ĐẠI HỌC BÁCH KHOA HÀ NỘI
TRƯỜNG CÔNG NGHỆ THÔNG TIN VÀ TRUYỀN THÔNG

BÁO CÁO THỰC HÀNH
IT3103-744527-2024.1

BÀI THỰC HÀNH -LAB01

Họ và tên sv: Đặng Huy Hoàng

MSSV: 20225843

Lớp: Việt Nhật 06 -K67

GVHD: Lê Thị Hoa

HTGD: Đặng Mạnh Cường

Mã lớp thực hành: 744528

Hà Nội 9/2024

Contents

BÁO CÁO THỰC HÀNH LAB 1

The Very First Java Programs

2.2.1 Write, compile the first Java application:

```
public class HelloWorld {
    public static void main(String[] args) {
        System.out.println("Xin chao \n cac ban!");
        System.out.println("Hello \t world!");
    }

}
```

Kết quả

```
<terminated> HelloWorld [Java Application] C:\Program
Xin chao
 cac ban!
Hello    world!
```

2.2.2 Write, compile the first dialog Java program

```
import javax.swing.JOptionPane;

public class FirstDialog {
    public static void main(String[] args) {
        JOptionPane.showMessageDialog(null,"Hello world! How are you?");
        System.exit(0);
    }

}
```

Kết quả

2.2.3 Write, compile the first input dialog Java application

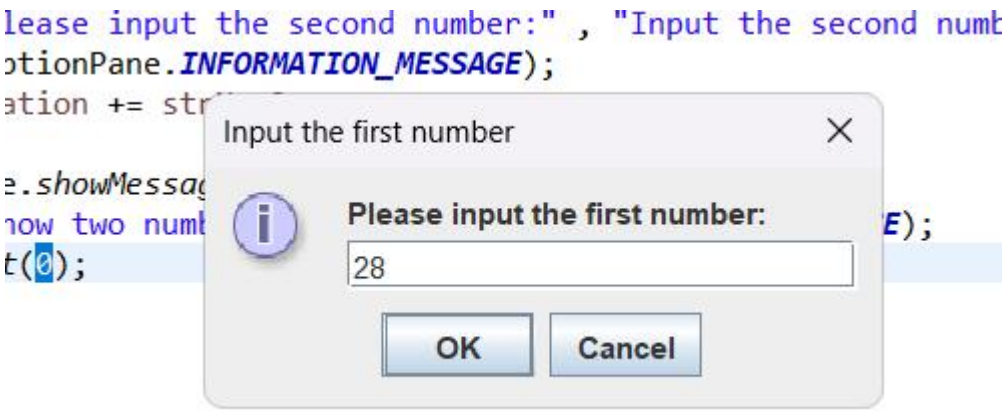
```
3  import javax.swing.*;
4  public class HelloNameDialog {
5      public static void main(String[] args) {
6          String result;
7          result = JOptionPane.showInputDialog("Please enter your name:");
8          JOptionPane.showMessageDialog(null,"Hi" + result + "!");
9          System.exit(0);
0      }
1
2  }
3
```

