BÁO CÁO THỰC HÀNH LAB 1
LẬP TRÌNH HƯỚNG ĐỐI TƯỢNG

The Very First Java Programs

2.2.1 Write, compile the first Java application:

```java
// Example 1: HelloWorld.java
// Text-printing program
public class HelloWorld {

    public static void main(String[] args) {
        System.out.println("Xin chao \n cac ban!");
        System.out.println("Hello \t World!");
    } //end of the method
}
```

Kết quả

```
// Example 1: HelloWorld.java
// Text-printing program
public class HelloWorld {

    public static void main(String[] args) {
        System.out.println("Xin chao \n cac ban!");
        System.out.println("Hello \t World!");
    } //end of the method
}
```
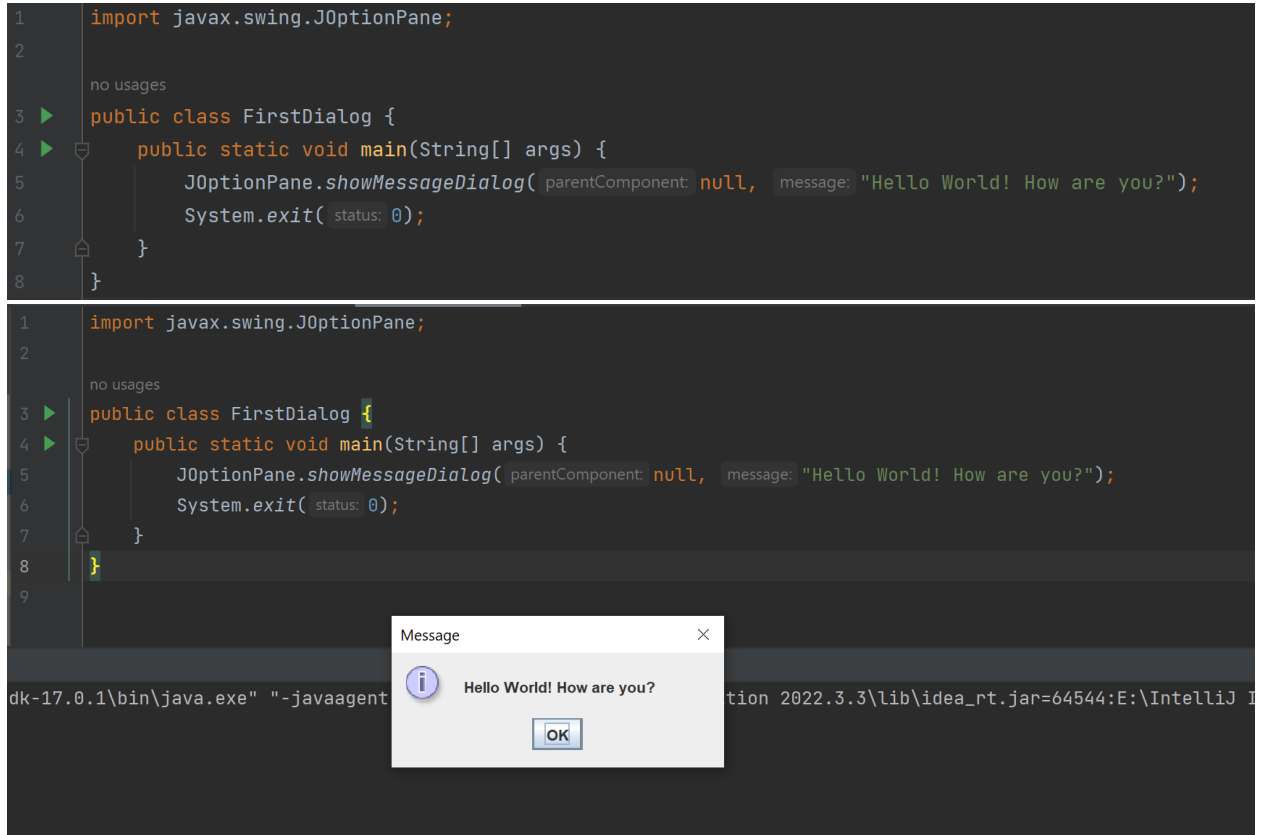
```
Run:    HelloWorld ×
    "C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 2022.3.3\
    Xin chao
     cac ban!
    Hello    World!

    Process finished with exit code 0
```

