**ASSIGNMENT 1**

**Name : Meghana Dhananjay Pagare**

**Roll No : 1135**

**Sub : concepts of programming with java**

**//Q1 )**

**public** **class** Test1 {

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

System.***out***.println("Hello World");

}

}

**//output**

Hello World

**-------------------------------------------------------------------**

Q2//sum of 2 num

**import** java.util.Scanner;

**public** **class** Test2 {

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

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

**int** A,B,result;

String X,Y,res;

System.out.println("Enter 2 number : ");

A=sc.nextInt();

B=sc.nextInt();

result=A+B;

System.out.println("sum ="+result);

System.out.println("Enter 2 char");

X=sc.next();

Y=sc.next();

res=X+Y;

System.out.println("sum ="+res);

}

}

**//output**

Enter 2 number :

45

55

sum =100

Enter 2 char

A B

sum =AB

**-----------------------------------------------------------------------**

//3:Find the compound amount and compound interest on the principal Rs.20,000 borrowed at 6% compounded annually for 3 years.

**public** **class** Test3 {

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

**int** p = 20000;

**int** ans=0;

**int** n = 3;

**int** r = 6;

**int** A = p;

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

A = A + (A\*r/100);

ans = A-p;

}

System.***out***.println("The amount at the end of 3 years is "+A);

System.***out***.println("The compound interest at the end of 3 years is "+ans);

}

}

/\*public class Test3 {

public static void main(String[] args) {

float a,p=20000,r=6,ci,n=3;

a = (float) (p \* (Math.pow (1+r/100, n) ));

ci= a-p;

System.out.println("amount = "+a);

System.out.println("compound interest = "+ci);

}

}

\*/

**//output**

The amount at the end of 3 years is 23820

The compound interest at the end of 3 years is 3820

**-------------------------------------------------------------------------**

//4:Write a program to calculate power of a number.

**import** java.util.Scanner;

**public** **class** Test4 {

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

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

**int** base,exponent;

**long** ans = 1;

System.***out***.println("enter number");

base=sc.nextInt();

exponent=sc.nextInt();

System.***out***.println("base="+base);

System.***out***.println("exponent="+exponent);

**while**(exponent!=0) {

ans\*=base;

--exponent;

}

System.***out***.println("ans is (base^exponent) : "+ans);

}

}

**//output**

enter number

22

2

base=22

exponent=2

ans is (base^exponent) : 484

**--------------------------------------------------------------------------**

//5:Write a program to swap two numbers.

**import** java.util.Scanner;

**public** **class** Test5 {

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

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

**int** A,B,t;

System.***out***.println("enter numbers : ");

A=sc.nextInt();

System.***out***.println("A =" +A);

B=sc.nextInt();

System.***out***.println("B =" +B);

t=A;

A=B;

B=t;

System.***out***.println("after swapping");

System.***out***.println("A =" +A);

System.***out***.println("B =" +B);

}

}

**//output**

enter numbers :

123

A =123

224

B =224

after swapping

A =224

B =123

**-------------------------------------------------------------------------**

//6:Write a program to find factorial of a given number.

**import** java.util.Scanner;

**public** **class** Test6 {

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

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

System.***out***.println("Enter number");

**int** i,fact=1,number;

number=sc.nextInt();

System.***out***.println("number = "+number);

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

fact=fact\*i;

}

System.***out***.println("factorial of number is : "+fact);

}

}

**//output**

Enter number

4

number = 4

factorial of number is : 24

**------------------------------------------------------------------------**

//7:Write a program to find m to the power n

**import** java.util.Scanner;

**public** **class** Test7 {

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

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

**int** base,exponent;

**long** ans = 1;

System.***out***.println("enter number");

base=sc.nextInt();

exponent=sc.nextInt();

System.***out***.println("m="+base);

System.***out***.println("n="+exponent);

**while**(exponent!=0) {

ans\*=base;

--exponent;

}

System.***out***.println("ans is (m^n) : "+ans);

}

}

//output

enter number

14

3

m=14

n=3

ans is (m^n) : 2744

--------------------------------------------

//8:Check if number is a prime number or not.

**import** java.util.Scanner;

**public** **class** Test8 {

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

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

System.***out***.println("enter number : ");

**int** num1;

num1=sc.nextInt();

System.***out***.println("num1 = "+num1);

**if**(num1%2==0)

System.***out***.println("it is not prime number");

**else**

System.***out***.println("it is prime number");

}

}

//output

enter number :

223

num1 = 223

it is prime number

--------------------------------------------

//9:Sum of series :1+2+3+….+n

**import** java.util.Scanner;

**public** **class** Test9 {

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

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

System.***out***.println("enter nth number : ");

**int** n,i,sum=0;

n=sc.nextInt();

System.***out***.println("nth term = "+n);

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

sum=sum+i;

}

System.***out***.println("sum of first n numbers = "+sum);

}

}

//output

enter nth number :

99

nth term = 99

sum of first n numbers = 4950

-----------------------------------------------

//10 palidrome no or not

**import** java.util.Scanner;

**public** **class** Test10 {

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

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

**int** num,rem,rev=0;

System.***out***.println("enter number");

num=sc.nextInt();

System.***out***.println("num="+num);

**int** t=num;

**while** (num != 0) {

rem = num % 10;

rev = rev \* 10 + rem;

num /= 10;

}

System.***out***.println("reverse = "+rev);

**if**(t==rev) {

System.***out***.println("it is palidrome number");

}

**else** {

System.***out***.println("it is not palidrome number");

}

}

}

//output

enter number

151

num=151

reverse = 151

it is palidrome number

-----------------------------------------------

//11:Write a program to find sum of all even and odd numbers between 1 to n.

