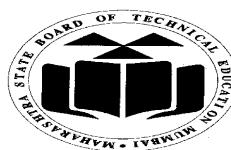


MICRO-PROJECT REPORT PART - A and PART - B

Name of Program:	Diploma in Computer Engineering
Semester:	IV
Name of Course and Code:	Java Programming (22412)
Title of the Micro-Project:	Shopping Management System.
Name of Team Members:	Onkar Dokhe Omkar Waghmare Pallavi Satpute Sakshi Waghmare Vaibhav Mohod Pratik Bandpatte
Name and Sign of the Project Guide:	Mrs. G.S.Mujumdar



**Maharashtra State
Board of Technical Education, Mumbai
(Autonomous) (ISO-9001-2008) (ISO/IEC 27001:2013)**

CERTIFICATE

This is to certify that Mr/Mrs

1. Onkar Dokhe 2. Omkar Waghmare 3. Pallavi Satpute
4. Sakshi Waghmare 5. Vaibhav Mohod 6. Pratik Bandpatte

of Diploma In Computer Engineering of **Pimpri Chinchwad Polytechnic** (Code:0056)
has completed Micro projects of the course **Java Programming (22412)** as prescribed
in the curriculum for the academic year 2020 to 2021.

Place: Akurdi

Date:

Course In charge
Department
Prof. M.S. Malkar

Head of
Mrs. G.S.Mujumda

Seal of institute

PART A – MICRO PROJECT PROPOSAL

FOR 4th SEMESTER

Shopping Management System

1.0 Aim/Benefits of the Micro-Project:

The Micro Project aims at:-

- 1) To assure that every team member is familiar with the given topic.
- 2) Collect the qualitative data regarding the topic assigned.
- 3) Analyze the data and work on it.
- 4) Work persistently to achieve the targets.
- 5) Submit the project in time.

The Micro Project benefits us as:-

- ✓ This will improve our java programming skills.
- ✓ This micro project will increase our logical thinking.
- ✓ This will indeed make us capable to take some firm decisions and create new logics.
- ✓ We came across various new java concepts related to the assigned topic.
- ✓ This will helps us to Manage our shops and Stores.
- ✓ Teach us the value of team work and co-ordination.

2.0 Intended Course Outcomes:

- a. Develop programs using Object Oriented methodology in Java.
- b. Apply concept of inheritance for code reusability.
- c. Develop programs using multithreading.
- d. Implement Exception Handling.
- e. Develop programs using graphics and applet.
- f. Develop programs for handling I/O and file streams.

3.0 Proposed Methodology:

- ➔ To make the list of the tasks to be done.
- ➔ Then after collect relevant data from different resources (books/internet/experts).
- ➔ Analyze the collected data and generate useful information from it.
- ➔ Present generated information and work on it.
- ➔ Distribute the work accordingly to the team mates (as per their ability and choice).
- ➔ Submit the project in time

4.0 Action Plan:

Name of Programme : Computer Engineering
Computer semester : 4th
Course Title : Java Programming (22412)
Title of the Micro-Project : Shopping Management System.
Name of subject Teacher : Mrs. G.S.Mujumdar

Sr. No./Week	Details of activity	Planned Start date	Planned Finish date	Name of Responsible Team Members
1.	Topics given by Subject Teacher and discussed on given topic with all members.	06/04/2021	07/04/2021	Onkar Dokhe Omkar Waghmare
2.	Collection of information related to the topic.	07/04/2021	13/04/2021	Pallavi Satpute
3.	Planning of project.	13/04/2021	17/04/2021	Sakshi Waghmare
4.	Analyze the collected data and finalize structure of project.	17/04/2021	20/04/2021	Vaibhav Mohod
Week 4: Submission of Proposal				
5.	Distribution of task and discussion of roles and responsibilities of each member.	20/04/2021	21/04/2021	Pratik Bandpatte
6.	Design of Project.	21/04/2021	28/04/2021	

Roll No. 49 To 54

7.	Design of Project	28/04/2021	30/04/2021	Onkar Dokhe Omkar Waghmare Pallavi Satpute
8.	Implementation	30/04/2021	04/05/2021	
Week 8: Review and Suggestions				

Name of Course Teacher : Mrs. G.S.Mujumdar

Sign :

5.0 Resources Required:

Sr. No.	Name of Resource/material	Specifications
1	Computer	1TB HDD, Intel Core i3 U380, 6GB DDR3 RAM, Windows 7
2	Software	Java jdk-13.0.1 Visual Studio Code (Text Editor)

6.0 Names of Team Members with Roll No.

Roll No. of Student	Name of Student	Enrollment No.
49	Onkar Sanjay Dokhe	1900560410
50	Omkar Kakasaheb Waghmare	1900560411
51	Pallavi Ankush Satpute	1900560412
52	Sakshi Sudhir Waghmare	1900560413
53	Vaibhav Lahanu Mohod	1900560414
54	Pratik Deepak Bandpatte	1900560415

PART B – Micro-Project Proposal

FOR 4th Semester

Topic: Shopping Management System

1.0 Rationale:

This project mainly involves a system of Shopping Management System designed for managing shopping system and accounting related tasks. It aims for efficient managing of a general Store to improve productivity . An application software has been designed using Java programming language for this mini Shopping Management System which helps to manage Day-To-Day Task in the shopping management system for a general store.