2.2.2 Write, compile the first dialog Java program

```java
import javax.swing.JOptionPane;

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

```java
import javax.swing.JOptionPane;

public class FirstDialog {
    public static void main(String[] args) {
        JOptionPane.showMessageDialog( parentComponent: null,  message: "Hello World! How are you?");
        System.exit( status: 0);
    }
}
```
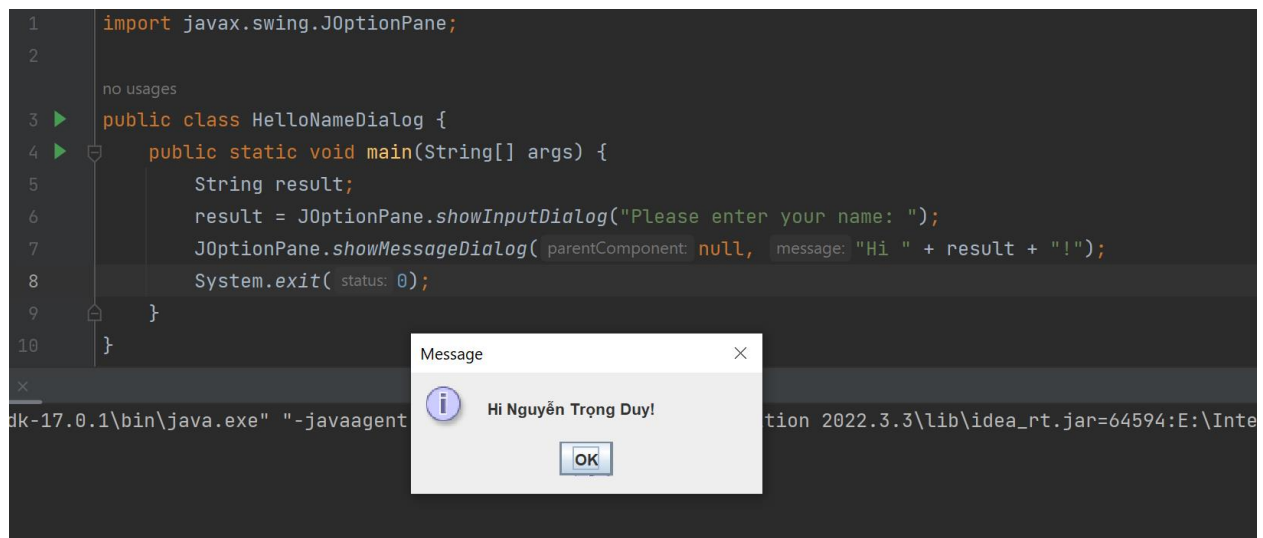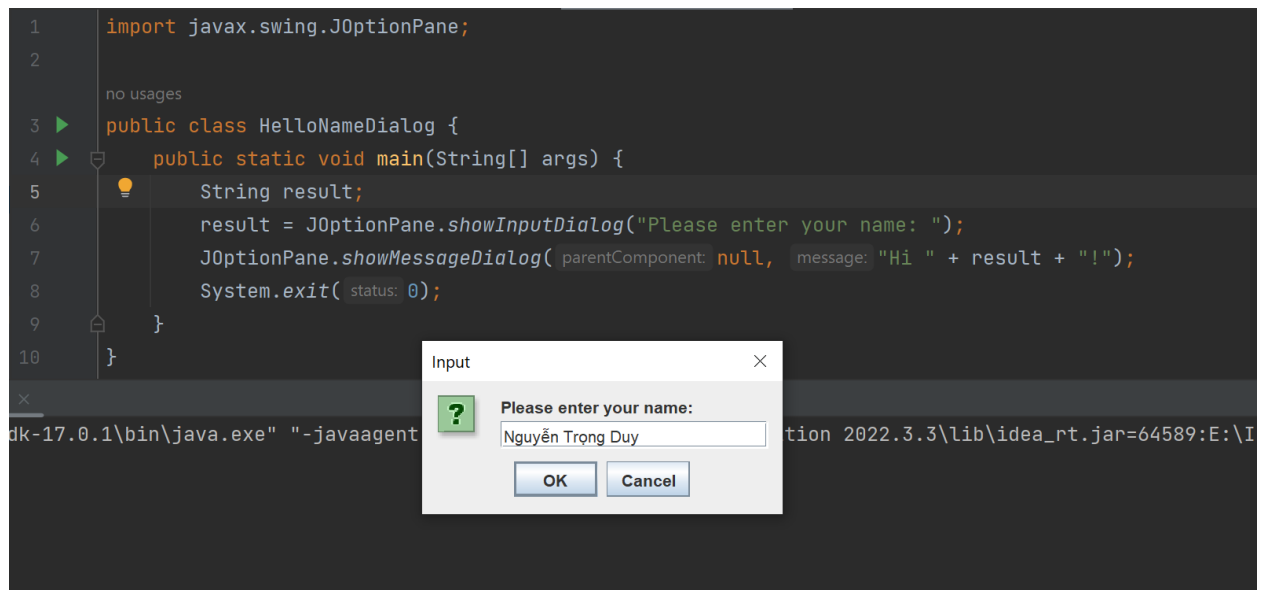
dk-17.0.1\bin\java.exe" "-javaagent ... tion 2022.3.3\lib\idea_rt.jar=64544:E:\IntelliJ I

Message ✕

Hello World! How are you?

OK

2.2.3 Write, compile the first input dialog Java application

