }
                            else{
                                break;
                            }

                            break;
                        case 2:
                            foodItem = 2;
                            System.out.println("You've
ordered Pepsi");

                            System.out.print("Enter quantity:
");

```

```

                                quantity = input.nextDouble();
                                runningTotal += itemPrice();
                                System.out.println();
                                bw.write("You've ordered
Pepsi\n"+"Quantity: "+quantity+"\n");

                                System.out.println("\n1.Return\nPress any Integer except '1'");
                                item_return = input.nextInt();
                                if(item_return ==1){
                                    t_amount-=returnItem();
                                    bw.write("You've
returned a Pepsi\n"+"Quantity: "+quantity+"\n");
                                }
                                else{
                                    break;
                                }
                                break;
                                case 3:
                                    foodItem = 3;
                                    System.out.println("You've
ordered a Fanta");

                                    System.out.print("Enter quantity: ");
                                    quantity = input.nextDouble();
                                    runningTotal += itemPrice();
                                    System.out.println();
                                    bw.write("You've ordered a
Fanta\n"+"Quantity: "+quantity+"\n");

                                    System.out.println("\n1.Return\nPress any Integer except '1'");
                                    item_return = input.nextInt();
                                    if(item_return ==1){
                                        t_amount-=returnItem();
                                        bw.write("You've
returned a Fanta\n"+"Quantity: "+quantity+"\n");
                                    }
                                    else{
                                        break;
                                    }
                                    break;
                                    case 4:
                                        foodItem = 4;
                                        System.out.println("You've
ordered a Dew");

                                        System.out.print("Enter quantity: ");
                                        quantity = input.nextDouble();
                                        runningTotal += itemPrice();
                                        System.out.println();

```

```

Dew\n"+"Quantity: "+quantity+"\n");

        bw.write("You've ordered a

        System.out.println("\n1.Return\nPress any Integer except '1'");
        item_return = input.nextInt();
        if(item_return ==1){
            t_amount-=returnItem();
            bw.write("You've

returned a Dew\n"+"Quantity: "+quantity+"\n");
        }
        else{
            break;
        }
        break;
    case 5:
        foodItem = 5;

        System.out.println("You've

ordered a String");
        System.out.print("Enter quantity: ");
        quantity = input.nextDouble();
        runningTotal += itemPrice();
        System.out.println();
        bw.write("You've ordered a

String\n"+"Quantity: "+quantity+"\n");

        System.out.println("\n1.Return\nPress any Integer except '1'");
        item_return = input.nextInt();
        if(item_return ==1){
            t_amount-=returnItem();
            bw.write("You've

returned a String\n"+"Quantity: "+quantity+"\n");
        }
        else{
            break;
        }
        break;
    case 6:
        foodItem = 6;

        System.out.println("You've

ordered a Sprite");
        System.out.print("Enter quantity: ");
        quantity = input.nextDouble();
        runningTotal += itemPrice();
        System.out.println();
        bw.write("You've ordered a

Sprite\n"+"Quantity: "+quantity+"\n");

```

```

        System.out.println("\n1.Return\nPress any Integer except '1'");
        item_return = input.nextInt();
        if(item_return ==1){
            t_amount-=returnItem();
            bw.write("You've
returned a Sprite\n"+"Quantity: "+quantity+"\n");
        }
        else{
            break;
        }
        break;
        default:
            System.out.println("Invalid
option.");
    }
    if(menuOption==0){
        break;
    }
}
catch(Exception e){
    System.out.println("Invalid Inputs");
    input.nextLine();
}
}
bw.write("Total Amount: "+SoftDrinkbill()+"\n");
bw.close();
}
catch(Exception e){
    return;
}
}

```

Output:

```

1.Food
2.Drinks
0.Nothing

Enter Your Choice: 1

1.Fast Food
2.for Desi Food
0.Nothing

Enter Your Choice: 1

```

```

1.Burger(80 Rs)
2.Zinger Burger(250Rs)
3.Shawarma(120)
4.Pizza(350)
5.Sandwich(70)
6.Fries(50)
7.Deal A(Small Pizza      Zinger sharwarma      1 litre Pepsi)
8.Deal B(Medium Pizza     2 Zinger Burger    1 litre Pepsi)
9.Deal C(Large Pizza      2 Zinger Burger    1 Chicken Shawarma
1 litre Pepsi)
0.Nothing

Enter Your Choice: 1

You've ordered a burger
Enter quantity: 1

```

Library Management System:

Displaying and borrowing books:

All the books will be displayed to you and you can borrow them. The borrowed books will be stored in another file for record keeping.