2.0 Aim/Benefits of the Micro-Project:

The aim of the Micro-Project is:

To develop a Java program for creating a mini Shopping Management System designed for managing shopping system related tasks.

The Benefits of the Micro-Project are:

It will help to learn in detail about the working of the Shopping Management System which managing shopping system related tasks, understand the importance of this system in day to day life and also will get to know the actual process of working of a general store.

3.0 Course Outcomes Achieved:

- a. Develop programs using Object Oriented methodology in Java.
- b. Apply concept of inheritance for code reusability.
- c. Develop programs using multithreading.
- d. Implement Exception Handling.
- e. Develop programs using graphics and applet.
- f. Develop programs for handling I/O and file streams.

4.0 Literature Review:

Today's world is fast and developed. The traditional Store management system which manages shopping system and accounting related tasks can be hectic and is becoming less efficient as well as time consuming. So to

overcome this situation, we have to develop a kind of mini Shopping Management System for which manages shopping system and accounting related tasks so that the user could efficiently perform such transactions on a secure platform and without wasting any time. This project is mainly aimed towards creating a mini Shopping Management System for which manages shopping system and accounting related tasks in Java programming language.

5.0 Actual Methodology Followed:

1. Analyze the given topic carefully.
2. Search for tips and information for the same
3. Try doing the project by analyzing the data carefully and keeping the development cost at its minimum.
4. Check for errors, fix them (if any).
5. Submit it.

Sr. No.	Work Done by Team Member	Name of Student
1	Preparation of Part A	Onkar Sanjay Dokhe
2	Information Collection	Omkar Kakasaheb Waghmare
3	Information Analysis	Pallavi Ankush Satpute
4	Design of Project	Sakshi Sudhir Waghmare
5	Implementation	Vaibhav Lahanu Mohod
6	Report Preparation	Pratik Deepak Bandpatte

6.0 Actual Resources Used:

S. No.	Name of Resource/Material	Specifications	Qty.	Remarks
1.	Software	Java jdk-13.0.1 Visual Studio Code	-	-

7.0 Outputs of the Micro Project:

***Output**

```
Command Prompt - java SMSjava
C:\Users\Onkar\Java>javac SMS.java
C:\Users\Onkar\Java>java SMS.java

Please Enter your choice
1.Product List
2.Generate Shopping Bill
3.Exit
1
Product List is as follows:
1.Whole Grain Breads Rs.40
2.Brown Rice Wraps Rs.69/Kg
3.Oats Rs.20
4.Bulgur Rs.100
5.Baking Soda Rs.50/kg
6.Sea Salt Rs.10
7.Natural Oil Rs.140/lit
8.Catalyst Rs.55
9.Green Tea Rs.69
10.Coffee Rs.28

Please Enter your choice
1.Product List
2.Generate Shopping Bill
3.Exit
```

```
Command Prompt - java SMSjava
1.Whole Grain Breads Rs.40
2.Brown Rice Wraps Rs.69/Kg
3.Oats Rs.20
4.Bulgur Rs.100
5.Baking Soda Rs.50/kg
6.Sea Salt Rs.10
7.Natural Oil Rs.140/lit
8.Catalyst Rs.55
9.Green Tea Rs.69
10.Coffee Rs.28

Please Enter your choice
1.Product List
2.Generate Shopping Bill
3.Exit
2

How many purchases do you want to do? :
1

Got 1 purchases. Choose your product now by entering 1, 2, 3...:
1 5 7
-----
                JK Mart Private Limited      |
Add: Main Market Pimpri, Pimpri Chinchwad| Contact No. 9876543210 | -----
Bill to Pay *
To. Cash          Bill No: 3554        Date & Time: 28/05/2021 11:07:43
-----
Item => 40, Amount(in Rs) => 1.Whole Grain Breads Rs.40
Item => 28, Amount(in Rs) => 10.Coffee Rs.28
```