```java
import javax.swing.JOptionPane;

public class HelloNameDialog {
    public static void main(String[] args) {
        String result;
        result = JOptionPane.showInputDialog("Please enter your name: ");
        JOptionPane.showMessageDialog( parentComponent: null,  message: "Hi " + result + "!");
        System.exit( status: 0);
    }
}
```

```java
import javax.swing.JOptionPane;


no usages
public class HelloNameDialog {
    public static void main(String[] args) {
        String result;
        result = JOptionPane.showInputDialog("Please enter your name: ");
        JOptionPane.showMessageDialog( parentComponent: null, message: "Hi " + result + "!");
        System.exit( status: 0);
    }
}
```

Input

Please enter your name:

Nguyễn Trọng Duy

OK   Cancel

dk-17.0.1\bin\java.exe" "-javaagent   tion 2022.3.3\lib\idea_rt.jar=64589:E:\I

```java
import javax.swing.JOptionPane;


no usages
public class HelloNameDialog {
    public static void main(String[] args) {
        String result;
        result = JOptionPane.showInputDialog("Please enter your name: ");
        JOptionPane.showMessageDialog( parentComponent: null, message: "Hi " + result + "!");
        System.exit( status: 0);
    }
}
```
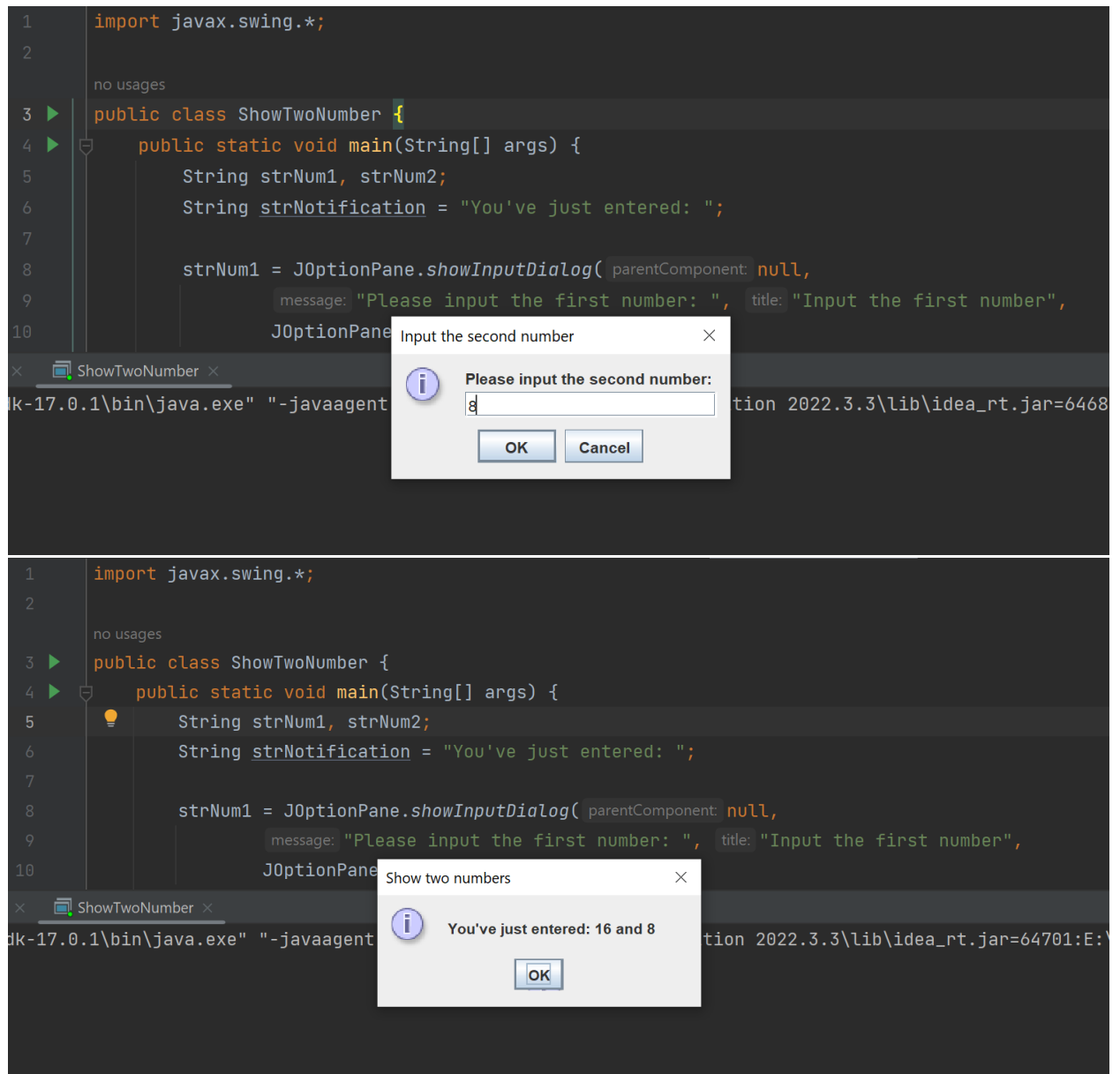
Message

Hi Nguyễn Trọng Duy!

OK

dk-17.0.1\bin\java.exe" "-javaagent   tion 2022.3.3\lib\idea_rt.jar=64594:E:\Inte

2.2.4 Write, compile, and run the following example:

```java
import javax.swing.*;

no usages
public class ShowTwoNumber {
    public static void main(String[] args) {
        String strNum1, strNum2;
