Institute of Computer Technology

B. Tech Computer Science and Engineering

Subject: Object Oriented Programming (2CSE303)

MIDSEM - 1

**PRACTICAL-EXAM**

**Practical Definition: -**

**A customer wants to spend his money for which following functions could be performed:**

1. **Take the user input for total monthly income, monthly budget for luxury expenses.**
2. **Determine the total savings and find the percentage of savings from the total monthly income. If the savings percentage is greater than 90%, it should display the message ‘Select your choice’ -> Home, Décor, Clothing, Accessories. In case of Home apply discount of 25%, Décor apply discount of 20%, for Clothing and accessories, apply discount of 30%.**
3. **Once the choice is done display the actual total amount invoice generated based on the selection made.**

**Note: The above program should be designed through inheritance.**

***SOLUTION***

import java.util.\*;

class ObjectiveA

{

double m\_Income, m\_Expense;

void GetData(){

Scanner yash1=new Scanner(System.in);

System.out.println("\nEnter Total Monthly Income: ");

m\_Income=yash1.nextDouble();

System.out.println("\nEnter Total Budget for Monthly Luxury Expense: ");

m\_Expense=yash1.nextDouble();

}

}

class ObjectiveB extends ObjectiveA

{

double Savings, Percentage, new\_Expense;

int ch;

void Calc()

{

Savings = m\_Income - m\_Expense;

Percentage = (Savings/m\_Income)\*100;

Scanner yash2=new Scanner(System.in);

if(Percentage > 90)

{

System.out.println("\nSelect Your Choice: \n1. Home\n2. Décor\n3. Clothing & Accessories");

System.out.println("\n\nEnter your choice: ");

ch=yash2.nextInt();

switch(ch){

case 1:

System.out.println("\nYou will get discount of 25%!!!");

new\_Expense = m\_Expense - (0.25\*m\_Expense);

break;

case 2:

System.out.println("\nYou will get discount of 20%!!!");

new\_Expense = m\_Expense - (0.2\*m\_Expense);

break;

case 3:

System.out.println("\nYou will get discount of 30%!!!");

new\_Expense = m\_Expense - (0.3\*m\_Expense);

break;

default:

System.out.println("\nINVALID CHOICE !!!");

break;

}

}

else

{

System.out.println("\nYour Savings % is less than 90%. Please Save More.");

}

}

}

class ObjectiveC extends ObjectiveB

{

void Display()

{

if(Percentage > 90)

{

System.out.println("\n---------------USER INPUT---------------");

System.out.println("\nMonthly Total Income: "+m\_Income);

System.out.println("\nMonthly Total Luxury Expense: "+m\_Expense);

System.out.println("\n---------------CALCULATED INVOICE---------------");

System.out.println("\n\nUpdated Total Savings: "+(m\_Income-new\_Expense));

System.out.println("\nNew Discounted Expense: "+new\_Expense);

}

}

}

public class PracticalExam {

public static void main(String[] args) {

ObjectiveC obj = new ObjectiveC();

obj.GetData();

obj.Calc();

obj.Display();

}

}

***OUTPUT***