**import** java.util.Scanner;

**public** **class** Test11 {

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

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

**int** n ;

**int** evenSum = 0;

**int** oddSum = 0;

System.out.println("enter number");

n=sc.nextInt();

System.out.println("n = "+n);

**for** (**int** i = 1; i <= 2 \* n; i++) {

// check even & odd using Bitwise AND operator

**if** ((i & 1) == 0)

evenSum += i;

**else**

oddSum += i;

}

// Sum of even numbers less then 17

System.out.println("Sum of First " + n

+ " Even numbers = " + evenSum);

// sum of odd numbers less then 17

System.out.println("Sum of First " + n

+ " Odd numbers = " + oddSum);

}

}

//output

enter number

100

n = 100

Sum of First 100 Even numbers = 10100

Sum of First 100 Odd numbers = 10000

------------------------------------------

//12: Write a program to enter a number and print its reverse.

**import** java.util.Scanner;

**public** **class** Test12 {

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

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

**int** num,rem,rev=0;

System.out.println("enter number");

num=sc.nextInt();

System.out.println("num="+num);

**while** (num != 0) {

rem = num % 10;

rev = rev \* 10 + rem;

num /= 10;

}

System.out.println("reverse = "+rev);

}

}

//output

enter number

213445

num=213445

reverse = 544312

-----------------------------------------------

//13:Write a program to print all Prime numbers between 1 to n.

**import** java.util.Scanner;

**public** **class** Test13 {

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

**int** i,count;

System.out.print("Enter n value : ");

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

**int** n=sc.nextInt();

System.out.println("Prime numbers between 1 to "+n+" are ");

**for**(**int** j=2;j<=n;j++)

{

count=0;

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

{

**if**(j%i==0)

{

count++;

}

}

**if**(count==2)

System.out.print(j+" ");

}

}

}

//output

Enter n value : 100

Prime numbers between 1 to 100 are

2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97

--------------------------------------------------

**import** java.util.Scanner;

------------------------------------------------------------

//14:Write a program to check entered number is Armstrong number or not.

**public** **class** Test14 {

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

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

System.out.println("enter no to check armstrong or not : ");

**int** n,sum=0,r,temp;

n=sc.nextInt();

System.out.println("n : "+n);

temp=n;

**while**(n>0)

{

r=n%10;

sum=sum+(r\*r\*r);

n=n/10;

}

**if**(temp==sum)

System.out.println("armstrong number ");

**else**

System.out.println("not armstrong number");

}

}

//output

enter no to check armstrong or not :

153

n : 153

armstrong number

---------------------------------------------

//15:Write a program to find greatest of three numbers using nested if-else.

**import** java.util.Scanner;

**public** **class** Test15 {

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

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

System.out.println("enter num : ");

**int** num1,num2,num3;

num1=sc.nextInt();

System.out.println("num1 ="+num1);

num2=sc.nextInt();

System.out.println("num2 ="+num2);

num3=sc.nextInt();

System.out.println("num3 ="+num3);

**if**(num1>=num2) {

**if**(num1>=num3) {

System.out.println("num 1 is greatest");

}

}**else**

{

**if**(num2>num3)

System.out.println("num 2 is greatest");

**else**

{ System.out.println("num 3 is greatest");

}

}

}

}

//output

enter num :

121

num1 =121

200

num2 =200

162

num3 =162

num 2 is greatest

---------------------------------------------

**ASSIGNMENT 2**

**Name : Meghana Dhananjay Pagare**

**Roll No : 1135**

**Sub : concepts of programming with java**

//1:Java program to print the following pattern on the console

//\*

//\* \*

//\* \* \*

//\* \* \* \*

//\* \* \* \* \*

**public** **class** pro1 {

**public** **static** **void** printStars(**int** n)

{

**int** i, j;

**for**(i=0; i<n; i++)

{

**for**(j=0; j<=i; j++)

{

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

}

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

}

}

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

{

**int** n = 5;

*printStars*(n);

}

}

//output

\*

\* \*

\* \* \*

\* \* \* \*

\* \* \* \* \*

-------------------------------------------------

//2:Write a program which will accept student information like rollno,name,5 subject marks.calculate total and percentage.calculate grade..

// per >75 grade :A

// per<74 and >60 :B

// per<59 :C

**import** java.util.Scanner;

**public** **class** pro2 {

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

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

System.***out***.println("Enter student information : ");

**float** total, percentage;

String name;

**int** rollNo;

**int** sub1,sub2,sub3,sub4,sub5;

System.***out***.println(" Student name : ");

name=sc.nextLine();

System.***out***.println(" Student name : "+name);

System.***out***.println("roll no : ");

rollNo=sc.nextInt();

System.***out***.println("roll no : "+rollNo);

System.***out***.print("Enter marks for 5 Subjects : ");

sub1=sc.nextInt();

sub2=sc.nextInt();

sub3=sc.nextInt();

sub4=sc.nextInt();

sub5=sc.nextInt();

System.***out***.print("Enter marks for 5 Subjects : ");

total=sub1+sub2+sub3+sub4+sub5;

percentage = (total / 500) \* 100;

System.***out***.println("total : "+total);

System.***out***.println("percentage : "+percentage);

System.***out***.println("student got ");

**if**(percentage>75)

System.***out***.println("grade : A");

**else** **if** (percentage<74 && percentage>60)

System.***out***.println("grade : B");

**else** **if** (percentage<59)

System.***out***.println("grade : C");

}

}

//output

Enter student information :

Student name :

Meghana Pagare

Student name : Meghana Pagare

roll no :

1135

roll no : 1135

Enter marks for 5 Subjects : 50

45

50

60

70

Enter marks for 5 Subjects : total : 275.0

percentage : 55.0

student got

grade : C

-----------------------------------------------------

//3:Write function to swap two numbers.