        String strNotification = "You've just entered: ";

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

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

        JOptionPane.showMessageDialog( parentComponent: null, strNotification,
                title: "Show two numbers", JOptionPane.INFORMATION_MESSAGE);
        System.exit( status: 0);
    }
}
```

```java
import javax.swing.*;

no usages
public class ShowTwoNumber {
    public static void main(String[] args) {
        String strNum1, strNum2;
        String strNotification = "You've just entered: ";

        strNum1 = JOptionPane.showInputDialog( parentComponent: null,
                message: "Please input the first number: ", title: "Input the first number",
                JOptionPane
```

Input the second number ✕

(i) **Please input the second number:**

8

OK   Cancel

ShowTwoNumber

k-17.0.1\bin\java.exe" "-javaagent   tion 2022.3.3\lib\idea_rt.jar=6468

```java
import javax.swing.*;

no usages
public class ShowTwoNumber {
    public static void main(String[] args) {
        String strNum1, strNum2;
        String strNotification = "You've just entered: ";

        strNum1 = JOptionPane.showInputDialog( parentComponent: null,
                message: "Please input the first number: ", title: "Input the first number",
                JOptionPane
```

Show two numbers ✕

(i) You've just entered: 16 and 8

OK

ShowTwoNumber

k-17.0.1\bin\java.exe" "-javaagent   tion 2022.3.3\lib\idea_rt.jar=64701:E:\

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