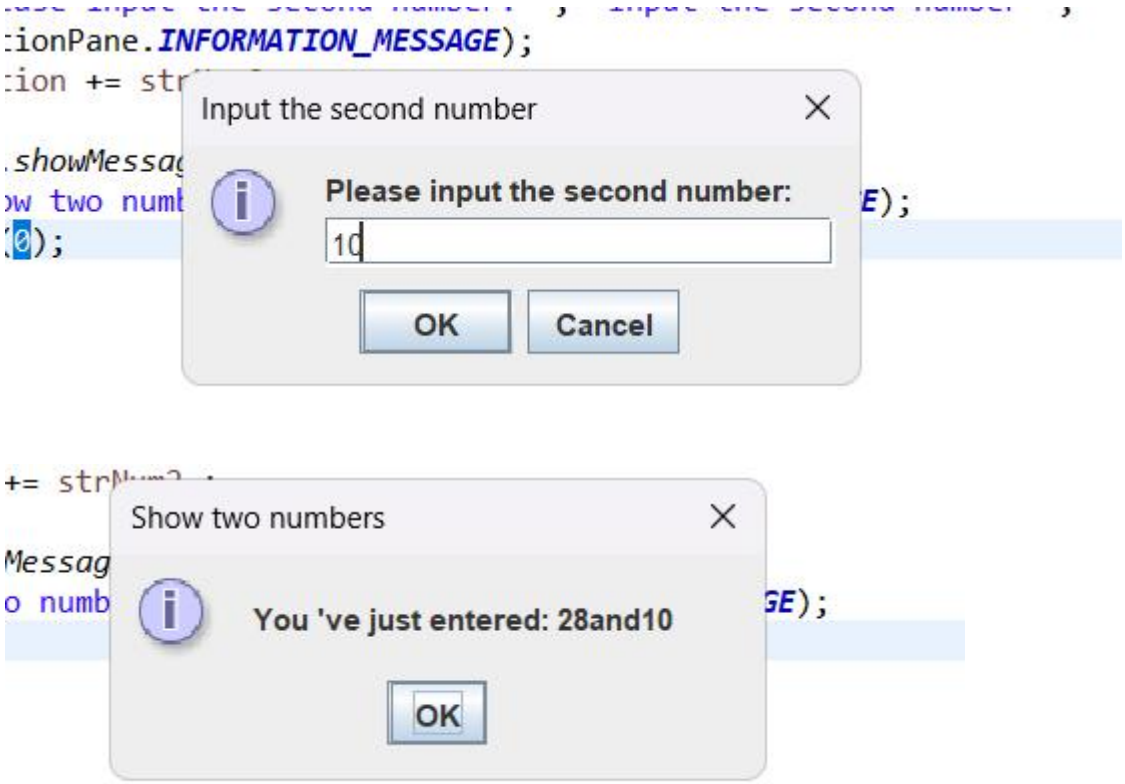
Kết quả

2.2.4 Write, compile, and run the following example:

```
import javax.swing.*;

public class ShowTwoNumbers {
    public static void main(String[] args) {
        String strNum1, strNum2;
        String strNotification = "You 've just entered: ";

        strNum1 = JOptionPane.showInputDialog(null,
                "Please input the first number:" , "Input the first number" ,
                JOptionPane.INFORMATION_MESSAGE);
        strNotification += strNum1 +"and";

        strNum2 = JOptionPane.showInputDialog(null,
                "Please input the second number:" , "Input the second number" ,
                JOptionPane.INFORMATION_MESSAGE);
        strNotification += strNum2 ;

        JOptionPane.showMessageDialog(null, strNotification,
                "Show two numbers" , JOptionPane.INFORMATION_MESSAGE);
        System.exit(0);
    }

}
```

Kết quả




ionPane.INFORMATION_MESSAGE);
Input the second number
Please input the second number:
10
OK
Cancel

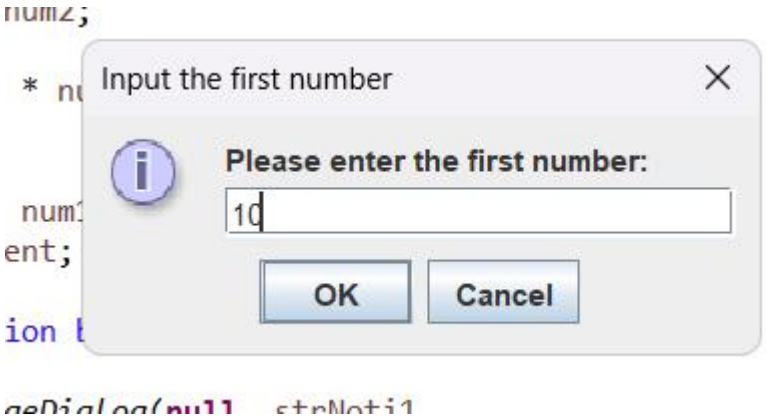
Show two numbers
You 've just entered: 28and10
OK

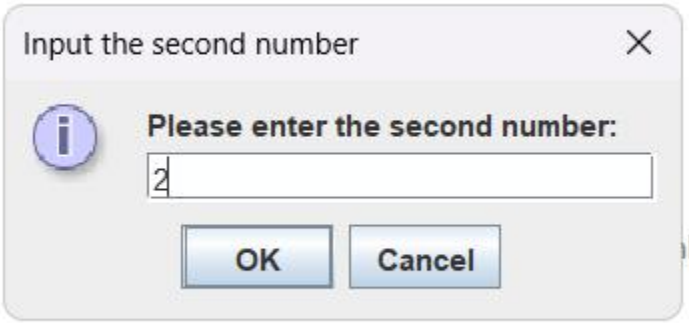
BÀI TẬP

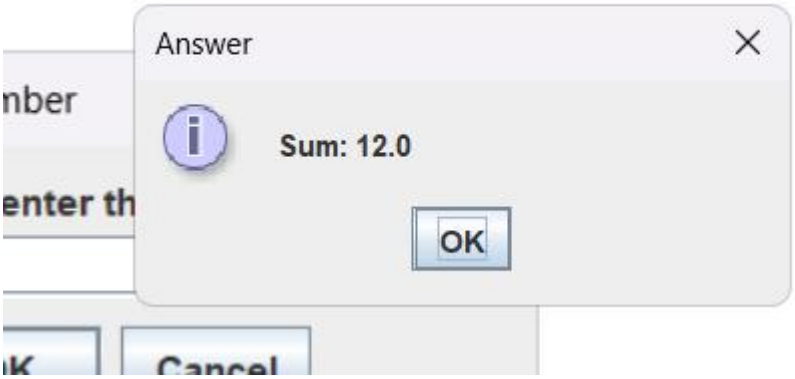
2.2.5 Write a program to calculate sum, difference, product, and quotient of 2 double numbers which are entered by users.