```

public static void main(String[] args) {
    boolean flag = true;
    while(flag){
        System.out.println("*****");
        System.out.println("Welcome to Library Managment System!");
        System.out.println("Enter 1 to borrow books ");
        System.out.println("Enter 2 to return books ");
        System.out.println("Enter 3 to read membership criteria ");
        System.out.println("Enter 4 to see your fine details");
        System.out.println("Enter 5 to exit");
        System.out.println("*****");

        System.out.print("Enter your choice: ");
        int userChoice;

        try{
            userChoice = input.nextInt();
            if (userChoice == 1){
                TermsAndConditions.displayTerms();

                System.out.print("Do you accept the terms Press 1 to accept and 2 to reject: ");
                int option = input.nextInt();

                if(option==1){
                    borrowBook();

```

```

    }
    else if(option==2){
        System.out.println("You cannot borrow any book.");
    }
    else{
        System.out.print("Invalid Input! ");
    }

}

else if (userChoice == 2){
    System.out.print("");
    // returnBook();
}
else if(userChoice == 3){
    System.out.print("");
    // TermsAndConditions.displayTerms();

}
else if(userChoice == 5){
    System.exit(0);
}
else{
    System.out.println("Invalid Input! ");
}
} catch(Exception e){
    System.out.println("You have entered wrong input. Try Again!");
    input.nextLine();
}
}
}

public static void borrowBook() {
    System.out.println("*****");
    System.out.println("Available books are: ");
    try{
        File file = new File("Library/AvailableBooks.txt");
        Scanner sc = new Scanner(file);
        int j=1;
        while(sc.hasNextLine()){
            String line = sc.nextLine();
            books[j-1] = line;
            System.out.println(j+" "+line);
            j++;
            totalBooks++;
        }
    }
}

```

```

    }
    System.out.println("*****");

}
catch(Exception e){
    System.out.print("Error occurred!");
}

boolean flag = false;
while(true){
    try{
        Scanner input = new Scanner(System.in);
        System.out.print("How many books you want to borrow: ");
        int numberOfPurchasedBooks = input.nextInt();
        borrowedbooks = new String[numberOfPurchasedBooks];

        if(numberOfPurchasedBooks < totalBooks && numberOfPurchasedBooks > 0){

            for(int i=0; i<numberOfPurchasedBooks; i++) {
                System.out.println("*****");
                System.out.printf("Record Book %d \n", i+1);
                System.out.print("Which book you want to borrow, Enter it index: ");
                int bookNumber = input.nextInt();

                try{
                    File ff = new File("Library/AvailableBooks.txt");
                    Scanner sc = new Scanner(ff);
                    int index = 1;
                    while(sc.hasNextLine()){
                        String line = sc.nextLine();
                        if(index==bookNumber){
                            borrowedbooks[i] = line;
                        }
                        index++;
                    }
                    flag = true;
                }
                catch(Exception ex){
                    System.out.println("Invalid Input! Try Again");
                }
            }
        }
    }
    catch(Exception e){
        System.out.print("Invalid input! Try Again\n");
    }
}

```

```

        if(flag){
            break;
        }
    }

    try{
        File myFile = new File("Library/BorrowedBooks/sp21-bcs-066.txt");
        boolean value = myFile.createNewFile();
        FileWriter fileWriter = new FileWriter("Library/BorrowedBooks/sp21-bcs-066.txt",true);
        for(String book : borrowedbooks){
            fileWriter.write(book+"\n");
        }
        fileWriter.close();
    }
    catch(Exception e){
        System.out.print(e+"\n");
    }

    for(int n=0;n<books.length;n++){
        for(int m=0;m<borrowedbooks.length;m++){
            if(borrowedbooks[m].compareTo(books[n])==0){
                books[n] = null;
            }
        }
    }
}

```

Output:

