Assignment 1

1) Write a Java program to print 'Hello' on screen and then print your name on a separate line.

class Hello

{

public static void main(String args[])

{

System.out.println("Hello");

}

}

2) Write a Java program to print the sum of two numbers.

import java.util.Scanner;

class SumOfTwo

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

int num1,num2,sum;

System.out.println("Input the first number: ");

num1=sc.nextInt();

System.out.println("Input the Second number: ");

num2=sc.nextInt();

System.out.println(num1+ " + " +num2);

sum=num1+num2;

System.out.println("Sum of number: "+sum);

}

}

3) Write a Java program to divide two numbers and print on the screen.

class DivideTwoNo

{

public static void main(String args[])

{

System.out.println(60/3);

}

}

4) Write a Java program to print the result of the following operations.

class OperationsResult

{

public static void main(String args[])

{

int a=5,b=8,c=6;

int d=-a+(b)\*c;

System.out.println(d);

int f=55,g=9,k=9;

int l=(f+g)%k;

System.out.println(l);

int x=20,y=-3,z=5,v=8;

int s=x+(-y)\*z/v;

System.out.println(s);

int p=5,m=15,e=2,t=8,u=3;

int w=p+m/u\*e-t%u;

System.out.println(w);

}

}

5) Write a Java program that takes two numbers as input and display the product of two numbers.

import java.util.Scanner;

class ProductTwoNo

{

public static void main(String args[])

{

Scanner scan=new Scanner(System.in);

System.out.print("Input first number: ");

int num1=scan.nextInt();

System.out.print("Input second number: ");

int num2=scan.nextInt();

System.out.println(num1 + "x" +num2 + "=" +num1\*num2);

}

}

6) Write a Java program to print the sum (addition), multiply, subtract, divide and remainder of two numbers.

import java.util.Scanner;

class Operations

{

public static void main(String[] args)

{

Scanner p=new Scanner(System.in);

int n1,n2;

System.out.print("Input first number: ");

n1=p.nextInt();

System.out.print("Input second number: ");

n2=p.nextInt();

System.out.println(n1 + " + " + n2 + " = " +(n1 + n2));

System.out.println(n1 + " - " + n2 + " = " + (n1 - n2));

System.out.println(n1 + " x " + n2 + " = " + (n1 \* n2));

System.out.println(n1 + " / " + n2 + " = " + (n1 / n2));

System.out.println(n1 + " mod " + n2 + " = " + (n1 % n2));

}

}

7) Write a Java program that takes a number as input and prints its multiplication table upto 10.

Test Data: Input a number: 8

import java.util.Scanner;

public class MultiplicationTable {

public static void main(String[] args) {

Scanner ab=new Scanner(System.in);

int n,i;

System.out.print("Input a number: ");

n=ab.nextInt();

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

{

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

}

}

}

Output:

8) Write a Java program to display the following pattern.

public class SamplePattern {

public static void main(String[] args)

{

System.out.println(" J a v v a ");

System.out.println(" J a a v v a a");

System.out.println("J J aaaaa V V aaaaa");

System.out.println(" JJ a a V a a");

}

}

9) Write a Java program to compute the specified expressions and print the output.

Test Data: ((25.5 \* 3.5 - 3.5 \* 3.5) / (40.5 - 4.5))

public class SpecifiedExp {

public static void main(String[] args) {

System.out.println((25.5 \* 3.5 - 3.5 \* 3.5) / (40.5 - 4.5));

}

}

10) Write a Java program to compute a specified formula. Specified Formula : 4.0 \* (1 - (1.0/3) + (1.0/5) - (1.0/7) + (1.0/9) - (1.0/11))

public class SpecifiedFormula {

public static void main(String[] args) {

double ai= 4.0 \* (1 - (1.0/3) + (1.0/5) - (1.0/7) + (1.0/9) - (1.0/11));

System.out.println(ai);

}

}

11) Write a Java program to print the area and perimeter of a circle. Test Data: Radius = 7.5

import java.util.Scanner;

class circle

{

private float radius=0.0f;

private float area=0.0f;

private float perimeter=0.0f;

public void readRadius()

{

Scanner sc=new Scanner(System.in);

System.out.print("Enter radius:");

radius=sc.nextFloat();

}

public float getPerimeter()

{

perimeter = (float) (2\* Math.PI \*radius);

return perimeter;

}

public float getArea()

{

area= (float) (Math.PI \*radius\*radius);

return area;

}

}

public class AreaAndperimeter

{

public static void main(String []s)

{

circle area=new circle();

area.readRadius();

System.out.println("Perimeter is:" + area.getPerimeter());

System.out.println("Area is:" + area.getArea());

}

}

12) Write a Java program that takes three numbers as input to calculate and print the average of the numbers.

import java.util.Scanner;

public class AverageNumbers {

public static void main(String[] args) {

Scanner scan=new Scanner(System.in);

System.out.print("Enter the first number: ");

double num1=scan.nextDouble();

System.out.print("Enter the second number: ");

double num2=scan.nextDouble();