**import** java.util.Scanner;

**public** **class** pro3 {

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

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

**int** A,B,t;

System.***out***.println("enter numbers : ");

A=sc.nextInt();

System.***out***.println("A =" +A);

B=sc.nextInt();

System.***out***.println("B =" +B);

t=A;

A=B;

B=t;

System.***out***.println("after swapping");

System.***out***.println("A =" +A);

System.***out***.println("B =" +B);

}

}

//output

enter numbers :

22

A =22

33

B =33

after swapping

A =33

B =22

----------------------------------------------------

//4:Write functions for making addition of diffrent types(use FunctionOverloading);

**public** **class** pro4 {

**public** **static** **void** add() {

}

**public** **static** **void** add(**int** i,**int** j) {

System.***out***.println("add"+(i+j));

}

**public** **static** **void** add(**int** i,**double** k) {

System.***out***.println("add"+(i+k));

}

**public** **static** **void** add(**double** k,**int** i) {

System.***out***.println("add"+(k+i));

}

**public** **static** **void** add(**int** i,**int** j,**int** l) {

System.***out***.println("add"+(i+j+l));

}

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

**int** a=20,b=30,c=20;

**double** d=12.4;

*add*();

*add*(a,b);

*add*(a,d);

*add*(d,a);

*add*(a,b,c);

}

}

//output

add50

add32.4

add32.4

add70

-----------------------------------------------------

//5:Write a program to accept array of 5 numbers and display it.

**import** java.util.Scanner;

**public** **class** pro5 {

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

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

System.***out***.println("enter arr elements : ");

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

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

intArr[i] = sc.nextInt();

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

System.***out***.println(intArr[i]);

}

}

//output

enter arr elements :

1

2

3

4

5

1

2

3

4

5

-----------------------------------------------------

//6:Write a program which read aaray of 5 elements and print reverse array.

**public** **class** pro6 {

**static** **void** reverse(**int** a[], **int** n)

{

**int**[] b = **new** **int**[n];

**int** j = n;

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

b[j - 1] = a[i];

j = j - 1;

}

System.***out***.println("Reversed array is: \n");

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

System.***out***.println(b[k]);

}

}

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

**int** [] arr = {10, 20, 30, 40, 50};

*reverse*(arr, arr.length);

}

}

//output

Reversed array is:

50

40

30

20

10

---------------------------------------------------

//7:Write a Java program , accept array ,accept number from user and

//find the index of number in array if present else show message not exist.

**import** java.util.Scanner;

**public** **class** pro7 {

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

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

**int**[] arr;//declare

**int** no;

**boolean** flag=**true**;

System.***out***.println("enter size");

**int** size=sc.nextInt();//size

arr=**new** **int**[size];//instance

System.***out***.println("enter array elements");

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

arr[i]=sc.nextInt();

}

System.***out***.println("array elements are :");

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

System.***out***.println(arr[i]);

}

System.***out***.println("enter no to search : ");

no=sc.nextInt();

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

**if**(arr[i]==no) {

System.***out***.println("number is present at index : "+i);//i gives index here

flag=**true**;

**break**;

}

**else**

{flag=**false**;

}

}

**if** (flag==**false**) {

System.***out***.println("number not exist :");

}

}

}

//output

enter size

5

enter array elements

1

2

3

4

5

array elements are :

1

2

3

4

5

enter no to search :

5

number is present at index : 4

----------------------------------------------------

//8:Write a Java program to find the maximum and minimum value of an array.

**import** java.util.Scanner;

**public** **class** pro8 {

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

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

**int**[] arr;//declare

**int** no;

**boolean** flag=**true**;

System.***out***.println("enter size");

**int** size=sc.nextInt();//size

arr=**new** **int**[size];//instance

System.***out***.println("enter array elements");

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

arr[i]=sc.nextInt();

}

System.***out***.println("array elements are :");

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

System.***out***.println(arr[i]);

}

System.***out***.println("largest element");

**int** max=arr[0];

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

{

**if**(max<arr[i])

{

max=arr[i];

}

}

System.***out***.println(max);

**int** min=arr[0];

System.***out***.println("smallest element");

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

{

**if**(min>arr[i])

{

min=arr[i];

}

}

System.***out***.println(min);

}

}

//output

enter size

5

enter array elements

1

22

333

444

5555

array elements are :

1

22

333

444

5555

largest element

5555

smallest element

1

--------------------------------------------------

//9: Write a program to create an array of integers and perform following operations on that array like

//finding the sum, average, maximum and minimum number in that array. Accept the numbers of the

//array from user.