*Code

```
package company;

import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Date;
import java.util.HashMap;
import java.util.List;
import java.util.Map;
import java.util.Map.Entry;
import java.util.Random;
import java.util.Scanner;

public class SMS {

    public static void ShoppingBill(Map<Integer,String> total, Map<Integer,String>
to_take, Scanner k) {
        System.out.println("How many purchases do you want to do? :");
        int n = k.nextInt();
        System.out.printf("Got %d purchases. Choose your product now by entering 1, 2,
3....:\n", n);
        List<Integer> to_take_values = new ArrayList<Integer>();
        for(int j=0;j<n;j++) {int r = k.nextInt();to_take_values.add(r);}

        for(Entry<Integer,String> jl:total.entrySet()) {
            String prt = jl.getValue().split("")[0];
            for(int r=0;r<to_take_values.size();r++) {
                if(Integer.parseInt(prt) == to_take_values.get(r)) {
                    to_take.put(jl.getKey(), jl.getValue());
                }
            }
        }
    }

    SimpleDateFormat f = new SimpleDateFormat("dd/MM/yyyy HH:mm:ss");
    Date date = new Date();
    System.out.println(String.format(
        "-----\n"
        + "| \t JK Mart Private Limited | \n"
        + "| Add: Main Market Pimpri, Pimpri Chinchwad | \t Contact No.
9876543210 \t \t \t | \n"
        + "-----\n"));
    System.out.println("\t Bill to Pay *");
    Random rand = new Random();
    System.out.println(String.format(
        "To. Cash \t \t "+ "\t \t \t Bill No: "+rand.nextInt(10000)+" \t \t Date & Time:
"+f.format(date)+" \n"
        + "-----\n"));
    for(Entry<Integer,String> fa:to_take.entrySet()) {
        System.out.printf("Item => %d, Amount(in Rs) => %s\n", fa.getKey(),
```

Roll No 49 To 54

```
fa.getValue());
    }

    to_take.clear();
}

public static List<String> Products() {
    List<String> product = new ArrayList<String>(List.of(
        "1.Whole Grain Breads Rs.40","2.Brown Rice Wrape Rs.69/Kg","3.Oats
Rs.20","4.Bulgur Rs.100",
        "5.Baking Soda Rs.50/kg","6.Sea Sat Rs.10","7.Natural Oil
Rs.140/lit","8.Catalyst Rs.55",
        "9.Green Tea Rs.69", "10.Coffee Rs.28"
));
    return product;
}

public static void main(String[] args) {
    List<String> products = new ArrayList<String>(Products());
    List<Integer> prices = new ArrayList<Integer>(List.of(40, 69, 20, 100, 50, 10,
140, 55, 69, 28));
    Map<Integer,String> products_to_take = new HashMap<Integer,String>();
    Map<Integer,String> map = new HashMap<Integer,String>();
    for(int j=0;j<prices.size();j++){map.put(prices.get(j), products.get(j));}
    Scanner kb = new Scanner(System.in);
    while(true) {
        System.out.println(String.format(
            "Please Enter your choice\n1.Product List\n2.Generate Shopping
Bill\n3.Exit"
));
        int choice = kb.nextInt();
        switch(choice) {
            case 1:
                System.out.println("Product List is as follows:");
                for(int i=0;i<products.size();i++)
{System.out.println(products.get(i));
                System.out.println("\n\n");
                break;
            case 2:
                ShoppingBill(map, products_to_take, kb);
                System.out.println("\n\n");
                break;
            case 3:
                System.out.println("Existing");
                System.exit(0);
                break;
            default:
                System.out.println("Not found");
                System.out.println("\n\n");
                break;
        }
    }
}
```

}

}

8.0 Skill Developed/Learning outcome of this Micro-project:

Sr. No.	Technical/ Non-technical Skills	Tick Mark(✓) for Developed Skill
1	Information Collection	✓
2	Information Analysis	✓
3	Design of Project	✓
4	Programming Skills	✓
5	Leadership	✓
6	Team Management	✓
7	Planning	✓
8	Critical Thinking	✓
9	Task Management	✓
10	Creativity	✓
11	Develop Project in deadline driven environment	✓

9.0 Applications of this Micro Project:

1. It will help to learn the use of mini Shopping Management System which for which manages shopping system and accounting related tasks and importance of efficient management of the transaction records in day to day life and will also get to know the actual process of the mini Shopping Management System.
2. It will store all the transaction records for the efficiency of the manager and the user.
3. It will also help to easily find a particular transaction for a particular user along with its other details.

10.0 Action Plan:

Sr. no.	Details of the activity	Planned start date	Planned finished date	Name of the responsible team members
9.	Implementation	04/05/2021	05/05/2021	Onkar Sanjay Dokhe
10.	Implementation	07/05/2021	12/05/2021	Omkar Kakasaheb Waghmare
11.	Report Preparation	11/05/2021	18/05/2021	Pallavi Ankush Satpute
Week 12: Review and Suggestions				
12.	Review on report by teacher	12/05/2021	19/05/2021	Sakshi Sudhir Waghmare
13.	Report Preparation	18/05/2021	28/05/2021	Vaibhav Lahanu Mohod
14.	Presentation	19/05/2021	11/05/2021	Pratik Deepak Bandpatte
15.	Submission of Micro project	28/05/2021	28/05/2021	Onkar Sanjay Dokhe
End of Term: Final Submission of Micro project				

Name of the course teacher: Mrs. G.S.Mujumdar Sign: