

Q3. Section A

```
package _3oct;

import java.util.*;

public class MemberType {

    int age;

    String name;

    int memberType;

    String memberTypes;

    String tripname;

    int idno;

    String phoneno,address;

    int tno;

    static int countCrew,countAdult,countChild;

    int fee;

    Scanner sc = new Scanner(System.in);

    public MemberType()
    {
        System.out.println("Enter Your Age");
        this.age=sc.nextInt();

        System.out.println("Enter Your Name");
        this.name=sc.next();

        if(age>10) {

            System.out.println("Type 1 for Crew Member or 2 for Adults");

            this.memberType=sc.nextInt();
```

```
if(memberType==1)
{
    System.out.println("Enter id no.");
    this.idno=sc.nextInt();
    System.out.println("Enter trip name");
    this.tripname=sc.next();
    this.memberTypes="Crew";
    countCrew++;
    fee=0;
}
else if(memberType==2)
{
    System.out.println("Enter the ticket number");
    this.tno=sc.nextInt();
    System.out.println("Enter phone number");
    this.phoneno=sc.next();
    System.out.println("Enter address");
    this.address=sc.next();
    this.memberTypes="Adult";
    countAdult++;
    fee=500;
}
}
else
{
    System.out.println("Enter ticket number");
    this.tno=sc.nextInt();
    this.memberTypes="Children";
    countChild++;
    fee=250;
```

```

    }

    }

    public static String countMembers() {

        return "Number of Crew Members: "+countCrew+"\nNumber of Adults: "+countAdult+"\nNumber of Children: "+countChild;

    }

    public static String total()

    {

        return "Total amount of ticket sold = "+(countAdult+countChild+countCrew);

    }

    }

    /* Name : Gourav Soni*/

```

```

package _3oct;

import java.util.*;

public class CruiseClass {

    public static void main(String[] args)

    {

        Scanner sc = new Scanner(System.in);

        Map<Integer,MemberType> mapValue = new HashMap<Integer,MemberType>();

        System.out.println("Enter the Number of Travelers You want On the Cruise");

        int num = sc.nextInt();

```

```
for(int i=1; i<=num; i++)
```

```
{
```

```
mapValue.put(i, new MemberType());
```

```
}
```

```
for(Map.Entry<Integer, MemberType> entry:mapValue.entrySet()){
```

```
int key=entry.getKey();
```

```
MemberType b=entry.getValue();
```

```
System.out.println(key+" Data:");
```

```
System.out.println("Name: " + b.name + "\nAge: " + b.age + "\nMember Type: " + b.memberTypes+"\nFees: "+b.fee);
```

```
}
```

```
System.out.println(MemberType.countMembers());
```

```
System.out.println(MemberType.total());
```

```
sc.close();
```

```
}
```

```
}
```

```
/* Name : Gourav Soni*/
```

```
Pr | Properties | Servers | Data Source Explorer | Snippets | Terminal | Console x | JUnit
<terminated> CruiseClass (1) [Java Application] C:\Users\gourav.soni\Downloads\ eclipse-jee-2022-09-R-win32-x86_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20220903-1038\jre\bin\javaw.exe (0:
Enter the Number of Travelers You want On the Cruise
3
Enter Your Age
23
Enter Your Name
ram
Type 1 for Crew Member or 2 for Adults
1
Enter id no.
123
Enter trip name
singapore
Enter Your Age
7
Enter Your Name
aman
Enter ticket number
234
Enter Your Age
34
Enter Your Name
sanjay
Type 1 for Crew Member or 2 for Adults
2
Enter the ticket number
231
Enter phone number
75636576553
Enter address
Bangalore
1 Data:
```

```
1 Data:
Name: ram
Age: 23
Member Type: Crew
Fees: 0
2 Data:
Name: aman
Age: 7
Member Type: Children
Fees: 250
3 Data:
Name: sanjay
Age: 34
Member Type: Adult
Fees: 500
Number of Crew Members: 1
Number of Adults: 1
Number of Children: 1
Total amount of ticket sold = 3
```

Q3. Section B

```
package _30sep;
```

```
import java.util.*;
```

```
public class ToothpasteType1 {
```

```
    int age;
```

```
    String name;
```

```
    int toothpasteType;
```

```
    String toothpasteTypes,memberType;
```

```
static int countColgate,countPepso,countDabur,countPatanjali;
```

```
static int maximum;
```

```
static String max;
```

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

```
public ToothpasteType1() {
```

```
System.out.println("Enter your age: ");
```

```
age = sc.nextInt();
```