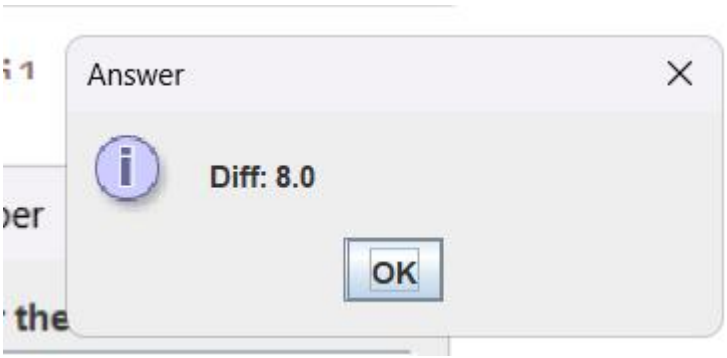
```
    import javax.swing.*;

public class Calculate {
    public static void main(String[] args) {
    String strNum1, strNum2;
    String strNoti1 = "Sum: ", strNoti2 = "Diff: ", strNoti3 = "Product: ", strNoti4 = "Quotient: ";
    strNum1 = JOptionPane.showInputDialog(null, "Please enter the first number:","Input the first number",
            JOptionPane.INFORMATION_MESSAGE);
    strNum2 = JOptionPane.showInputDialog(null, "Please enter the second number:","Input the second number",
            JOptionPane.INFORMATION_MESSAGE);
    double num1 = Double.parseDouble(strNum1);
    double num2 = Double.parseDouble(strNum2);
    double sum = num1 + num2;
    strNoti1 += sum;
    double diff = num1 - num2;
    strNoti2 += diff;
    double product = num1 * num2;
    strNoti3 += product;
    if (num2 != 0) {
        double quotient = num1 / num2;
        strNoti4 += quotient;
    } else {
        strNoti4 = "Division by zero is not allowed.";
    }
    JOptionPane.showMessageDialog(null, strNoti1,
            "Answer" , JOptionPane.INFORMATION_MESSAGE);
    JOptionPane.showMessageDialog(null, strNoti2,
            "Answer" , JOptionPane.INFORMATION_MESSAGE);
    JOptionPane.showMessageDialog(null, strNoti3,
            "Answer" , JOptionPane.INFORMATION_MESSAGE);
    JOptionPane.showMessageDialog(null, strNoti4,
            "Answer" , JOptionPane.INFORMATION_MESSAGE);
    System.exit(0);
    }

}
```

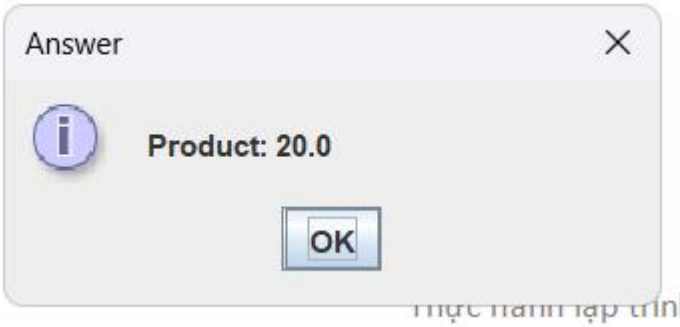
Kết quả

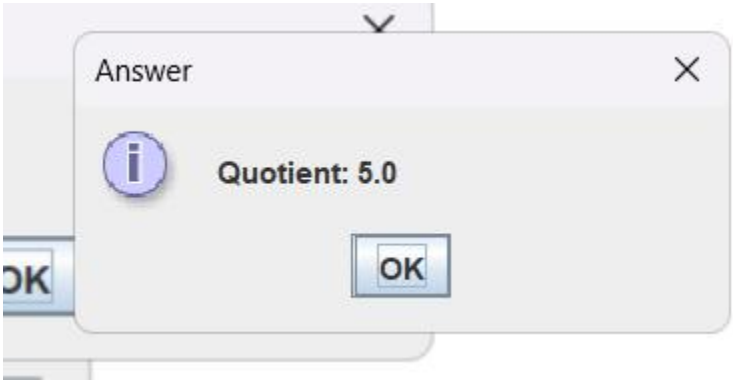

Input the first number
Please enter the first number:
10
OK
Cancel


Input the second number
Please enter the second number:
2
OK
Cancel


Answer
Sum: 12.0
OK
Cancel







2.2.6 Write a program to solve:

For simplicity, we only consider the real roots of the equations in this task.