**import** java.util.Scanner;

**public** **class** pro9 {

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

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

**int**[] arr;//declare

**int** no,choice = 0,sum=0,avg = 0;

**boolean** flag=**true**;

System.***out***.println("enter size");

**int** size=sc.nextInt();//size

arr=**new** **int**[size];//instance

System.***out***.println("enter array elements");

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

arr[i]=sc.nextInt();

}

System.***out***.println("array elements are :");

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

System.***out***.println(arr[i]);

}

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

sum=sum+arr[i];

}

System.***out***.println("sum :"+sum);

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

avg=sum/size;

}

System.***out***.println("avg"+avg);

System.***out***.println("largest element");

**int** max=arr[0];

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

{

**if**(max<arr[i])

{

max=arr[i];

}

}

System.***out***.println(max);

**int** min=arr[0];

System.***out***.println("smallest element");

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

{

**if**(min>arr[i])

{

min=arr[i];

}

}

System.***out***.println(min);

}

}

//output

enter size

5

enter array elements

5

5

5

5

5

array elements are :

5

5

5

5

5

sum :25

avg5

largest element

5

smallest element

5

-------------------------------------------------

//10: Write a program to input basic salary of an employee and calculate its Gross salary according to

//following: Basic Salary <= 10000 : HRA = 20%, DA = 80% Basic Salary <= 20000 : HRA = 25%, DA = 90%

//Basic Salary > 20000 : HRA = 30%, DA = 95%

**import** java.util.Scanner;

**public** **class** pro10 {

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

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

**double** gross,basic,hra,da;

System.***out***.println("enter basic salary to calculate gross salary : ");

basic=sc.nextDouble();

System.***out***.println("basic salary : "+basic);

**if**(basic<=10000)

{

hra=basic\*0.2;

da=basic\*0.8;

}

**else** **if**(basic<=20000)

{

hra=basic\*0.9;

da=basic\*0.25;

}

**else**

{

da=basic\*0.95;

hra=basic\*0.3;

}

gross=basic+hra+da;

System.***out***.println("Gross salary for provided salary will be:"+gross);

}

}

//output

enter basic salary to calculate gross salary :

11000

basic salary : 11000.0

Gross salary for provided salary will be:23650.0

-----------------------------------------------------

//11:Write a menu driven program for stationary shop.Items are 1:Pen 2:Pencil 3:NoteBook 4:Bottle 5:ColorBox.

//1 pen cost is 10Rs,Pencil is 5 rs.NoteBook is 20 rs Bottle is 30 rs and ColorBox is at 50 Rs.

//Calculate Total of all purchesed items.

**import** java.util.Scanner;

**public** **class** pro11 {

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

System.***out***.println("------------Stationary shop---------------");

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

**int** total=0;

**boolean** flag = **true**;

**int** choice = 0;

System.***out***.println("1 : pen");

System.***out***.println("2 : pencil");

System.***out***.println("3 : book");

System.***out***.println("4 : sharpner");

System.***out***.println("5 : eraser");

**while**(flag!=**false**) {

System.***out***.println("enter choice of item u want to buy");

choice=sc.nextInt();

**switch**(choice) {

**case** 1 :

**int** pen=10;

System.***out***.println("pen : "+pen);

total=total+10;

**break**;

**case** 2:

**int** pencil=5;

System.***out***.println("pencil: "+pencil);

total=total+5;

**break**;

**case** 3:

**int** book=20;

System.***out***.println("book; "+book);

total=total+20;

**break**;

**case** 4:

**int** bottle=30;

System.***out***.println("bottle; "+bottle);

total=total+30;

**break**;

**case** 5:

**int** eraser=30;

System.***out***.println("eraser; "+eraser);

total=total+30;

**break**;

**case** 6:

flag=**false**;

**break**;

}

}

System.***out***.println("total : "+total);

}

}

//output

------------Stationary shop---------------

1 : pen

2 : pencil

3 : book

4 : sharpner

5 : eraser

enter choice of item u want to buy

1

pen : 10

enter choice of item u want to buy

2

pencil: 5

enter choice of item u want to buy

3

book; 20

enter choice of item u want to buy

4

bottle; 30

enter choice of item u want to buy

5

eraser; 30

enter choice of item u want to buy

6

total : 95

-------------------------------------------------

**ASSIGNMENT 3**

**Name : Meghana Dhananjay Pagare**

**Roll No : 1135**

**Sub : concepts of programming with Java**

//1:Write a function to accept array of string.Display all elements in uppercase.

**import** java.util.Scanner;

**public** **class** pro1 {

**public** **static** **void** acceptArray(**char**[] arr) {

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

String[] arrs;//declare

System.***out***.println("enter size");

**int** size=sc.nextInt();//size

arrs=**new** String[size];//instance

System.***out***.println("enter array elements");

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

arrs[i]=sc.next();

}

System.***out***.println("array elements are :");

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

System.***out***.println(arrs[i].toUpperCase());

}

}

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

**char**[] arr = **null**;

*acceptArray*(arr);

}

}

//output

enter size

6

enter array elements

aparna

meghana

kalyani

mRuNali

ashutosh

abhishek

array elements are :

APARNA

MEGHANA

KALYANI

MRUNALI

ASHUTOSH

ABHISHEK

--------------------------------------------------------------------------------------------------------------------------

//2:Write a Java program to accept 2D aaray elements.Display all elements.

**import** java.util.Scanner;

**public** **class** pro2 {

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

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

**int**[][]arr;//declare

System.***out***.println("enter size for row");

**int** sizer=sc.nextInt();

System.***out***.println("enter size for col");

**int** sizec=sc.nextInt();//size

arr=**new** **int**[sizer][sizec];//instance

System.***out***.println("enter array elements");

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

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

arr[i][j]=sc.nextInt();

}

}

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

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

System.***out***.print(arr[i][j]+" ");//" " for space

}

System.***out***.println();//going to next line

}

}

}

//output

enter size for row

4

enter size for col

4

enter array elements

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1 1 1 1

1 1 1 1

1 1 1 1

1 1 1 1

--------------------------------------------------------------------

**import** java.util.Scanner;

//3:Write a java program to make the addition of two 2D array And

//store result in Third array.