```java
//a program to calculate sum, difference, product, and quotient of 2 double numbers which are entered by users.
import java.util.Scanner;

public class Exercise225 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter the first number: ");
        double number_1 = Double.parseDouble(scanner.nextLine());
        System.out.print("Enter the second number: ");
        double number_2 = Double.parseDouble(scanner.nextLine());
        System.out.println("The sum of two number is: " + (number_1 + number_2));
        System.out.println("The difference of two number is: " + (number_1 - number_2));
        System.out.println("The product of two number is: " + (number_1 * number_2));
        System.out.println("The quotient of two number is: " + (number_1 / number_2));
    }
}
```

```java
//a program to calculate sum, difference, product, and quotient of 2 double numbers which a
import java.util.Scanner;

public class Exercise225 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter the first number: ");
        double number_1 = Double.parseDouble(scanner.nextLine());
        System.out.print("Enter the second number: ");
        double number_2 = Double.parseDouble(scanner.nextLine());
        System.out.println("The sum of two number is: " + (number_1 + number_2));
        System.out.println("The difference of two number is: " + (number_1 - number_2));
        System.out.println("The product of two number is: " + (number_1 * number_2));
        System.out.println("The quotient of two number is: " + (number_1 / number_2));
    }
}
```

```
Run:    FirstDialog ×   HelloNameDialog ×   ShowTwoNumber ×   Exercise225 ×

"C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edit
Enter the first number: 16
Enter the second number: 8
The sum of two number is: 24.0
The difference of two number is: 8.0
The product of two number is: 128.0
The quotient of two number is: 2.0

Process finished with exit code 0
```

2.2.6 Write a program to solve:

The first-degree equation

```java
1        import java.util.Scanner;
2
         no usages
3   ▶    public class Exercise226 {
             no usages
4            static void first_degree_equation() {
5                // The first-degree equation (linear equation) with one variable
6                Scanner scanner = new Scanner(System.in);
7                float a, b;
8                do {
9                    System.out.print("Enter a: ");
10                   a = scanner.nextFloat();
11                   if (a == 0) System.out.println("a must not equal to 0");
12               } while(a == 0);
13
14               System.out.print("Enter b: ");
15               b = scanner.nextFloat();
16               System.out.println("x = " + (b / a));
17           }
18
```

```java
40               if (delta < 0) System.out.println("No solutions");
41               else if (delta == 0) System.out.println("x = " + (-b / (2*a)));
42               else {
43                   System.out.println("x1 = " + ((-b + Math.sqrt(delta)) / (2*a)));
44                   System.out.println("x2 = " + ((-b - Math.sqrt(delta)) / (2*a)));
45               }
46           }
47       }
48   ▶   public static void main(String[] args) {
49           first_degree_equation();
50
51
52       }
53   }
54
```

```
Run:    FirstDialog ×    HelloNameDialog ×    ShowTwoNumber ×    Exercise226 ×
    ▶  ↑    "C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 2022.3.3\
       ↓    Enter a: 0
            a must not equal to 0
            Enter a: 3
            Enter b: 8
            x = 2.6666667

            Process finished with exit code 0
```

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

```java
    static void system_of_first_degree_equations() {
        Scanner scanner = new Scanner(System.in);
        double a11 , a12 , b1 , a21 , a22 , b2;
        System.out.print("Input a11 , a12 , b1 : ");
        a11 = scanner.nextDouble();
        a12 = scanner.nextDouble();
        b1 = scanner.nextDouble();
        System.out.print("Input a21 , a22 , b2 : ");
        a21 = scanner.nextDouble();
        a22 = scanner.nextDouble();
        b2 = scanner.nextDouble();
        double Det = (a11 * a22 - a12 * a21);
        double Dx = (b1 * a22 - b2 * a12);
        double Dy = (b2 * a11 - b1 * a21);
        if (Det == 0) {
            if ( a11 == 0 && a12 == 0 && b1 != 0) System.out.println("No solution !");
            else if ( a21 == 0 && a22 == 0 && b2 != 0) System.out.println("No solution !");
            else if(Dx == 0 && Dy == 0) System.out.println("Infinite solution");
            else System.out.println("No solution !");
        }
        else {
            double x = Dx / Det;
            double y = Dy / Det;
            System.out.println("Solution is: x = " + x + " y = " + y);
        }
    }
```

