Lab-Based Assignment - Basics of Java

## **Write Java programs based on the given lab based questions:-**

1. Read two numbers from the user, and print the result of the following operations:

* Sum (use + operator)
* Difference (use – operator)
* Product (Use \* operator)
* Quotient (use / operator)
* Remainder (use % operator)

Program

**import** java.util.\*;

**public** **class** ArthmeticOperations {

**public** **static** **void** main(String[] args) {

System.***out***.println("Enter two numbers");

Scanner sc = **new** Scanner(System.***in***);

**int** firstNumber = sc.nextInt();

**int** secondNumber = sc.nextInt();

*sum*(firstNumber,secondNumber);

*difference*(firstNumber,secondNumber);

*product*(firstNumber,secondNumber);

*division*(firstNumber,secondNumber);

sc.close();

}

**public** **static** **void** sum(**int** a, **int** b)

{

**int** result = a+b;

System.***out***.println("Sum of the two numbers = "+ result );

}

**public** **static** **void** difference(**int** a, **int** b)

{

**int** result =0;

**if**(a>b)

result = a-b;

**else**

result = b-a;

System.***out***.println("Difference between two numbers = "+ result );

}

**public** **static** **void** product(**int** a, **int** b)

{

**int** result = a\*b;

System.***out***.println("Product of the two numbers = "+ result );

}

**public** **static** **void** division(**int** a, **int** b)

{

**int** quotient =0;

**int** remainder = 0;

**if**(a>b)

{

quotient = a/b;

remainder =a%b;

}

**else**

{

quotient = b/a;

remainder =b%a;

}

System.***out***.println("The Quotient is = " + quotient);

System.***out***.println("The Remainder is = " + remainder);

}

}

Screenshot

Graphical user interface, text

Description automatically generated

2.  Input electricity unit charges and calculate total electricity bill according to the given condition:

* For first 50 units Rs. 0.50/unit
* For next 100 units Rs. 0.75/unit
* For next 100 units Rs. 1.20/unit
* For unit above 250 Rs. 1.50/unit

Program

**import** java.util.Scanner;

**public** **class** ElectricityBill {

**public** **static** **void** main(String[] args) {

System.***out***.println("Enter total units of consumption");

Scanner sc = **new** Scanner(System.***in***);

**int** inputUnits = sc.nextInt();

sc.close();

**double** billAmount = 0;

**if**(inputUnits<=50)

{

billAmount = 0.5\*inputUnits;

}

**else** **if**(inputUnits<=150)

{

billAmount =( 50\*0.5)+ (inputUnits-100)\*0.75;

}

**else** **if**(inputUnits<=250)

{

billAmount = (50\*0.5) + (100\*0.75)+ (inputUnits-200)\*1.20;

}

**else** **if**(inputUnits>250)

{

billAmount = (50\*0.5) + (100\*0.75)+ (100\*1.20)+ (inputUnits-250)\*1.5;

}

System.***out***.println("Total Electricity Bill : " + billAmount);

}

}

Screen

Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application

Description automatically generated