```

*****
Welcome to Library Managament System!
Enter 1 to borrow books
Enter 2 to return books
Enter 3 to read membership criteria
Enter 4 to exit
*****
Enter your choice: 1
Following terms and conditions you must follow to borrow book(s) from
Library:

1. You will be fined 50/- per day fine if you return book late
2. You will be fined 500/- if you tore any page of book
3. You will be fined 1000/- in case you lose the book

Do you accept the terms Press 1 to accept and 2 to reject: 1
*****

```


Available books are:

1. Advance Python with Exercises.
2. Beginners' guide to Python Programming.
3. Programming Fundamentals using C++.
4. C++ an Introduction to real word Programming.
5. Advance Concepts of C++ Programming.
6. Object Oriented Programming in C++.
7. A guide for C++ Developers.
8. Getting Started with Java.
9. Professional Practices for IT.
10. Information Communication Technology.
11. Calculas and Analytical Geometry.
12. Report Writing Skills.
13. Data Structure and Algorithms.
14. Introduction to Java Programming.
15. How to Program in Java.
16. How to code in Java.
17. Learn Java in one day.
18. Python For Absolute Beginners.
19. Programming with Python.
20. Being a Python Guru.

How many books you want to borrow: 2

Record Book 1

Which book you want to borrow, Enter it index: 1

Record Book 2

Which book you want to borrow, Enter it index: 2 1

Returning books and membership criteria:

You can return the borrowed books and will be fined if you submit the book late.

```
try{
    File myFile = new File("Library/BorrowedBooks/sp21-bcs-066.txt");
    boolean value = myFile.createNewFile();
    FileWriter fileWriter = new
FileWriter("Library/BorrowedBooks/sp21-bcs-066.txt", true);
    for(String book : borrowedbooks){
        fileWriter.write(book+"\n");
    }
    fileWriter.close();
}
catch(Exception e){
    System.out.print(e+"\n");
}

for(int n=0;n<books.length;n++){
    for(int m=0;m<borrowedbooks.length;m++){
        if(borrowedbooks[m].compareTo(books[n])==0){
            books[n] = null;
        }
    }
}
```

```

    }
}

try{
    File myFF = new File("Library/AvailableBooks.txt");
    FileWriter fileWriter = new FileWriter(myFF);
    fileWriter.write("");
    fileWriter.close();
}
catch(Exception e){
    System.out.print(e+"\n");
}

try{
    File myFF = new File("Library/AvailableBooks.txt");
    boolean value = myFF.createNewFile();
    FileWriter fileWriter = new FileWriter(myFF,true);
    for(String bk:books){
        if(bk!=null){
            fileWriter.write(bk+"\n");
        }
    }
    fileWriter.close();
}
catch(Exception e){
    System.out.print(e+"\n");
}

for(int a=0;a<borrowedbooks.length;a++){
    borrowedbooks[a] = null;
}
for(int b=0;b<books.length;b++){
    books[b] = null;
}
totalBooks=0;
}
}

```

Output:

```

You have borrowed following books :
1. Advance Python with Exercises.
2. Beginners' guide to Python Programming.

*****

1. Return books
2. Previous menu
Enter your choice : 1
Books has been returned Successfully!

```

Transport Management System:

Display bus routes and stops:

The project will display all the routes which you can select regarding your ease and make your buses to pick and drop you with different bus timings. Code for this module is given below:

```
public static void main(String regNumber) {
    System.out.print("\n");
    Scanner input = new Scanner(System.in);

    String registrationNo = regNumber;
    String busID = busID(registrationNo);

