MARCH 18 - 01. JAVA PROGRAMMING ELEMENTS - LEVEL 2 PROGRAMS

1. Write a program to create a basic calculator for addition, subtraction, multiplication, and division. The program should ask for two numbers (floating point) and perform all the operations

**Hint =>**

1. Create a variable number1 and number2 and take user inputs.
2. Perform Arithmetic Operations of addition, subtraction, multiplication, and division assign the result to a variable, and finally print the result

**I/P =>** number1, number2

**O/P =>** The addition, subtraction, multiplication, and division value of 2 numbers \_\_\_ and \_\_\_ is \_\_\_, \_\_\_\_, \_\_\_\_, and \_\_\_

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

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

double num1 = input.nextDouble();

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

double num2 = input.nextDouble();

double addition = num1+num2;

double substraction = num1-num2;

double multiplication = num1\*num2;

double divison = num1/num2;

System.out.println("Addition :" + addition);

System.out.println("Substraction :" + substraction);

System.out.println("Multiplication :" + multiplication);

System.out.println("Divison :" + divison);

}

}

1. Write a program that takes the base and height in cm to find the area of a triangle in square inches and square centimeters

**Hint =>** Area of a Triangle is ½ \* base \* height and 1 in = 2.54 cm

**I/P =>** base, height

**O/P =>** The Area of the triangle in sq in is \_\_\_ and sq cm is \_\_\_

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("Enter base of triangle");

double base = input.nextDouble();

System.out.println("Enter height of triangle");

double height = input.nextDouble();

double area = (base\*height)/2;

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

}

}

1. Write a program to find the side of the square whose parameter you read from the user

**Hint =>** Perimeter of the Square is 4 times the side

**I/P =>** perimeter

**O/P =>** The length of the side is \_\_\_ whose perimeter is \_\_\_\_

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("Enter side of square");

double side = input.nextDouble();

double perimeter = 4\*side;

System.out.println("Perimeter :" + perimeter);

}

}

1. Write a program to find the distance in yards and miles for the distance provided by the user in feet

**Hint =>** 1 mile = 1760 yards and 1 yard is 3 feet

**I/P =>** distanceInFeet

**O/P =>** The distance in yards is \_\_\_ while the distance in miles is \_\_\_

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("Enter distance in feet");

double feet = input.nextDouble();

double yards = feet/3;

double miles = yards/1760;

System.out.println("Yards :" + yards);

System.out.println("Miles :" + miles);

}

}

1. Write a program to input the unit price of an item and the quantity to be bought. Then, calculate the total price.

**Hint =>** NA

**I/P =>** unitPrice, quantity

**O/P =>** The total purchase price is INR \_\_\_ if the quantity \_\_\_ and unit price is INR \_\_\_

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("Enter price of item");

double price = input.nextDouble();

System.out.println("Enter quantity of item");

double quantity = input.nextDouble();

double total = price\*quantity;

System.out.println("Total price :" + total);

}

}

1. Write a program to take 2 numbers and print their quotient and reminder

**Hint =>** Use division operator (/) for quotient and moduli operator (%) for reminder

**I/P =>** number1, number2

**O/P =>** The Quotient is \_\_\_ and Reminder is \_\_\_ of two number \_\_\_ and \_\_\_

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

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

int num1 = input.nextInt();

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

int num2 = input.nextInt();

int quotient = num1/num2;

int remainder = num1%num2;

System.out.println("Quotient is :" + quotient);

System.out.println("Remainder is :" + remainder);

}

}

1. Write an ***IntOperation*** program by taking a, b, and c as input values and print the following integer operations a + b \*c, a \* b + c, c + a / b, and a % b + c. Please also understand the precedence of the operators.

**Hint =>**

1. Create variables a, b, and c of int data type.
2. Take user input for a, b, and c.
3. Compute 3 integer operations and assign the result to a variable
4. Finally, print the result and try to understand operator precedence.

**I/P =>** fee, discountPrecent

**O/P =>** The results of Int Operations are \_\_\_, \_\_\_, and \_\_\_

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

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

int a = input.nextInt();

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

int b = input.nextInt();

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

int c = input.nextInt();

int num1 = a + b \* c;

int num2 = a \* b + c;

int num3 = c + a / b;

int num4 = a % b + c;

System.out.println("First is :" + num1);

System.out.println("Second is :" + num2);

System.out.println("Third is :" + num3);

System.out.println("Fourth is :" + num4);

}

}

1. Similarly, write the ***DoubleOpt*** program by taking double values and doing the same operations.

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

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

double a = input.nextDouble();

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

double b = input.nextDouble();

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

double c = input.nextDouble();

double num1 = a + b \* c;

double num2 = a \* b + c;

double num3 = c + a / b;

double num4 = a % b + c;

System.out.println("First is :" + num1);

System.out.println("Second is :" + num2);

System.out.println("Third is :" + num3);

System.out.println("Fourth is :" + num4);

}

}