**public** **class** pro3 {

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

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

**int**[][]arr;//declare

System.***out***.println("enter size for row");

**int** sizer=sc.nextInt();

System.***out***.println("enter size for col");

**int** sizec=sc.nextInt();//size

arr=**new** **int**[sizer][sizec];//instance

System.***out***.println("enter array elements");

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

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

arr[i][j]=sc.nextInt();

}

}

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

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

System.***out***.print(arr[i][j]+" ");//" " for space

}

System.***out***.println();//going to next line

}

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

**int**[][]arrs;//declare

System.***out***.println("enter size for row");

**int** sizer1=sc.nextInt();

System.***out***.println("enter size for col");

**int** sizec1=sc.nextInt();//size

arrs=**new** **int**[sizer1][sizec1];//instance

System.***out***.println("enter array elements");

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

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

arrs[i][j]=sc.nextInt();

}

}

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

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

System.***out***.print(arrs[i][j]+" ");//" " for space

}

System.***out***.println();//going to next line

}

}

}

//output

enter size for row

3

enter size for col

3

enter array elements

1

2

3

1

2

3

1

2

3

1 2 3

1 2 3

1 2 3

-------------------------------------

enter size for row

4

enter size for col

4

enter array elements

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1 1 1 1

1 1 1 1

1 1 1 1

1 1 1 1

--------------------------------------------------------------------

//4.Write a function /method which takes variable no of int numbers as an argument and

//returns the sum of these arguments as an output.

**import** java.util.Scanner;

**public** **class** pro4 {

**public** **static** **void** add(**int** a,**int** b) {

System.***out***.println("add : "+(a+b));

}

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

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

**int** x = 0,y = 0;

System.***out***.println("Enter A :");

x=sc.nextInt();

System.***out***.println("A : "+x);

System.***out***.println("Enter B : ");

y=sc.nextInt();

System.***out***.println("Enter B : "+y);

*add*(x, y);

}

}

//output

Enter A :

11

A : 11

Enter B :

22

Enter B : 22

add : 33

--------------------------------------------------------------------

//5:Write a program to merge two arrays into a single array.

**import** java.util.Scanner;

**public** **class** pro5 {

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

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

**int**[][]arr;//declare

System.***out***.println("enter size for row");

**int** sizer=sc.nextInt();

System.***out***.println("enter size for col");

**int** sizec=sc.nextInt();//size

arr=**new** **int**[sizer][sizec];//instance

System.***out***.println("enter array elements");

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

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

arr[i][j]=sc.nextInt();

}

}

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

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

System.***out***.print(arr[i][j]+" ");//" " for space

}

System.***out***.println();//going to next line

}

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

**int**[][]arrs;//declare

System.***out***.println("enter size for row");

**int** sizer1=sc.nextInt();

System.***out***.println("enter size for col");

**int** sizec1=sc.nextInt();//size

arrs=**new** **int**[sizer1][sizec1];//instance

System.***out***.println("enter array elements");

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

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

arrs[i][j]=sc.nextInt();

}

}

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

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

System.***out***.print(arrs[i][j]+" ");//" " for space

}

System.***out***.println();//going to next line

}

System.***out***.println("merged array is");

**int** fal = arr.length; //determines length of firstArray

**int** sal = arrs.length;

**int**[][]arr3=**new** **int**[fal+sal][fal+sal];

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

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

arr3[i][j]=arr[i][j]+arrs[i][j];

}

}

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

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

System.***out***.print(arr3[i][j]+" ");//" " for space

}

System.***out***.println();//going to next line

}

}

}

//output

enter size for row

3

enter size for col

3

enter array elements

1

1

1

1

1

1

1

1

1

1 1 1

1 1 1

1 1 1

-------------------------------------

enter size for row

3

enter size for col

3

enter array elements

1

1

1

1

1

1

1

1

1

1 1 1

1 1 1

1 1 1

merged array is

2 2 2

2 2 2

2 2 2

--------------------------------------------------------------------------------------------------------------------------

//6:Write a java program to sort array.

**import** java.util.Scanner;

**public** **class** pro6 {

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

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

**int**[]arr;

**int** size;

System.***out***.println("enter size : ");

size=sc.nextInt();

System.***out***.println("Size : "+size);

arr=**new** **int**[size];

System.***out***.println("enter elements of array : ");

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

arr[i]=sc.nextInt();

}

System.***out***.println("arr elements are : ");

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

System.***out***.println(arr[i]);

}

System.***out***.println("after sorting in descending order : ");

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

**for**(**int** j=i+1;j<arr.length;j++) {

**if**(arr[i]<arr[j]) {

**int** temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

}

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

System.***out***.println(arr[i]);

}

System.***out***.println("after sorting in ascending order : ");

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

**for**(**int** j=i+1;j<arr.length;j++) {

**if**(arr[i]>arr[j]) {

**int** temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

}

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

System.***out***.println(arr[i]);

}

}

}

//output

enter size :

4

Size : 4

enter elements of array :

11

34

66

3

arr elements are :

11

34

66

3

after sorting in descending order :

66

34

11

3

after sorting in ascending order :

3

11

34

66

---------------------------------------------------------------------------------------------------------------------

//7:Write a java program to convert char array into String.