    String busReg = "";
    while (true) {
        System.out.println("Enter Corresponding Number to Select the option :");
        System.out.println("1. Bus Routes\n2. Bus fees\n3. Bus registration\n4. fee Payment\n5.
        Bus ReviewForm\n6. Bus Profile\n7. Delete Bus registration\n8. Exit TMS\n");
        String selection = input.next();

        if (selection.equals("8")) {
            System.out.println("Thank you for using TMS by Sameem Group of Transportation !");
            System.exit(0);
        }
        else if
        (selection.equals("1") || selection.equals("2") || selection.equals("3") || selection.equals("4") || selec
        tion.equals("5") || selection.equals("6") || selection.equals("7")){
            switch (selection) {
                case "1" ->{
                    displayRoutesAndStops(registrationNo);
                    try {
                        Thread.sleep(4000);
                    } catch (InterruptedException e) {
                        e.printStackTrace();
                    }
                }
                case "2" ->{
                    displayBusFees(registrationNo);
                    try {
                        Thread.sleep(4000);
                    } catch (InterruptedException e) {
                        e.printStackTrace();
                    }
                }
                case "3" ->{
                    busReg = busRegistration(registrationNo);
```

```

//    text file generation with the busID number
File busFile = new File("transport/TransportFiles/"+busID+".txt");
try {
    busFile.createNewFile();
}
catch (IOException e) {
    System.out.println("Sorry we found some issues creating your file !");
}
//    writing details in text file
try {
    FileWriter busFileWriter = new
FileWriter("transport/TransportFiles/"+busID+".txt");
    busFileWriter.write(busReg);
    System.out.print("\n***** Registered Successfully!
*****\n\n");
    busFileWriter.close();
}
catch (IOException e) {
    System.out.println("Sorry we found some issues inserting your details in the our
database ");
}

}
case "4" ->{
    paymentMethod(registrationNo);
}
case "5" ->{
    String busReview = busReviewMessage(registrationNo);
//    adding this review to the file
    try {
        FileWriter busFileWriter = new
FileWriter("transport/TransportFiles/"+busID+".txt",true);
        String busReviewFinal = String.format("\n\nYour FeedBack --->\n %s",busReview);
        busFileWriter.write(busReviewFinal);
        busFileWriter.close();
    }
    catch (IOException e) {
        System.out.println("Sorry we found some issues inserting your details in the our
database ");
    }

}

case "6" ->{
    try {
        File busFile = new File("transport/TransportFiles/"+busID+".txt");

        Scanner sc = new Scanner(busFile);

```

```

        while (sc.hasNextLine()) {
            String profile = sc.nextLine();
            System.out.println(profile);
        }
        sc.close();
    }

    catch(IOException e){
        System.out.println("Sorry! It was not possible for us to read your profile! Try
again! ");
    }
}
case "7" ->{
    File busFile = new File("transport/TransportFiles/"+busID+".txt");
    if (busFile.delete()) System.out.println("The bus profile has been deleted
successfully!");
    else System.out.println("Something went wrong ");
}

}
} else System.out.println("invalid input!");
}

}
}

```

Output:

```

-----Route # 1-----
-----
Stops --> F11 Markaz
Golra more
Margala road
PAF Complex Gate
Shaheen Chowk
Madina Market
-----Route # 2-----
-----
Stops --> G-11/2 Apple School
G-11 Markaz
G-11/3 Alladin Appartment
G-10 Umer market
G-9/1 Street no. 44
-----Route # 3-----
-----
Stops --> Askari XI
Qasim Market

```

```

Roomi Market
GPO Saddar
Kacheri Chowk
-----Route # 4-----
-----
Stops --> Hajj Complex
Old Daewoo Stop
Pirdhadhai More
Charing Cross
Valley Road
-----Route # 5-----
-----
Stops --> Chungi no 22
CMH
502 workshop
Jinnah Park
Jhandha Chechi
-----Route # 6-----
-----
Stops --> Bahria Town Ace Academy
Street no 6 Bahria More
Al Noor Pharmacy
Rahat Bakery
PWD Barrier
London Tradex
-----Route # 7-----
-----
Stops --> Gangal East
karal Chowk
Gangal West
Fizaya Colony
Chatry Chowk
Khanna Pull
-----Route # 8-----
-----
Stops --> Nawal Anchorage
Bhander
Sowan Garden
Al Shifa Hospital
Toyota Motors

```

Random bus id's and Fee details:

You will be given unique id's which you can use for bus registration and also you got to have fees details here for every bus stop and bus route.