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

```
name = sc.next();
```

```
System.out.println("Enter member type (Men, Women or Child): ");
```

```
memberType = sc.next();
```

```
System.out.println("Type 1 for colgate or 2 for pepsodent or 3 for patanjali or 4 for dabur red: ");
```

```
this.toothpasteType=sc.nextInt();
```

```
switch(toothpasteType) {
```

```
case 1:{
```

```
this.toothpasteTypes="Colgate";
```

```
countColgate++;
```

```
break;
```

```
}
```

```
case 2:{
```

```
this.toothpasteTypes="Pepsodent";
```

```
countPepso++;
```

```
break;
```

```
}
```

```
case 3:{
```

```
this.toothpasteTypes="Patanjali";
```

```

countPatanjali++;
break;
}
case 4:{
this.toothpasteTypes="Dabour Red";
countDabur++;
break;
}
default:{
System.out.println("Enter correct input");
break;
}
}

maximum = Math.max(Math.max(countColgate,countPepso),Math.max(countPatanjali,countDabur));
}

public static String countPastes() {

System.out.println("Number of Colgate: "+countColgate+"\nNumber of Pepsodent:
"+countPepso+"\nNumber of Patanjali: "+countPatanjali+"\nNumber of Dabur Red: "+countDabur);

if(maximum==countColgate) {
max="Colgate";
System.out.println("Maximum: "+ max);
}

if(maximum==countPepso) {
max="Pepsodent";
System.out.println("Maximum: "+ max);
}

if(maximum==countPatanjali) {

```

```
max="Patanjali";
System.out.println("Maximum: "+ max);
}
if(maximum==countDabur) {
max="Dabur Red";
System.out.println("Maximum: "+ max);
}
return " ";
}

}
```

```
package _30sep;
import java.util.*;
```

```
public class ToothpasteBrand {
public static void main(String[] args)
{
// ToothpasteType ob;
Scanner sc = new Scanner(System.in);

Map<Integer,ToothpasteType1> mapValue = new HashMap<Integer,ToothpasteType1>();

System.out.println("Enter the Number of members: ");
int num = sc.nextInt();
```



```

for(int i=1; i<=num; i++)

{

mapValue.put(i, new ToothpasteType1());

}


for(Map.Entry<Integer, ToothpasteType1> entry:mapValue.entrySet()){

int key=entry.getKey();

ToothpasteType1 b=entry.getValue();

System.out.println(key+" Data:");

System.out.println("Name: " + b.name + "\nAge: " + b.age + "\nMember Type: " +
b.memberType+"\nToothpaste Type: " + b.toothpasteTypes);

}


System.out.println(ToothpasteType1.countPastes());

sc.close();

}

}

```

```

Properties Servers Data Source Explorer Snippets Terminal Console × JUnit
<terminated> ToothpasteBrand [Java Application] C:\Users\gourav.son\Downloads\eclipse-jee-2022-09-R-win32-x86_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x8
Enter the Number of members:
4
Enter your age:
23
Enter your name:
dchb
Enter member type (Men, Women or Child):
Men
Type 1 for colgate or 2 for pepsodent or 3 for patanjali or 4 for dabur red:
1
Enter your age:
21
Enter your name:
hbchd
Enter member type (Men, Women or Child):
women
Type 1 for colgate or 2 for pepsodent or 3 for patanjali or 4 for dabur red:
2
Enter your age:
34
Enter your name:
fev
Enter member type (Men, Women or Child):
child
Type 1 for colgate or 2 for pepsodent or 3 for patanjali or 4 for dabur red:
1
Enter your age:
34
Enter your name:
men
Enter member type (Men, Women or Child):
women
Type 1 for colgate or 2 for pepsodent or 3 for patanjali or 4 for dabur red:
4

```

```

Properties Servers Data Source Explorer Snippets Terminal Console × JUnit
<terminated> ToothpasteBrand [Java Application] C:\Users\gourav.soni\Downloads\eclipse-jee-2022-09-R-win32-x86_64\eclipse\plugins\org.eclipse.j
1
Enter your age:
34
Enter your name:
men
Enter member type (Men, Women or Child):
women
Type 1 for colgate or 2 for pepsodent or 3 for patanjali or 4 for dabur red:
4
1 Data:
Name: dchb
Age: 23
Member Type: Men
Toothpaste Type: Colgate
2 Data:
Name: hbchd
Age: 21
Member Type: women
Toothpaste Type: Pepsodent
3 Data:
Name: fev
Age: 34
Member Type: child
Toothpaste Type: Colgate
4 Data:
Name: men
Age: 34
Member Type: women
Toothpaste Type: Dabour Red
Number of Colgate: 2
Number of Pepsodent: 1
Number of Patanjali: 0
Number of Dabur Red: 1
Maximum: Colgate