**import** java.util.Scanner;

**public** **class** pro7 {

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

**char**[] charArray= {'M','E','G','H','A','N','A'};

String str=**new** String(charArray);

System.***out***.println("After converting array to string ");

System.***out***.println(str);

}

}

//output

MEGHANA

-------------------------------------------------------------------------------------------------------------------------

**ASSIGNMENT 4**

**Name : Meghana Dhananjay Pagare**

**Roll No : 1135**

**Sub : concepts of programming with oop**

**//1:Create Date class with data members day,month,year.**

**//Write a method to accept all data members.write display function to display date.**

**import java.util.Scanner;**

**public class Date {**

**private int day;**

**private int month;**

**private int year;**

**public void acceptInfo() {**

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

**System.out.println("day :");**

**day = sc.nextInt();// local variable inside function**

**System.out.println("month:");**

**month = sc.nextInt();**

**System.out.println("year:");**

**year = sc.nextInt();**

**}**

**public void displayInfo() {**

**System.out.println( + day+"-"+month+"-"+year);**

**}**

**}**

**public** **class** TestDate {

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

Date date1=**new** Date();

date1.acceptInfo();//object created

date1.displayInfo();//calling public method of student class

}

}

//output

day :

11

month:

11

year:

1998

11-11-1998

**--------------------------------------------------------------**

//2:>Create a java applicstion for the following.

//Create a Customer class , with data members (all private : tight encapsulation)

//name(String),email(String),age(int), creditLimit(double)

//

//2.1 Write acceptInfo() method to accept customer details:

//

//2.2 Write a method , showDetails to display customer name & credit limit only.

//

//Naming convention : public void setCreditLimit(double limit) {...}

//public double getCreditLimit(){...}

//

//2.3 Create a TestCustomer class . Use scanner to accept user i/ps.

//Create 2 customers object.

//Display customer details of both customers.

//Prompt user , for changing creditLimit of the customer2.

//Display new credit limit on the console.

**import** java.util.Scanner;

**public** **class** Customer {

**private** String name;

**private** String email;

**private** **int** age;

**private** **double** creditLimit;

**public** **void** acceptInfo() {

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

System.***out***.println("name :");

name = sc.nextLine();// local variable inside function

System.***out***.println("email:");

email = sc.next();

System.***out***.println("age:");

age = sc.nextInt();

System.***out***.println("credit limit:");

creditLimit = sc.nextDouble();

}

**public** **void** displayInfo() {

System.***out***.println("name :"+name+"credit limit:"+creditLimit);

}

**public** **void** setCreditLimit(**double** limit) {

creditLimit=limit;

}

**public** **double** getCreditLimit(){

**return** creditLimit;

}

}

**public** **class** TestCustomer {

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

Customer type1=**new** Customer();

type1.acceptInfo();//object created

type1.displayInfo();//calling public method of student class

Customer type2=**new** Customer();

type2.acceptInfo();

type2.setCreditLimit(3000000);//object created

type2.getCreditLimit();//calling public method of student class

type2.displayInfo();

}

}

//output

name :

Meghana Pagare

email:

meghanapagare982gmail.com

age:

22

credit limit:

10000

name :Meghana Pagarecredit limit:10000.0

name :

Ashutosh Pagare

email:

meghanapagare982gmail.com

age:

18

credit limit:

200000

name :Ashutosh Pagarecredit limit:3000000.0

**----------------------------------------------------------------**

//3:Consider that payroll software needs to be developed for computerization of

//operations of an ABC organization. The organization has employees.

//3.1. Construct a class Employee with following members using private access

//specifies:

// Employee Id integer

// Employee Name string

// Basic Salary double

// HRA double

// Medical double

// PF double

//PT double

// Net Salary double

// Gross Salary double

//Please use following expressions for calculations:

// \* HRA = 50% of Basic Salary

//\* PF = 12% of Basic Salary

//\* PT = Rs. 200

//

//3.2. Write methods to display the details of an employee and calculate the gross

//and net salary.

//\* Goss Salary = Basic Salary + HRA + Medical

//\* Net Salary = Gross Salary – (PT + PF)

//

//Create a TestEmployee Class.Create Object of employee class and assign values and display Details.

**import** java.util.Scanner;

**public** **class** Employee {

**private** **int** id;

**private** String Name;

**private** **double** basicSalary ;

**private** **double** HRA ;

**private** **double** Medical;

**private** **double** PF;

**private** **double** PT;

**private** **double** grossSalary ;

**private** **double** netSalary;

// \* Goss Salary = Basic Salary + HRA + Medical

// \* Net Salary = Gross Salary – (PT + PF)

**public** **void** acceptInfo() {

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

System.***out***.println("id:");

id = sc.nextInt();

System.***out***.println("Name :");

Name = sc.next();

System.***out***.println("basicSalary:");

basicSalary = sc.nextDouble();

System.***out***.println("Medical :");

Medical = sc.nextDouble();

}

**public** **void** cal() {

HRA = basicSalary\*0.5;

PF = basicSalary\*0.12;

PT = 200;

grossSalary = basicSalary + HRA + Medical;

netSalary = grossSalary - PT + PF;

}

**public** **void** displayInfo() {

System.***out***.println(" id : "+id +" name : "+Name+" basicSalary : "+basicSalary+" hra :"+HRA+" pf : "+PF+"PT : "+PT+" grossSalary: "+grossSalary+ " netSalary: "+netSalary);

}

**public** **void** grossSalary() {

// **TODO** Auto-generated method stub

}

}

**public** **class** TestEmployee {

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

Employee emp1=**new** Employee();

emp1.acceptInfo();

emp1.cal();

emp1.displayInfo();

}

}

//output

id:

1135

Name :

meghana

basicSalary:

300000

Medical :

200

id : 1135 name : meghana basicSalary : 300000.0 hra :150000.0 pf : 36000.0PT : 200.0 grossSalary: 450200.0 netSalary: 486000.0

**ASSIGNMENT 5**

**Name : Meghana Dhananjay Pagare**

**Roll No : 1135**

**Sub : concepts of programming with oop**

//Problem Statement 1

//1.1:Create 2 classes Student and Batch. Student class is in pack1 and Batch

//class is in pack2. Write accept() and display() methid in both the class to accept and to display info.