```

static String busID(String registrationNo){
    //    busID generation
    Random randCardNum = new Random();
    int number =(int) 1000 + randCardNum.nextInt(1000);
    String busID = registrationNo+ " Bus-ID " + number + "";
    return busID;
}
static String registrationTiming(String registrationNo){

```

```

//    Registration date and timing
return LocalDateTime.now().format(DateTimeFormatter.ofPattern("dd-MM-yyyy || h:m a"));

}

static String busRoute(String registrationNo){
    Scanner input = new Scanner(System.in);
    String route;
    while(true){

        System.out.println("Enter your route :");
        route = input.next();
        if (route.equals("1") || route.equals("2") || route.equals("3") || route.equals("4") ||
route.equals(
        "5") || route.equals("6") || route.equals("7") || route.equals("8")){
            return route;
        }
        else System.out.println("Enter valid route no!");
    }

}

static String busStop(String registrationNo){
    Scanner input = new Scanner(System.in);
    System.out.println("Enter the stop name");
    return input.nextLine();

}

//    bus fee
static String busFee(String registrationNo ,String route){
    String fees = "";
    switch (route) {
        case "1" -> fees = "20000";
        case "2" -> fees = "15000";
        case "3" -> fees = "14000";
        case "4" -> fees = "13000";
        case "5" -> fees = "10000";
        case "6" -> fees = "22000";
        case "7" -> fees = "24000";
        case "8" -> fees = "21000";
    }
    return fees;
}

//    bus timing selection

static String busDropOff(String registrationNo){
    while(true){
        Scanner input = new Scanner(System.in);

```

```

//      selecting the drop-off timing

        System.out.println("Enter your preferred timing for drop-off\n1. 1:30 PM\n2. 2:30 PM\n3. 5:30 PM");
        String selectionDropOff = input.next();
        String dropOffTime = "";
        if (selectionDropOff.equals("1") || selectionDropOff.equals("2") || selectionDropOff.equals("3")){
            switch (selectionDropOff){
                case "1" -> dropOffTime = "1:30 PM";
                case "2" -> dropOffTime = "2:30 PM";
                case "3" -> dropOffTime = "5:30 PM";
            }
            return dropOffTime;
        }
        else System.out.println("kindly Enter valid input!");

    }

}

static String busPickUp(String registrationNo){
    Scanner input = new Scanner(System.in);
    while (true){
//      selecting the pick-up timing
        System.out.println("Enter your preferred timing for pick-up\n1. 8 AM\n2. 10 AM\n3. 12 AM");
        String selectionPickUp = input.next();
        String pickUpTime = "";
        if (selectionPickUp.equals("1") || selectionPickUp.equals("2") || selectionPickUp.equals("3")){
            switch (selectionPickUp){
                case "1" -> pickUpTime = "8 AM";
                case "2" -> pickUpTime = "10 AM";
                case "3" -> pickUpTime = "12 AM";
            }
            return pickUpTime;
        }
        else System.out.println("kindly Enter valid input!");
    }
}

//  bus Review
static String busReviewMessage(String registrationNo){
    Scanner input = new Scanner(System.in);
    System.out.println("Enter your Review for Transport Management ");
    String review = input.nextLine();
}

```



```

        System.out.println("Thank you for your feedback about Our Bus Management System !");
        return review;

    }

//bus registration main

    static String busRegistration(String registrationNo){
        Scanner input = new Scanner(System.in);
        String busID = busID(registrationNo);
        String dateAndTime = registrationTiming(registrationNo);
        String route = busRoute(registrationNo);
        String busStop = busStop(registrationNo);
        String busFee = busFee(registrationNo,route);
        String pickUp = busPickUp(registrationNo);
        String dropOff = busDropOff(registrationNo);