```

Q2.

package _3oct;

class Regular {

int membership_fee=0;

int enrollment_fee=0;

int charges_per_month=20000;

int months;

public Regular(int months) {

super();

this.months=months;

}

```

public void display() {
    System.out.println("Bill for regular member : ");
    System.out.println("Membership Fee : "+this.membership_fee);
    System.out.println("Enrollment Fee : "+this.enrollment_fee);
    System.out.println("Charges Per Month = Rs 20,000");
    System.out.println("*****");
    int charges = this.months*this.charges_per_month+this.membership_fee+this.enrollment_fee;
    System.out.println("Total amount : "+charges);
}

}

```

```

/* Name : Gourav Soni*/

```

```

package _3oct;

class Gold extends Regular{

    int membership_fee=90000;
    int enrollment_fee=10000;
    int charges_per_month=10000;
    public Gold(int months) {
        super(months);
    }
}

```

```

public void display() {

    System.out.println("Bill for Gold member : ");
    System.out.println("Membership Fee : "+this.membership_fee);
    System.out.println("Enrollment Fee : "+this.enrollment_fee);
    System.out.println("Charges for 6 Month : Free");
    System.out.println("after 6 months charges per month : 10000");
    System.out.println();
    System.out.println("*****");

    if(months<=6) {
        int charges = this.membership_fee+this.enrollment_fee;
        System.out.println("Total amount = "+charges);
    }

    if(months>6)
    {
        int charges= this.membership_fee+this.enrollment_fee+((this.months-
6)*this.charges_per_month);
        System.out.println("Total amount = "+charges);
    }
}

}

/* Name : Gourav Soni*/

```

```
package _3oct;
```

```
class Silver extends Regular{
```

```
    int membership_fee=15000;
```

```
    int enrollment_fee=5000;
```

```
    int charges_per_month=20000;
```

```
    public Silver(int months) {
```

```
        super(months);
```

```
        // TODO Auto-generated constructor stub
```

```
    }
```

```
    public void display() {
```

```
        System.out.println("Bill for Silver member : ");
```

```
        System.out.println("Membership Fee : "+this.membership_fee);
```

```
        System.out.println("Enrollment Fee : "+this.enrollment_fee);
```

```
        System.out.println("Charges for 6 Month : Free");
```

```
        System.out.println("after 6 months charges per month : 20000");
```

```
        System.out.println();
```

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

```
        if(months<=6) {
```

```
            int charges=this.membership_fee+this.enrollment_fee;
```

```
            System.out.println("Total amount : "+charges);
```

```
        }
```

```
if(months>6)
{
int charges=this.membership_fee+this.enrollment_fee+((this.months-6)*this.charges_per_month);
System.out.println("Total amount : "+charges);
}
}
}
```

```
/* Name : Gourav Soni*/
```

```
package _3oct;
import java.util.*;
public class Golf_club {
public static void main(String[] args) {
System.out.println("Enter Details for enrollment");
Scanner sc = new Scanner(System.in);
System.out.println("Enter the membership type:");
System.out.println("1. Regular \n2. Gold \n3. Silver");
int memebership_type=sc.nextInt();
System.out.println("enter the number of months you want to enroll yourself : ");
int months=sc.nextInt();

Reguler mb ;

switch (memebership_type) {

case 1:
mb= new Reguler(months);
```

```
mb.display();
```

```
break;
```

```
case 2:
```

```
mb = new Gold(months);
```

```
mb.display();
```

```
break;
```

```
case 3:
```

```
mb = new Silver(months);
```

```
mb.display();
```

```
break;
```

```
default:
```

```
System.out.println("choose one out of regular/gold/silver");
```

```
break;
```

```
}
```

```
sc.close();
```

```
}
```

```
}
```

```
/* Name : Gourav Soni*/
```



```
public String getProductID() {  
    return productID;  
}
```

```
public String getProductName() {  
    return productName;  
}
```

```
public double getPrice() {  
    return price;  
}
```

```
public int getQuantity() {  
    return quantity;  
}
```

@Override

```
public String toString() {  
    return "Product \nproductID : " + productID + ",\nproductName : " + productName + ",\nprice : " +  
    price + ", \nquantity : "  
        + quantity;  
}
```

```
public static void main(String[] args) throws Exception{
```

```
    ProductLoader pp = new ProductLoader();
```

```
    pp.loadProduct();
```

