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| File:COMSATS new logo.jpg - Wikimedia Commons  OBJECT ORIENTED PROGRAMMING  *Lab Task 01*  *Class and objects* | **submitted by:**  **Shahzaneer Ahmed**  **registration number:**  **sp21-bcs-087**  **submitted to:**  **mA’M sANEEHA aMIR**  **date of submission:**  **FEBRUARY 15, 2022** |

Question-1

# Source Code:

*public* class question1{

*public* *static* void main(String [] args){

    int a = 2;

    int b = 5;

    int power = power(a,b);

    System.out.println(power);

    }

*static* int power(int num1,int num2){

        int pow = 1;

*for*(int i =1;i<=num2;i++){

        pow\*=num1;

        }

*return* pow;

    }

}

Question-2

# Source Code:

public class question2 {

*public* *static* void main(String [] args){

        int num=5;

        question2.pattern(num);

    }

*static* void pattern(int num){

        int i,j;

*for*( i=1; i<=num;i++){

*for*(j=1; j<=i;j++){

*if*(j==1){

                    System.out.print(i);

                }

                System.out.print("\*");

            }

            System.out.print(--j);

            System.out.println();

        }

    }

}

Question-3

# Source Code:

import java.util.\*;

*public* class question3 {

*public* *static* void main(String [] args){

    evenOdd();

    }

*static* void evenOdd(){

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

        int [] arr = *new* int[5];

        int evenCount=0,oddCount=0;

*for*(int i=0;i<5;i++){

            int num = sc.nextInt();

            arr[i] = num;

        }

*for*(int i = 0; i<5;i++){

*if*(arr[i]==0){

*continue*;

            }

*else*{

*if*(arr[i]%2==0){

                    evenCount+=1;

                }

*else* *if*(arr[i]%2==1){

                    oddCount+=1;

                }

            }

        }

    System.out.printf("The number of odd numbers are %d and even numbers are %d\n",oddCount,evenCount);

    }

}

Question-4

# Source Code:

public class question4 {

*public* *static* void main(String[]args){

        String str1="Pakistan";

        String str2="A beautiful Country";

        String str = concatenate(str1, str2);

        System.out.println(str);

    }

*static* String concatenate(String str1,String str2){

        String con = str1+""+str2;

*return* con;

    }

}

Question-5

# Source Code:

public class question5 {

*public* *static* void main(String[]args){

    int [] arr = {1,2,3,4,5};

    sumAvg(arr);

    }

*static* void sumAvg(int [] arr){

        int size = arr.length-1;

        int sum=0;

*for*(int i=0; i<size+1;i++){

            sum+=arr[i];

        }

        double avg = sum/size;

        System.out.printf("The sum of elements is %d",sum);

        System.out.printf("The average of elements is %f",avg);

    }

}

Question-6

# Source Code:

import java.util.Scanner;

*public* class question6 {

*public* *static* void main(String [] args){

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

        System.out.print("Enter the size of a array");

        int size = sc.nextInt();

        int [] arr = *new* int[size];

        System.out.println("Enter elements ");

*for*(int i=0; i<size;i++){

            int num = sc.nextInt();

            arr[i]=num;

        }

        lowHigh(arr);

    }

*static* void lowHigh(int arr []){

    int max = Integer.MIN\_VALUE;

    int min = Integer.MAX\_VALUE;

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

*if*(arr[i]>max) max = arr[i];

*if*(arr[i]<min) min = arr[i];

    }

    System.out.printf("The max value is %d and the min value is %d",max,min);

    }

}

Question-7

# Source Code:

import java.util.Scanner;

*public* class question7 {

*public* *static* void main(String [] args){

        telephoneServiceReview();

    }

*static* void telephoneServiceReview(){

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

        System.out.println(

        """

        Rate your telephone Service:

        1- Excellent

        2- Good

        3- Average

        4- Below Average

        5- Poor

        """);

        int cExcellent=0,cGood=0,cAvg=0,cBavg=0,cPoor=0;

        int [] arr = *new* int[10];

        System.out.println("Enter your assessment for telephone service");

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

            int choice = sc.nextInt();

            arr[i]= choice;

        }

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

*switch*(arr[i]){

*case* 1:

                cExcellent++;

*break*;

*case* 2:

                cGood++;

*break*;

*case* 3:

                cAvg++;

*break*;

*case* 4:

                cBavg++;

*break*;

*case* 5:

                cPoor++;

*break*;

            }

        }

        System.out.printf("""

        Excellent : %d

        Good :      %d

        Average :   %d

        Below Average : %d

        Poor    :   %d

        """,cExcellent,cGood,cAvg,cBavg,cPoor);

    }

}

Question-8

# Source Code:

import java.util.\*;

class question8{

*static* Scanner input = *new* Scanner(System.in);

*static* String[] issues = {"inheritance","divorce","child marriage","education right","polygamy"};

*public* *static* void main(String[] args) {

        callPoll();

    }

*public* *static* void callPoll(){

        int[][] responses = *new* int[5][10];

*for*(int i=0;i<10;i++){

            System.out.print("================  User  "+(i+1)+"=======================\n");

            System.out.print("Rate the following issue (1-10) -- "+issues[0]+" : ");

            responses[0][i] = input.nextInt();

            System.out.print("Rate the following issue (1-10) -- "+issues[1]+" : ");

            responses[1][i] = input.nextInt();

            System.out.print("Rate the following issue (1-10) -- "+issues[2]+" : ");

            responses[2][i] = input.nextInt();

            System.out.print("Rate the following issue (1-10) -- "+issues[3]+" : ");

            responses[3][i] = input.nextInt();

            System.out.print("Rate the following issue (1-10) -- "+issues[4]+" : ");

            responses[4][i] = input.nextInt();

            System.out.print("=================End==============================\n\n");

        }

        int[] average = *new* int[5];

        int[] totalPoints = *new* int[5];

        int sum = 0;

*for*(int j=0;j<5;j++){

            sum=0;

*for*(int k=0;k<10;k++){

                sum+=responses[j][k];

            }

            average[j] = sum/10;

            totalPoints[j] = sum;

        }

        int max = totalPoints[0];

        int maxIndex = 0;

*for*(int a=1;a<5;a++){

*if*(totalPoints[a]>max){

                max = totalPoints[a];

                maxIndex = a;

            }

        }

        int min = totalPoints[0];

        int minIndex = 0;

*for*(int a=1;a<5;a++){

*if*(totalPoints[a]<min){

                min = totalPoints[a];

                minIndex = a;

            }

        }

        System.out.print("Average of each issue : \n");

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

            System.out.print(issues[c] + " : "+average[c]+"\n");

        }

        System.out.println();

        System.out.print(issues[maxIndex] + " has highest points---- "+totalPoints[maxIndex]+" points.\n");

        System.out.print(issues[minIndex] + " has lowest points----"+totalPoints[minIndex]+" points.\n");

    }

}

Question-9

# Source Code:

public class question9 {

*public* *static* void main(String[] args) {

        String str = """

        WelcTme tT

        tutTrialspTint.cTm

        """;

        String strm = modified(str);

        System.out.println(strm);

    }

*static* String modified(String str){

        String modi = str.replace('T', 'O');

*return* modi;

    }

}

Question-10

# Source Code:

public class question10 {

*public* *static* void main(String [] args){

    String email\_address = "shahism01@gmail.com";

    String user = extractor(email\_address);

    System.out.println("The user name is "+user);

    }

*static* String extractor (String email){

        String username;

        username = email.substring(0, email.indexOf("@"));

*return* username;

    }

}