        //    All details
        String details = String.format("Bus Registration ID : %s\nRoute No      : %s\nStop Name
: %s\nFees          : %s\npickUp Timing    : %s\ndropOff Timing    : %s\nRegistered at    : %s",
busID,route,busStop,busFee,pickUp,dropOff,dateAndTime);

        return details;

    }

```

Output:

```

***** Buses Fees *****
Route 1 : 20,000
Route 2 : 15,000
Route 3 : 14,000
Route 4 : 13,000
Route 5 : 10,000
Route 6 : 22,000
Route 7 : 24,000
Route 8 : 21,000

***** Route *****
Enter your route :
1
Enter the stop name
Golra more
Enter your preferred timing for pick-up
1. 8 AM
2. 10 AM
3. 12 AM
8
kindly Enter valid input!
Enter your preferred timing for pick-up

```

```

1. 8 AM
2. 10 AM
3. 12 AM
1
Enter your preferred timing for drop-off
1. 1:30 PM
2. 2:30 PM
3. 5:30 PM
1
***** Registered Successfully! *****

```

Buses FeedBack and Fee Payment:

You got to have social links which you can use fee payment and you can give your important feedback regarding your experience with university buses too.

```

static String busReviewMessage(String registrationNo){
    Scanner input = new Scanner(System.in);
    System.out.println("Enter your Review for Transport Management ");
    String review = input.nextLine();
    System.out.println("Thank you for your feedback about Our Bus Management System !");
    return review;
}

//bus registration main

static String busRegistration(String registrationNo){
    Scanner input = new Scanner(System.in);
    String busID = busID(registrationNo);
    String dateAndTime = registrationTiming(registrationNo);
    String route = busRoute(registrationNo);
    String busStop = busStop(registrationNo);
    String busFee = busFee(registrationNo,route);
    String pickUp = busPickUp(registrationNo);
    String dropOff = busDropOff(registrationNo);

    // All details
    String details = String.format("Bus Registration ID : %s\nRoute No : %s\nStop Name : %s\nFees : %s\npickUp Timing : %s\ndropOff Timing : %s\nRegistered at : %s",
    busID,route,busStop,busFee,pickUp,dropOff,dateAndTime);

    return details;
}

// payment Method

```

```

static void paymentMethod(String registrationNo){
    Desktop desk = Desktop.getDesktop();
    Scanner input = new Scanner(System.in);

    while (true) {
        System.out.println("Select your payment method :\n1. JazzCash\n2. HBL\n3. Bank
Alfalah");
        try {
            int option = input.nextInt();
            if (option >= 1 && option <= 3) {
                switch (option) {

                    case 1 -> {
                        try {
                            desk.browse(new URI("https://www.jazzcash.com.pk"));
                            System.out.println("Thank you for using JazzCash for paying fee");

                        }
                        catch (IOException | URISyntaxException e) {
                            System.out.println("Sorry we found an issue try again!");
                        }
                    }
                    case 2 -> {
                        try {
                            desk.browse(new URI("https://www.hblbank.com.pk"));
                            System.out.println("Thank you for using HBL for paying fee");

                        }
                        catch (IOException | URISyntaxException e) {
                            System.out.println("Sorry we found an issue try again!");
                        }
                    }
                    case 3 -> {
                        try {
                            desk.browse(new URI("https://netbanking.bankalfalah.com/"));
                            System.out.println("Thank you for using Bank Alfalah for paying fee");

                        }
                        catch (IOException | URISyntaxException e) {
                            System.out.println("Sorry we found an issue try again!");
                        }
                    }
                }
            }
        }
    }
}

```

```
        break;
    } else System.out.println("Enter appropriate option !");
} catch (Exception e) {
    System.out.println("Invalid input !");
}
}
```

Output:

```
Select your payment method :
1. JazzCash
2. HBL
3. Bank Alfalah
1
Thank you for using JazzCash for paying fee

*****

Enter your Review for Transport Management
The TMS is good but is much expensive
Thank you for your feedback about Our Bus Management System !
```