//Write a Test class to print Student and Batch

//information.

//1.2:Use the Student and Batch classes created earlier. It should contain

//public rollNo,Public Name, private Grade and default totalMarks attributes and using Batch

//class, check accessibility of there attributes in same package .

//1.3:

//Create new package pack2.

//create class testStudent in pack3;

//create object of Student class from pack1 and access methods.Try to check accessibility.

**package** pack1;

**import** java.util.Scanner;

**public** **class** Student {

**public** **int** rollno;//every where

**private** **int** age;//within class only

**protected** **int** marks;

String name;

**public** **void** acceptInfo() {

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

rollno=sc.nextInt();

age=sc.nextInt();

name=sc.next();

}

**public** **void** displayInfo() {

System.***out***.println("roll no : "+rollno);

System.***out***.println("age : "+age);

System.***out***.println("name :"+name);

}

}

**package** pack2;

**import** java.util.Scanner;

**public** **class** Batch {

**public** **int** batchNo;//every where

**protected** **int** averagePlaced;

String name;

**public** **void** acceptInfo() {

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

batchNo=sc.nextInt();

averagePlaced=sc.nextInt();

name =sc.next();

}

**public** **void** displayInfo() {

System.***out***.println("batch no :"+batchNo);

System.***out***.println("averagePlaced :"+averagePlaced);

System.***out***.println("batch name :"+name);

}

}

**import** pack1.Student;

**import** pack2.Batch;

**public** **class** TestStudentBatch {

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

Student Stud1=**new** Student();

Stud1.acceptInfo();

Stud1.displayInfo();

Batch dac1=**new** Batch();

dac1.acceptInfo();

dac1.displayInfo();

}

}

//output

1135

22

meghana

roll no : 1135

age : 22

name :meghana45

55

dac

batch no :45

averagePlaced :55

batch name :dac

**package** pack1;

**import** java.util.Scanner;

**public** **class** Student {

**public** **int** rollno;//every where

**private** **int** grade;//within class only

**int** mark;

**public** String name;

**public** **void** acceptInfo() {

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

rollno=sc.nextInt();

mark = sc.nextInt();

grade=sc.nextInt();

name=sc.next();

}

**public** **void** displayInfo() {

System.***out***.println("roll no : "+rollno);

System.***out***.println("grade : "+grade);

System.***out***.print("name :"+name);

System.***out***.println("marks "+mark);

}

}

**package** pack1;

**public** **class** Batch2 {

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

Student stud =**new** Student();

stud.acceptInfo();

stud.mark=4;//accesible

//stud.name=Meghana;//not accesesible

stud.rollno=1135;

//stud.grade;// not accesible

stud.displayInfo();

}

}

//output

55

45

1

meghana

roll no : 1135

grade : 1

name :meghanamarks

//Q3.Create Employee class with empid,name,address,salary.Use Getter Setters

//3.2 :create array of 5 employees...show all employees using for loop as well as for each loop...in same assignment

//3.3:create array of 5 employees ...show those employee who are getting salary >20000.

//

**public** **class** Employee {

**private** **int** empid;

**private** String name;

**private** String address;

**private** **double** salary;

**public** Employee(**int** i,String n,String a,**double** s)

{

empid=i;

name=n;

address=a;

salary=s;

}

**public** **void** setEmpid(**int** empid)

{

**this**.empid=empid;

}

**public** **int** getEmpid()

{

**return** empid;

}

**public** String getName()

{

**return** name;

}

**public** **void** setName(String name)

{

**this**.name = name;

}

**public** String getAddress()

{

**return** address;

}

**public** **void** setAddress(String address)

{

**this**.address = address;

}

**public** **double** getSalary()

{

**return** salary;

}

**public** **void** setSalary(**double** salary)

{

**this**.salary = salary;

}

**public** **void** display()

{

System.***out***.println("empid: "+empid +" Name: "+name +" Address: "+address +" Salary:"+salary);

}

}

**import** java.util.Scanner;

**public** **class** Test\_employee {

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

// **TODO** Auto-generated method stub

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

Employee[] allEmp=**new** Employee[5];

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

{

System.***out***.println("Enter details of"+i+ "Emp");

allEmp[i]=**new** Employee(s.nextInt(),s.next(),s.next(),s.nextDouble());

}

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

{

allEmp[i].display();

}

**for**(Employee e:allEmp)

{

//e.display();

**if**(e.getSalary()>20000)

{

System.***out***.println(e.getName());