```java
            }
        }
    }

    static void system_of_first_degree_equations() {
        Scanner scanner = new Scanner(System.in);
        double a11 , a12 , b1 , a21 , a22 , b2;
        System.out.print("Input a11 , a12 , b1 : ");
        a11 = scanner.nextDouble();
        a12 = scanner.nextDouble();
        b1 = scanner.nextDouble();
        System.out.print("Input a21 , a22 , b2 : ");
        a21 = scanner.nextDouble();
        a22 = scanner.nextDouble();
        b2 = scanner.nextDouble();
        double Det = (a11 * a22 - a12 * a21);
        double Dx = (b1 * a22 - b2 * a12);
```

```
Run:    Exercise226
  "C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 2022.3.3\lib\idea_rt.jar
  Input a11 , a12 , b1 : 1 2 4
  Input a21 , a22 , b2 : 3 4 6
  Solution is: x = -2.0 y = 3.0

  Process finished with exit code 0
```

The second-degree equation

```java
19          static void second_degree_equation() {
20              Scanner scanner = new Scanner(System.in);
21              float a, b, c;
22              System.out.print("Enter a: ");
23              a = scanner.nextFloat();
24              if (a == 0) {
25                  do {
26                      System.out.print("Enter b: ");
27                      b = scanner.nextFloat();
28                      if (b == 0) System.out.println("b must not equal to 0");
29                  } while(b == 0);
30
31                  System.out.print("Enter c: ");
32                  c = scanner.nextFloat();
33                  System.out.println("x = " + (c / b));
34              } else {
35                  System.out.print("Enter b: ");
36                  b = scanner.nextFloat();
37                  System.out.print("Enter c: ");
38                  c = scanner.nextFloat();
39                  float delta = (float) Math.pow(b, 2) - 4*a*c;
40                  if (delta < 0) System.out.println("No solutions");
41                  else if (delta == 0) System.out.println("x = " + (-b / (2*a)));
42                  else {
43                      System.out.println("x1 = " + ((-b + Math.sqrt(delta)) / (2*a)));
44                      System.out.println("x2 = " + ((-b - Math.sqrt(delta)) / (2*a)));
45                  }
```

```java
37                  System.out.print("Enter c: ");
38                  c = scanner.nextFloat();
39                  float delta = (float) Math.pow(b, 2) - 4*a*c;
40                  if (delta < 0) System.out.println("No solutions");
41                  else if (delta == 0) System.out.println("x = " + (-b / (2*a)));
42                  else {
43                      System.out.println("x1 = " + ((-b + Math.sqrt(delta)) / (2*a)));
44                      System.out.println("x2 = " + ((-b - Math.sqrt(delta)) / (2*a)));
45                  }
46              }
47          }
48          public static void main(String[] args) {
49              second_degree_equation();
50
51
```

```
Run:    FirstDialog ×    HelloNameDialog ×    ShowTwoNumber ×    Exercise226 ×
    "C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 2022.
    Enter a: 2
    Enter b: 6
    Enter c: -12
    x1 = 1.3722813232690143
    x2 = -4.372281323269014

    Process finished with exit code 0
```
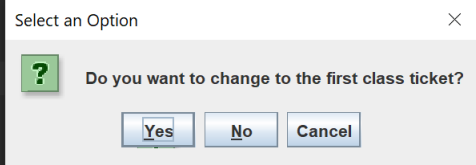
```
41              else if (delta == 0) System.out.println("x = " + (-b / (2*a)));
42              else {
43                  System.out.println("x1 = " + ((-b + Math.sqrt(delta)) / (2*a)));
44                  System.out.println("x2 = " + ((-b - Math.sqrt(delta)) / (2*a)));
45              }
46          }
47      }
48      public static void main(String[] args) {
49          second_degree_equation();
50
51
52      }
```

