import java.util.Scanner;

import java.util.Arrays;

class AssignmentOne {

public static void main(String args[]){

//Print 'Hello' and Your Name

System.out.println("Hello");

System.out.println("Mohini Mahajan");

AssignmentOne.formatter();

// Addition of two integer

int num1 = 36;

int num2 = 74;

System.out.println("Sum of num1 and num2 is "+ (num1 + num2));

AssignmentOne.formatter();

// division of two integer

int dividend = 50;

int divisor = 3;

int result = dividend / divisor;

System.out.println("result is "+ result);

AssignmentOne.formatter();

// Perform arthimatric operation

System.out.println(-5 + 8 \* 6);

System.out.println((55 + 9) % 9);

System.out.println(20 + -3 \* 5 / 8);

System.out.println(5 + 15 / 3 \* 2 - 8 % 3);

AssignmentOne.formatter();

//Multily two numbers

int mul1 = 25;

int mul2 = 5;

int mulResult = mul1 \* mul2;

System.out.println("multiplication is "+ mulResult);

AssignmentOne.formatter();

// Arithmatic Operation

int arNum1 = 125;

int arNum2 = 24;

System.out.println("Sum is "+ (arNum1 + arNum2));

System.out.println("multiplication is "+ (arNum1 \* arNum2 ));

System.out.println("subtraction is "+ (arNum1 - arNum2 ));

System.out.println("division is "+ (arNum1 / arNum2 ));

System.out.println("remainder is "+ (arNum1 % arNum2 ));

AssignmentOne.formatter();

// Multiplication Table

int tableOf = 8;

for(int i = 1; i <= 10; i++){

System.out.println(tableOf +" \* "+ i + " = "+ tableOf \* i );

}

AssignmentOne.formatter();

// Swap two numbers

int swap1 = 10;

int swap2 = 20;

swap2 = swap2 - swap1;

swap1 = swap1 + swap2;

System.out.println("swap1 === "+ swap1);

System.out.println("swap2 === "+ swap2);

AssignmentOne.formatter();

// Area of circle

int radius = 7 ;

System.out.println("Area of circle is "+ (3.14 \* (radius \* radius)));

AssignmentOne.formatter();

// Check if Even or Odd Number

int check = 15;

if(check % 2 != 0){

System.out.println(check + " is odd number");

}else{

System.out.println(check + " is even number");

}

AssignmentOne.formatter();

// Find the Largest of Three Numbers

int lgNum1 = 12;

int lgNum2 = 45;

int lgNum3 = 22;

if(lgNum1 > lgNum2 && lgNum1 > lgNum3){

System.out.println("lgNum1 is largest Number "+ lgNum1);

}else if(lgNum2 > lgNum3 ){

System.out.println("lgNum2 is largest Number "+ lgNum2);

}else{

System.out.println("lgNum3 is largest Number "+ lgNum3);

}

AssignmentOne.formatter();

// Reverse a Number

int rNum = 12345;

int i = 0;

int newArray[] = new int[5];

while(rNum % 10 != 0)

{

newArray[i] = rNum % 10;

rNum = rNum / 10;

i++;

}

System.out.println(Arrays.toString(newArray));

AssignmentOne.formatter();

//Calculate the Average of Three Numbers

int x = 20;

int y = 40;

int z = 60;

System.out.println("The average value is " + (x+y+z) / 3) ;

AssignmentOne.formatter();

//fibonacci series

int tempArray[] = new int[10] ;

tempArray[0] = 0;

tempArray[1] = 1;

for(int k = 2; k <= 9; k++){

tempArray[k] = tempArray[k - 2] + tempArray[k - 1];

}

System.out.println(Arrays.toString(tempArray));

// Factorial of a Number

int numm1 = 5;

int fact=1;

for (int l=1; l<=numm1; l++){

fact=fact\*l;

}

System.out.println("factorial"+ fact);

//17 Number Is Prime or not

if(AssignmentOne.isPrime(12)){

System.out.println(12 + "is Prime Number");

}else{

System.out.println(12 + "is not Prime Number");

}

//Print the First N Natural Numbers

int nat = 8;

for(int m=1; m<=nat; m++){

System.out.println(" "+ m);

}

// Convert Celsius to Fahrenheit

int celsius = 25;

System.out.println(celsius + "C is equal to "+ ((celsius \* 9/5)+32)+ "F");

// Power of a Number

int base = 3;

int exponent = 4;

int rO = base;

for(int o = 0 ; o < exponent - 1 ; o++){

rO = rO \* base;

}

System.out.println(base + " raised to the power 4 is " + rO);

//Count the Number of Digits in a Number

int no = 123456;

int count = 0 ;

while(no % 10 != 0){

no = no / 10;

count++;

}

System.out.println(count+ " ---- count");

//

}

static void formatter(){

System.out.println(" ");

System.out.println("######################################################################");

System.out.println(" ");

}

static boolean isPrime(int pNum){

if(pNum <= 1){

return false;

}

for(int g = 2; g < pNum; g++){

if(pNum % g == 0){

return false;

}

}

return true;

}

}