- The first-degree equation (linear equation) with one variable

- The system of first-degree equations (linear system) with two variables

- The second-degree equation with one variable

```java
import java.util.*;


public class Equation {
    public static void giaiPTbac1() {
        Scanner input = new Scanner(System.in);
        System.out.println("Nhap a: ");
        double a = input.nextDouble();
        System.out.println("Nhap b: ");
        double b = input.nextDouble();
    if(a == 0) {
        if(b==0) {
            System.out.println("PT vo so nghiem");
        }else {
            System.out.println("PT vo nghiem");
        }
    }else {
        double x = -b/a;
        System.out.println("PT co nghiem: " + x);
    }
    }
    public static void giaihePTbac1() {
        Scanner input = new Scanner(System.in);
        System.out.println("Nhap a11: ");
        double a11 = input.nextDouble();
        System.out.println("Nhap a12: ");
        double a12 = input.nextDouble();
        System.out.println("Nhap a21: ");
        double a21 = input.nextDouble();
        System.out.println("Nhap a22: ");
        double a22 = input.nextDouble();
        System.out.println("Nhap b1: ");
        double b1 = input.nextDouble();
        System.out.println("Nhap b2: ");
        double b2 = input.nextDouble();
        double D = a11 * a22 - a21 * a12;
        double D1 = b1 * a22 - b2 * a12;
        double D2 = a11 * b2 - a21 * b1;
```

```
        double D2 = a11 * b2 - a21 * b1;
        if(D == 0) {
            if(D1 == 0 && D2 == 0) {
                System.out.println("He PT vo so nghiem");
            } else {
                System.out.println("He PT vo nghiem");
            }
        }else {
            double x1 = D1/D;
            double x2 = D2/D;
            System.out.println("Nghiem cua he PT la" + x1 + "va" + x2);
        }
    }
    public static void giaiPTbac2() {
        Scanner input = new Scanner(System.in);
        System.out.println("Nhap a: ");
        double a = input.nextDouble();
        System.out.println("Nhap b: ");
        double b = input.nextDouble();
        System.out.println("Nhap c: ");
        double c = input.nextDouble();
         if (a == 0) {
                System.out.println("Day la PT bac 1");
                giaiPTbac1();
            } else {
                double delta = b * b - 4 * a * c;
                if (delta < 0) {
                    System.out.println("PT vo nghiem");
                } else if (delta == 0) {
                    double x = -b / (2 * a);
                    System.out.println("PT co nghiem kep: " + x);
                } else {
                    double x1 = (-b + Math.sqrt(delta)) / (2 * a);
                    double x2 = (-b - Math.sqrt(delta)) / (2 * a);
                    System.out.println("PT co 2 nghiem phan biet: " + x1 + "va " + x2);
                }
            }
        }
```

```
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        while(true) {
            System.out.println("Lua chon: ");
            System.out.println("1.Giai pt bac nhat 1 an");
            System.out.println("2.Giai he pt bac nhat");
            System.out.println("3.Giai he pt bac hai 1 an");
            System.out.println("4.Thoat");

        int choice = input.nextInt();
        switch(choice) {
            case 1:
                giaiPTbac1();
                break;
            case 2:
                giaihePTbac1();
                break;
            case 3:
                giaiPTbac2();
                break;
            case 4:
                return;
            default:
                System.out.println("Error");
            }
        }
    }

}
```

Kết quả

```
Lua chon:
1.Giai pt bac nhat 1 an
2.Giai he pt bac nhat
3.Giai he pt bac hai 1 an
4.Thoat
3
Nhap a:
4
Nhap b:
2
Nhap c:
1
PT vo nghiem
Lua chon:
1.Giai pt bac nhat 1 an
2.Giai he pt bac nhat
3.Giai he pt bac hai 1 an
4.Thoat
1
Nhap a:
4
Nhap b:
2
PT co nghiem: -0.5
Lua chon:
1.Giai pt bac nhat 1 an
2.Giai he pt bac nhat
3.Giai he pt bac hai 1 an
4.Thoat
2
Nhap a11:
1
Nhap a12:
2
Nhap a21:
3
Nhap a22:
4
Nhap b1:
5
Nhap b2:
6
Nghiem cua he PT la-4.0va4.5
Lua chon:
1.Giai pt bac nhat 1 an
2.Giai he pt bac nhat
3.Giai he pt bac hai 1 an
4.Thoat
```