```
Run:    FirstDialog ×   HelloNameDialog ×   ShowTwoNumber ×   Exercise226 ×

    "C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Communit
    Enter a: 1
    Enter b: 2
    Enter c: 5
    No solutions

    Process finished with exit code 0
```

```
42              else {
43                  System.out.println("x1 = " + ((-b + Math.sqrt(delta)) / (2*a)));
44                  System.out.println("x2 = " + ((-b - Math.sqrt(delta)) / (2*a)));
45              }
46          }
47      }
48      public static void main(String[] args) {
49          second_degree_equation();
50
51
52      }
```

```
Run:    FirstDialog ×   HelloNameDialog ×   ShowTwoNumber ×   Exercise226 ×

    "C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Ed
    Enter a: 1
    Enter b: -6
    Enter c: 9
    x = 3.0

    Process finished with exit code 0
```

6.1 Write, compile and run the ChoosingOption program:

```java
import javax.swing.JOptionPane;


no usages
public class ChoosingOption {
    public static void main(String[] args) {
        int option = JOptionPane.showConfirmDialog( parentComponent: null,
                message: "Do you want to change to the first class ticket?");
        JOptionPane.showMessageDialog( parentComponent: null,
                message: "You've chosen: " + (option==JOptionPane.YES_OPTION?"YES":"NO"));
        System.exit( status: 0);
    }
}
```

```java
import javax.swing.JOptionPane;


no usages
public class ChoosingOption {
    public static void main(String[] args) {
        int option = JOptionPane.showConfirmDialog( parentComponent: null,
                message: "Do you want to change to the first class ticket?");
        JOptionPane.showMessageDialog( parentComponent: null,
                message: "You've chosen: " + (option==JOptionPane.YES_OPTION?"YES":"NO"));
        System.exit( status: 0);
    }
}
```

Select an Option

? Do you want to change to the first class ticket?

[Yes] [No] [Cancel]

ShowTwoNumber ×   ChoosingOption ×

dk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 2022.3.3\lib\idea_rt.jar=64852:E:

Questions:

- When users choose "Cancel", the output is another dialog show "You 've chosen: NO".
- To customize the options to users, e.g. only two options: "Yes" and "No", we can change code to this:

```java
import javax.swing.JOptionPane;


public class ChoosingOption {
    public static void main(String[] args) {
        int option = JOptionPane.showConfirmDialog( parentComponent: null,
                message: "Do you want to change to the first class ticket?", title: null, JOptionPane.YES_NO_OPTION);
        JOptionPane.showMessageDialog( parentComponent: null,
                message: "You've chosen: " + (option==JOptionPane.YES_OPTION?"YES":"NO"));
        System.exit( status: 0);
    }
}
```

6.2 Write a program for input/output from keyboard.

```java
import java.util.Locale;
import java.util.Scanner;


public class InputFromKeyboard {
    public static void main(String[] args) {
        Scanner keyboard = new Scanner(System.in).useLocale(Locale.US);

        System.out.println("What's your name? ");
        String strName = keyboard.nextLine();
        System.out.println("How old are you? ");
        int iAge = keyboard.nextInt();
        System.out.println("How tall are you (m)? ");
        double dHeight = keyboard.nextDouble();

        System.out.println("Mrs/Ms. " + strName + ", " + iAge + " years old. " + "Your height is " + dHeight + ".");
    }
}
```

```java
import java.util.Locale;
import java.util.Scanner;


public class InputFromKeyboard {
    public static void main(String[] args) {
        Scanner keyboard = new Scanner(System.in).useLocale(Locale.US);

        System.out.println("What's your name? ");
        String strName = keyboard.nextLine();
        System.out.println("How old are you? ");
        int iAge = keyboard.nextInt();
        System.out.println("How tall are you (m)? ");
        double dHeight = keyboard.nextDouble();
```

Run: FirstDialog ×   HelloNameDialog ×   ShowTwoNumber ×   InputFromKeyboard ×

```
"C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 2022.3.3\li
What's your name?
Nguyễn Trọng Duy
How old are you?
19
How tall are you (m)?
1.72
Mrs/Ms. Nguyễn Trọng Duy, 19 years old. Your height is 1.72.

