Level 2 Practice Programs

1. Write a program to create a basic calculator that can perform 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 number 2 and take user inputs.
2. Perform Arithmetic Operations of addition, subtraction, multiplication and division and 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 \_\_\_

// Creating Class with name Q1 indicating the purpose is to perform basic calculations

import java.util.\*;

class Q1

{

    public static void main(String args[])

    {

        Scanner sc=new Scanner(System.in);

        System.out.println("Enter number 1");

        // Create a float variable number1 to store the first number

        float number1=sc.nextFloat();

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

        // Create a float variable number2 to store the second number

        float number2=sc.nextFloat();

        // Create a float variable addition to store the addition of number1 and number2

        float addition=number1+number2;

        // Create a float variable subtraction to store the subtraction of number1 and number2

        float subtraction=number1-number2;

        // Create a float variable multiplication to store the multiplication of number1 and number2

        float multiplication=number1\*number2;

        // Create a float variable division to store the division of number1 and number2

        float division=number1/number2;

        // Display the addition,subtraction,multiplication and division value of 2 number

        System.out.println("The addition,subtraction,multiplication and division value of 2 number "+number1+" and "+number2+" is "+addition+" , "+subtraction+" , "+multiplication+" , "+division);

    }

}

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

**Hint =>** Area of a Triangle is ½ \* base \* height

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

**O/P =>** Your Height in cm is \_\_\_ while in feet is \_\_\_ and inches is \_\_\_

// Creating Class with name Q2 indicating the purpose is to display the area of the triangle

import java.util.\*;

class Q2

{

    public static void main(String args[])

    {

        Scanner sc=new Scanner(System.in);

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

        // Create a double variable base to store the base of the triangle

        double base=sc.nextDouble();

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

        // Create a double variable height to store the height of the triangle

        double height=sc.nextDouble();

        // Create a double variable area to store the area of the triangle

        double area=(base\*height)/2.0;

        // Display the area of the triangle

        System.out.println("Area of the triangle is "+area);

    }

}

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

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

**I/P =>** perimeter

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

// Creating a class named Q3 indicating the purpose is to find the side of the square

import java.util.\*;

class Q3

{

    public static void main(String args[])

    {

        Scanner sc=new Scanner(System.in);

        System.out.println("Enter the perimeter of square");

        // Create a double variable perimeter to store the perimeter of the square

        double perimeter=sc.nextInt();

        // Create a double variable side to store the side of the square

        double side=perimeter/4.0;

        // Display the side of the square

        System.out.println("The length of the side is "+side+" whose perimeter is "+perimeter);

    }

}

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

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

**I/P =>** distanceInFeet

**O/P =>** Your Height in cm is \_\_\_ while in feet is \_\_\_ and inches is \_\_\_

// Creating Class with name Q4 indicating the purpose is to display the diatance in yards and miles

import java.util.\*;

class Q4

{

    public static void main(String args[])

    {

        Scanner sc=new Scanner(System.in);

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

        // Create a double variable distanceinfeet to store the distance in feet

        double distanceinfeet=sc.nextDouble();

        // Create a double variable distanceinyards to store the distance in yards

        double distanceinyards=distanceinfeet/3.0;

        // Create a double variable distanceinmiles to store the distance in miles

        double distanceinmiles=distanceinfeet/(distanceinyards\*1760.0);

        // Display the distance in yards and miles

        System.out.println("The distance "+distanceinfeet+" in yards is "+distanceinyards+" and in miles is "+distanceinmiles);

    }

}

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 \_\_\_

// Creating Class with name Q5 indicating the purpose is to display the total purchase price

import java.util.\*;

class Q5

{

    public static void main(String args[])

    {

        Scanner sc=new Scanner(System.in);

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

        // Create a double variable unitprice to store the unit price of the item

        double unitprice=sc.nextDouble();

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

        // Create a int variable quantity to store the quantity of the item

        int quantity=sc.nextInt();

        // Create a double variable totalcost to store the total purchase price

        double totalcost=unitprice\*quantity;

        // Display the total purchase price

        System.out.println("The total purchase price is INR  "+totalcost+" if the quantity "+quantity+" and unit price is INR "+unitprice);

    }

}

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 \_\_\_

// Creating Class with name Q6 indicating the purpose is to display the quotient and remainder of two numbers

import java.util.\*;

class Q6

{

    public static void main(String args[])

    {

        Scanner sc=new Scanner(System.in);

        System.out.println("Enter number 1");

        // Create a int variable number1 to store the first number

        int number1=sc.nextInt();

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

        // Create a int variable number2 to store the second number

        int number2=sc.nextInt();

        // Create a int variable quotient to store the quotient of two numbers

        int quotient=number1/number2;

        // Create a int variable remainder to store the remainder of two numbers

        int remainder=number1%number2;

        // Display the quotient and remainder of two numbers

        System.out.println("The quotient is "+quotient+" and remainder is  "+remainder+" of two numbers "+number1+" and "+number2);

    }

}

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, 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 —-

// Creating Class with name Q7 indicating the purpose is to display the results of IntOperations

import java.util.\*;

class Q7

{

    public static void main(String args[])

    {

        Scanner sc=new Scanner(System.in);

        System.out.println("Enter the value of a");

        // Create a int variable a to store the first number

        int a=sc.nextInt();

        System.out.println("Enter the value of b");

        // Create a int variable b to store the second number

        int b=sc.nextInt();

        System.out.println("Enter the value of c");

        // Create a int variable c to store the third number

        int c=sc.nextInt();

        // Create a int variable integeroperation1 to store the result of a + b \* c

        int integeroperation1 = a + b \* c;

        // Create a int variable integeroperation2 to store the result of a \* b + c

        int integeroperation2 = a \* b + c;

        // Create a int variable integeroperation3 to store the result of c + a / b

        int integeroperation3 = c + a / b;

        // Display the results of IntOperations

        System.out.println("The results of IntOperations are "+integeroperation1+" , "+integeroperation2+" and "+integeroperation3);

    }

}

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

// Creating Class with name Q8 indicating the purpose is to display the results of DoubleOperations

import java.util.\*;

class Q8

{

    public static void main(String args[])

    {

        Scanner sc=new Scanner(System.in);

        System.out.println("Enter the value of a");

        // Create a double variable a to store the first number

        double a=sc.nextDouble();

        System.out.println("Enter the value of b");

        // Create a double variable b to store the second number

        double b=sc.nextDouble();

        System.out.println("Enter the value of c");

        // Create a double variable c to store the third number

        double c=sc.nextDouble();

        // Create a double variable integeroperation1 to store the result of a + b \* c

        double integeroperation1 = a + b \* c;

        // Create a double variable integeroperation2 to store the result of a \* b + c

        double integeroperation2 = a \* b + c;

        // Create a double variable integeroperation3 to store the result of c + a / b

        double integeroperation3 = c + a / b;

        // Display the results of IntOperations

        System.out.println("The results of IntOperations are "+integeroperation1+" , "+integeroperation2+" and "+integeroperation3);

    }

}