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

```
    System.out.println("Enter Product id to search");
```

```
        String pid=sc.next();

        System.out.println(pp.searchProduct(pid));
    }
}

/*Gourav Soni*/
```

ProductLoader.java

```
package _3oct;

import java.io.*;
import java.util.*;
import java.io.BufferedReader;
import java.io.FileReader;
import java.io.ObjectOutputStream;
import java.nio.file.Files;
import java.util.ArrayList;
import java.util.stream.Collectors;
import java.util.stream.Stream;

public class ProductLoader {

    private static List<Product> It = new ArrayList<>();

    public static void loadProduct() throws Exception {

        BufferedReader bf = new BufferedReader(new FileReader(new
File("C:\\Users\\gourav.soni\\eclipse-workspace\\Happiestmind\\product.txt")));

        String line;
```

```

while((line=bf.readLine())!=null)
{
    String arr[] = line.split(",");
    Product pp = new Product(arr[0],arr[1],Double.parseDouble(arr[2]),Integer.parseInt(arr[3]));
    lt.add(pp);
}
}

public static List<Product> getProductList(){
    return lt;
}

public static Product searchProduct(String productID)
{
    List <Product> temp_lt = getProductList();
    for(Product p : temp_lt)
    {
        if(p.productID.equals(productID) )
        {
            return p;
        }
    }
    return null;
}

}

/*Gourav Soni*/

```

```
31
32 public static Product searchProduct(String productID)
33 {
34     List<Product> temp_l = getProductList();
    <
    Properties Servers Data Source Explorer Snippets Terminal Console x JUnit
<terminated> Product [Java Application] C:\Users\gourav.soni\Downloads\eclipse-jee-2022-09-R-win32-x86_64\eclipse\plug
Enter Product id to search
P101
Product
productID : P101,
productName : SIM-CARD,
price : 100.0,
quantity : 500
```

Q1. A

TestProduct.java

package _3oct;

import java.io.FileWriter;

import java.io.IOException;

import java.util.ArrayList;

import java.util.Scanner;

public class TestProduct {

private static Scanner scan;

public static void main(String[] args) throws IOException {

scan = new Scanner(System.in);

ArrayList<Product> prod;

```

        try {
ProductLoader.loadProduct();
        } catch (Exception e) {
// TODO Auto-generated catch block
e.printStackTrace();
        }

        String newtemp = "\n";
        prod = (ArrayList<Product>) ProductLoader.getProductList();
        System.out.print("Enter the product ID : ");
        String prodID = scan.next();
        Product checkProduct = ProductLoader.searchProduct(prodID);
        if (checkProduct == null) {
            System.out.print("Enter Product Name : ");
            String pnm = scan.next();
            System.out.print("Enter Price : ");
            String pr = scan.next();
            System.out.print("Enter Quantity : ");
            String qt = scan.next();
            newtemp += prodID+", "+pnm+", "+pr+", "+qt;
            TestProduct.addData(newtemp);
            try {
ProductLoader.loadProduct();
            } catch (Exception e) {
// TODO Auto-generated catch block
e.printStackTrace();
            }

            System.out.println("\nProduct Added : ");
            checkProduct = ProductLoader.searchProduct(prodID);
            TestProduct.getOutput(checkProduct);

```

```
    } else {  
        TestProduct.getOutput(checkProduct);  
    }  
}
```

```
public static void addProductData(String inputData) throws IOException {  
    FileWriter fw = new FileWriter("product.txt", true);  
    fw.write(inputData);  
    fw.close();  
}
```

```
public static void getOutput(Product checkProduct) {  
    System.out.println("\nProduct ID : " + checkProduct.getProductID());  
    System.out.println("Product Name : " + checkProduct.getProductName());  
    System.out.println("Price : " + checkProduct.getPrice());  
    System.out.println("Quantity : " + checkProduct.getQuantity());  
}
```

```
}
```

```
/*Gourav Soni*/
```

ProductLoader.java Product.java product.tx

```
1 P101, SIM-CARD, 100, 500
2 P102, DATA-CABLE, 200, 300
3 P103, Fan, 600, 5
```

Properties Servers Data Source Explorer Snipp

<terminated> TestProduct [Java Application] C:\Users\go

Enter the product ID : P103
Enter Product Name : Fan
Enter Price : 600
Enter Quantity : 5

Product Added :

Product ID : P103
Product Name : Fan
Price : 600.0
Quantity : 5