System.out.print("Enter the third number: ");

double num3=scan.nextDouble();

System.out.print("Average of entered number: " + avg(num1,num2,num3));

}

public static double avg(double a,double b,double c)

{

return (a+b+c)/3;

}

}

13) Write a Java program to print the area and perimeter of a rectangle. Test Data: Width = 5.5 Height = 8.5

public class AreaPerimeterRectangle

{

public static void main(String[] args)

{

final double width = 5.6;

final double height = 8.5;

double area = width \* height;

double perimeter = 2\*(height + width)

System.out.printf("Area is %.1f \* %.1f = %.2f \n", width, height, area);

System.out.printf("Perimeter is 2\*(%.1f + %.1f) = %.2f \n", height, width, perimeter);

}

14) Write a Java program to print an American flag on the screen.

public class AmericanFlag

{

public static void main(String[] args)

{

System.out.println("\* \* \* \* \* \* ================================== ");

System.out.println(" \* \* \* \* \* ================================== ");

System.out.println("\* \* \* \* \* \* ================================== ");

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

}

}

15) Write a Java program to swap two variables.

import java.util.Scanner;

public class SwapVariables

{

public static void main(String[] args)

{

int x,y,temp;

Scanner scan=new Scanner(System.in);

System.out.print("Enter the first number x: ");

x=scan.nextInt();

System.out.print("Enter the second number y: ");

y=scan.nextInt();

System.out.println("Before Swapping\nx = "+x+"\ny = "+y);

temp=x;

x=y;

y=temp;

System.out.println("After Swapping\nx = "+x+"\ny = "+y);

}

}

16) Write a Java program to print a face.

public class PrintFace {

public static void main(String[] args) {

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

System.out.println("[| o o |]");

System.out.println(" | ^ | ");

System.out.println(" | '-' | ");

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

}

}

17) Write a Java program to add two binary numbers.

Input Data: Input first binary number: 10 Input second binary number: 11

import java.util.Scanner;

public class AddBinaryNumbers

{

public static String add(String num1, String num2)

{

int num1 Binary = Integer.parseInt(num1, 2);

int num2 Binary = Integer.parseInt(num2, 2);

int sumOfNumbers = num1Binary + num2Binary;

return Integer.toBinaryString(sumOfNumbers);

}

public static void main(String[] args)

{

try (Scanner scan = new Scanner(System.in))

{

System.out.print("Enter first binary number : ");

String number1 = scan.next();

System.out.print("Enter second binary number : ");

String number2 = scan.next();

System.out.println("Sum of two binary numbers :" + add(number1,number2));

}

}

}

18) Write a Java program to convert a decimal number to binary number.

Input Data: Input a Decimal Number : 5

import java.util.Scanner;

public class DecimalToBinary

{

public static void main(String[] args)

{

long dec;

Scanner scan= new Scanner(System.in);

System.out.print("Input a Decimal Number: ");

dec = scan.nextLong();

System.out.println("Binary Number is: " + decimalToBinary(dec));

}

public static long decimalToBinary(long n)

{

long remainder, binary = 0, i = 1;

while (n != 0)

{

remainder = n % 2;

n = n / 2;

binary = binary + (remainder \* i);

i = i \* 10;

}

return binary;

}

}

19) Write a Java program to convert a decimal number to hexadecimal number.

Input Data: Input a decimal number: 15

import java.util.Scanner;

public class DecimalToHexadecimal

{

public static void main(String[] args)

{

Scanner scan=new Scanner(System.in);

System.out.print("Input a decimal number: ");

int num=scan.nextInt();

int rem;

String str2=" ";

char hex[]={'0','1','2','3','4','5','6','7','8','9','A','B','C','D','E','F'};

while(num>0)

{

rem=num%16;

str2=hex[rem]+str2;

num=num/16;

}

System.out.println("Hexadecimal number is: "+str2);

}

}

20) Write a Java program to convert a decimal number to octal number.

Input Data: Input a Decimal Number: 15

import java.util.Scanner;

public class DecimalToOctal

{

public static void main(String[] args)

{

Scanner scan=new Scanner(System.in);

System.out.print("Input a decimal number: ");

int num=scan.nextInt();

int rem;

String str2=" ";

char dec[]={'0','1','2','3','4','5','6','7','8','9','A','B','C','D','E','F'};

while(num>0)

{

rem=num%8;

str2=dec[rem]+str2;

num=num/8;

}

System.out.println("Octal number is: "+str2);

}

}

21)Write a Java program to convert a binary number to hexadecimal number.

Input Data: Input a Binary Number: 1101

import java.util.Scanner;

public class BinaryToHexadecimal

{

int number;

Scanner input=new Scanner(System.in);

void BinaryValue()

{

System.out.print("Input a Binary Number: ");

number=Integer.parseInt(input.nextLine(),2);

}

void Conversion()

{

String str=Integer.toHexString(number);

System.out.println("HexaDecimal value: "+str);

}

public static void main(String[] args)

{

BinaryToHexadecimal obj=new BinaryToHexadecimal();

obj.BinaryValue();

obj.Conversion();

}

}