}

}

/\*emp1.setEmpid(101);

emp1.getEmpid();

emp1.setName("Amruta");

emp1.getName();

emp1.setAddress("Pune");

emp1.getAddress();

emp1.setSalary(30000);

emp1.getSalary();

emp1.display();\*/

}

}

//output

Enter details of0Emp

1135

meghana

akole

2000000

Enter details of1Emp

1899

mrunali

pune

2000011

Enter details of2Emp

1000

ashu

pune

283939

Enter details of3Emp

1111

divya

pune

22222

Enter details of4Emp

1212

akash

pune

99999

empid: 1135 Name: meghana Address: akole Salary:2000000.0

empid: 1899 Name: mrunali Address: pune Salary:2000011.0

empid: 1000 Name: ashu Address: pune Salary:283939.0

empid: 1111 Name: divya Address: pune Salary:22222.0

empid: 1212 Name: akash Address: pune Salary:99999.0

meghana

mrunali

ashu

divya

akash

-------------------------------------------------------------

//Problem Statement 2:

//2.1: Create Employee class with empid,name,address,salary.Use Getter Setters

//2.2 :create array of 5 employees...show all employees using for loop as well as for each loop...in same assignment

//2.3:create array of 5 employees ...show those employee who are getting salary >20000.

**import** java.util.Scanner;

**public** **class** Date {

**private** **int** day;

**private** **int** month;

**private** **int** year;

**public** Date()//default constructor

{

}

**public** Date(**int** dy,**int** mn,**int** yr)//parameterized constructor

{

day=dy;

month=mn;

year=yr;

}

**public** **void** setDay(**int** day) {

**this**.day = day;

}

**public** **int** getDay(){

**return** day;

}

**public** **void** setMonth(**int** month) {

**this**.month = month;

}

**public** **int** getMonth() {

**return** month;

}

**public** **void** setYear(**int** year) {

**this**.year = year;

}

**public** **int** getYear() {

**return** year;

}

**public** **void** display()

{

System.***out***.println("The Birth date is="+day+"/"+month+"/"+year);

}

}

**public** **class** Test\_date {

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

// **TODO** Auto-generated method stub

Date d1=**new** Date();

Date d2=**new** Date(11, 11, 1998);

d1.display();

d2.display();

d2.setMonth(12);

System.***out***.println("after updating.....");

d2.display();

//d1.setDay(12);d1.getDay();

//d1.setMonth(05);d1.getMonth();

//d1.setYear(1997);d1.getYear();

}

}

//output

The Birth date is=0/0/0

The Birth date is=11/11/1998

after updating.....

The Birth date is=11/12/1998

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//Problem Statement 4:

//->Create a java applicstion for the following.

// Create a Customer class , with data members (all private : tight encapsulation)

//name(String),email(String),age(int), creditLimit(double)

//4.1 Supply a parameterized constructor to accept all details from user

//

//4.2 Supply an argument less constructor to init default name to "Riya" , email to "riya@gmail.com",age=25,creditLimit=10000

//(Must use constructor chaining)

//

//4.3 Write a method , getDetails to return String form of customer name & credit limit only.

//4.4 Supply getter & setter for creditLimit.

//

//Naming convention : public void setCreditLimit(double limit) {...}

//public double getCreditLimit(){...}

//

//4.5 Create a TestCustomer class . Use scanner to accept user i/ps.

//Create 2 customers using 2 different constructors(4.1 : customer1 ,4.2 : customer2)

//Display customer details of both customers.

//Prompt user , for changing creditLimit of the customer2.

//Display new credit limit on the console.

**public** **class** Constructor\_details {

**private** String name;

**private** String email;

**private** **int** age;

**private** **double** creditLimit;

**public** Constructor\_details()

{

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

String name="null";

String email="riya@gmai.com";

**int** age=25;

**double** creditlimit=10000;

}

**public** Constructor\_details(String nm,String email, **int** age, **double** creditLimit)

{

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

**this**.name=nm;

**this**.email=email;

**this**.age=age;

**this**.creditLimit=creditLimit;

}

**public** **void** setCreditLimit(**double** limit)

{

creditLimit=limit;

}

**public** **double** getCreditLimit()

{

**return** creditLimit;

}

**public** **void** getDetails()

{

System.***out***.println("Customer name is: "+name +" creditLimit is :"+creditLimit );

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

System.***out***.println("Now The Credit Limit is : "+creditLimit);

}

}

**import** java.util.Scanner;

**public** **class** Test\_constructor {

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

// **TODO** Auto-generated method stub

Constructor\_details c=**new** Constructor\_details();

Constructor\_details c1=**new** Constructor\_details();

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

System.***out***.println("Enter customer name:");

String name=sc.next();

System.***out***.println("Enter customer email:");

String email=sc.next();

System.***out***.println("Enter customer age:");

**int** age=sc.nextInt();

System.***out***.println("Enter customer creditlimit:");

**double** creditLimit=sc.nextDouble();

System.***out***.println("Customer name is: "+name );

System.***out***.println("Customer email is: "+email );

System.***out***.println("Customer age is: "+age );

System.***out***.println ("CreditLimit is: "+creditLimit);

// c.displayAll\_Info();

// c.getDetails();

c1.getDetails();

c1.setCreditLimit(20000);

c1.getDetails();

}

}

//output

Default

Default

Enter customer name:

meghana

Enter customer email:

meghanapagare1998@gmail.com

Enter customer age:

22

Enter customer creditlimit:

1000000

Customer name is: meghana

Customer email is: meghanapagare1998@gmail.com

Customer age is: 22

CreditLimit is: 1000000.0

Customer name is: null creditLimit is :0.0

---------------------------------------------

Now The Credit Limit is : 0.0

Customer name is: null creditLimit is :20000.0

---------------------------------------------

Now The Credit Limit is : 20000.0

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