

**VIT – A Place to Learn; A Chance to Grow**

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

CSE1007- JAVA PROGRAMMING

LAB CAT-1

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[16:07] Varalakshmi M

1.Define a class Customer to store the following details of the individual customers of an e-commerce website like Amazon – customer name (a string) and a 2-D ragged array that stores the cost of the products bought each month, for a total of 3 months. ie., the number of rows should be 3 and the number of columns for each month depends on the number of products bought each month. Define appropriate constructors to initialize the instance variables.  Discounts are announced for those customers whose total purchase amount in the 3 months exceeds Rs. 50000 or a single-month purchase exceeds Rs. 25000. Define a method haveDiscount() to check this and display the names of those customers who get this discount. Define another method findMaxMonth() which will display the month number in which maximum purchase has been made by taking into account the purchase details of all the customers.

Define the driver class to instantiate the Customer class and invoke its methods (minimum of 3 customers).

CODE:

import java.util.\*;

class Customer {

String name;

int[][] purchase = new int[3][];

Customer(String s,int[][] p){

this.name = s;

this.purchase = p;

}

void haveDiscount(Customer[] c){

System.out.println("Customers getting the discount: ");

for(int i =0 ; i< c.length ; i++){

int totalPur = 0 ;

boolean maxMonth = false;

for(int j = 0; j<3 ; j++){

int sum =0;

for(int k = 0 ; k< c[i].purchase[j].length ; k++){

totalPur += c[i].purchase[j][k];

sum += c[i].purchase[j][k];

}

if(sum >=25000){

maxMonth = true;

}

}

if(totalPur>=50000 || maxMonth){

System.out.println(c[i].name);

}

}

}

void findMaxMonth(Customer[] c){

int MonthPurchase = 0;

int maxx=0;

int month =0;

for(int i = 0 ; i < 3 ; i++){

for(int j = 0 ;j< c.length ; j++){

for(int k =0 ; k < c[j].purchase[i].length; k++){

MonthPurchase += c[j].purchase[i][k];

}

}

if(MonthPurchase > maxx){

maxx = MonthPurchase;

month = i;

}

}

System.out.println();

System.out.println("Month with max purchase: " + month );

}

}

class MainCla {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the number of customers: ");

int n = sc.nextInt();

Customer[] c = new Customer[n];

//Customer c1 = new Customer();

int[][] p = new int[3][];

for(int i= 0 ; i<n ;i++){

String s = sc.next();

for(int j =0 ; j<3 ; j++){

int x = sc.nextInt();

p[i] = new int[x];

for(int k = 0 ; k < x ; k ++){

p[i][k] = sc.nextInt();

}

}

c[i] = new Customer(s,p);

}

System.out.println();

System.out.println();

c[0].haveDiscount(c);

c[0].findMaxMonth(c);

}

}

OUTPUT:

