MARCH 18 - 03 Java Programming Elements-

Level 2 Lab Practice

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, c of int data type.
2. Take user input for a, b, and c.
3. Compute 3 integer operations and assign 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);

}

}

1. Write a TemperaturConversion program, given the temperature in Celsius as input outputs the temperature in Fahrenheit

**Hint =>**

1. Create a ***celsius*** variable and take the temperature as user input
2. Use the Formulae Celsius to Fahrenheit: (°C × 9/5) + 32 = °F and assign to ***farenheitResult***  and print the result

**I/P =>** celcius

**O/P =>** The \_\_\_\_ celsius is \_\_\_\_\_ fahrenheit

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("Enter temperature in celsius");

double cel = input.nextDouble();

double fah = ((cel\*9)/5)+32;

System.out.println("Temperature in Fahrenheit is :" + fah);

}

}

1. Write a TemperaturConversion program, given the temperature in Fahrenheit as input outputs the temperature in Celsius

**Hint =>**

1. Create a ***fahrenheit*** variable and take the user's input
2. User the formulae to convert Fahrenheit to Celsius: (°F − 32) x 5/9 = °C and assign the result to ***celsiusResult***  and print the result

**I/P =>** fahrenheit

**O/P =>** The \_\_\_\_ fahrenheit is \_\_\_\_\_ celsius

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("Enter temperature in Fahrenheit");

double fah = input.nextDouble();

double cel = ((fah-32)\*5)/9;

System.out.println("Temperature in Celcius is :" + cel);

}

}

1. Create a program to find the total income of a person by taking salary and bonus from user

**Hint =>**

1. Create a variable named salary and take user input.
2. Create another variable bonus and take user input.
3. Compute income by adding salary and bonus and print the result

**I/P =>** salary, bonus

**O/P =>** The salary is INR \_\_\_ and bonus is INR \_\_\_. Hence Total Income is INR \_\_\_

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("Enter Salary");

double sal = input.nextDouble();

System.out.println("Enter Bonus");

double bonus = input.nextDouble();

double total = sal+bonus;

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

}

}

1. Create a program to swap two numbers

**Hint =>**

1. Create a variable number1 and take user input.
2. Create a variable number2 and take user input.
3. Swap number1 and number2 and print the swapped output

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

**O/P =>** The swapped numbers 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");

double num1 = input.nextDouble();

System.out.println("Enter Second Number");

double num2 = input.nextDouble();

num1 = num1 + num2;

num2 = num1 - num2;

num1 = num1 - num2;

System.out.println("After swap First number :" + num1);

System.out.println("After swap Second number :" + num2);

}

}

1. An athlete runs in a triangular park with sides provided as input by the user in meters. If the athlete wants to complete a 5 km run, then how many rounds must the athlete complete

**Hint =>** The perimeter of a triangle is the addition of all sides and rounds is distance/perimeter

**I/P =>** side1, side2, side3

**O/P =>** The total number of rounds the athlete will run is \_\_\_ to complete 5 km

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("Enter First side");

double num1 = input.nextDouble();

System.out.println("Enter Second side");

double num2 = input.nextDouble();

System.out.println("Enter Third side");

double num3 = input.nextDouble();

double perimeter = num1+num2+num3;

double rounds = perimeter/5;

System.out.println("Length of park :" + perimeter);

System.out.println("No of rounds :" + rounds);

}

}

1. Create a program to divide N number of chocolates among M children.

**Hint =>**

1. Get an integer value from user for the numberOfchocolates and numberOfChildren.
2. Find the number of chocolates each child gets and number of remaining chocolates
3. Display the results

**I/P =>** numberOfchocolates, numberOfChildren

**O/P =>** The number of chocolates each child gets is \_\_\_ and the number of remaining chocolates are \_\_\_

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("Enter No of chocolates");

int chocolates = input.nextInt();

System.out.println("Enter No of children");

int children = input.nextInt();

int per\_person = chocolates/children;

int remaining = chocolates%children;

System.out.println("Chocolate per child :" + per\_person);

System.out.println("Remanining chocolate :" + remaining);

}

}

1. Write a program to input the Principal, Rate, and Time values and calculate Simple Interest.

**Hint =>** Simple Interest = Principal \* Rate \* Time / 100

**I/P =>** principal, rate, time

**O/P =>** The Simple Interest is \_\_\_ for Principal \_\_\_, Rate of Interest \_\_\_ and Time \_\_\_

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("Enter Principal amount");

double principal = input.nextDouble();

System.out.println("Enter Time");

double time = input.nextDouble();

System.out.println("Enter Rate of Interest");

double rate = input.nextDouble();

double simple\_interest = (principal\*time\*rate)/100;

System.out.println("Simple Interest is :" + simple\_interest);

}

}

1. Create a program to convert weight in pounds to kilograms.

**Hint =>** 1 pound = 2.2 kg

**I/P =>** weight

**O/P =>** The weight of the person in pound is \_\_\_ and in kg is \_\_\_

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("Enter weight in Pounds");

double pound = input.nextDouble();

double kgs = pound/2.2;

System.out.println("Weight in kgs :" + kgs);

}

}