Process finished with exit code 0
```

6.3 Write a program to display a triangle with a height of n stars (*), n is entered by users.

```java
import java.util.Scanner;

// program to display a triangle with a height of n stars (*), n is entered by users.
no usages
public class Exercise_63 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter n: ");
        int n = scanner.nextInt();
        for(int i = n - 1; i >= 0; i--) {
            for(int j = 0; j <= i; j++) {
                System.out.print(" ");
            }
            for(int k = 1; k <= 1 + 2*(n - i - 1); k++) {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}
```

```
import java.util.Scanner;

// program to display a triangle with a height of n stars (*), n is entered by users.
no usages
public class Exercise_63 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter n: ");
        int n = scanner.nextInt();
        for(int i = n - 1; i >= 0; i--) {
            for(int j = 0; j <= i; j++) {
                System.out.print(" ");
            }
            for(int k = 1; k <= 1 + 2*(n - i - 1); k++) {
```

Run: FirstDialog ×   HelloNameDialog ×   ShowTwoNumber ×   Exercise_63 ×
```
"C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 2022.3.3\lib\idea_rt.jar
Enter n: 6
        *
       ***
      *****
     *******
    *********
   ***********

Process finished with exit code 0
```

6.4 Write a program to display the number of days of a month.

```java
/.../

import java.util.Scanner;

no usages
public class Exercise_64 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        String month;
        int year;
        boolean validMonth;
        do {
            System.out.print("Enter month: ");
            month = scanner.nextLine();
            System.out.print("Enter year: ");
            year = scanner.nextInt();
            scanner.nextLine();
            validMonth = true;
            switch (month) {
                case "1", "Jan.", "Jan", "January", "3", "Mar", "Mar.", "March",
                        "5", "May", "7", "July", "Jul", "8", "August", "Aug.", "Aug",
                        "10", "October", "Oct.", "Oct", "12", "December", "Dec", "Dec.":
                    System.out.println("31 days");
                    break;
                case "2", "Feb", "Feb.", "February":
                    if(!(year>0)) {
                        System.out.println("Not a valid year, enter again!");
                        break;
                    }
```

```java
                    System.out.println("31 days");
                    break;
                case "2", "Feb", "Feb.", "February":
                    if(!(year>0)) {
                        System.out.println("Not a valid year, enter again!");
                        break;
                    }
                    if((year % 4 == 0) || (year % 400 == 0)) System.out.println("29 days");
                    else System.out.println("28 days");
                    break;
                case "4", "Apr", "Apr.", "April", "6", "Jun", "June",
                        "9", "September", "Sep.", "Sep", "11", "November", "Nov", "Nov.":
                    System.out.println("30 days");
                    break;
                default:
                    System.out.println("Not a valid month, enter again!");
                    validMonth = false;
            }
        } while (!validMonth || !(year>0));

    }
}
```

```
30              break;
31         case "4", "Apr", "Apr.", "April", "6", "Jun", "June",
32             "9", "September", "Sep.", "Sep", "11", "November", "Nov", "Nov.":
33              System.out.println("30 days");
34              break;
35         default:
36              System.out.println("Not a valid month, enter again!");
37              validMonth = false;
38      }
39  } while (!validMonth || !(year>0));
40
```

Run: FirstDialog ×   HelloNameDialog ×   ShowTwoNumber ×   Exercise_64 ×

```
"C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 20
Enter month: Febb
Enter year: 1999
Not a valid month, enter again!
Enter month: Feb
Enter year: -9
Not a valid year, enter again!
Enter month: Feb
Enter year: 2000
29 days

Process finished with exit code 0
```

```
"C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 2022.3.3\lib\idea_rt.jar=65245:E:\IntelliJ IDEA Community Ed
Enter month: Mar
Enter year: 2023
31 days
```

```
"C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 2022.3.3\lib\idea_rt.jar=65252:E:\IntelliJ IDEA Community Edit
Enter month: Feb.
Enter year: 1999
28 days
```

6.5 Write a Java program to sort a numeric array, and calculate the sum and average value of array elements.

```java
import java.util.Arrays;
import java.util.Scanner;

public class Exercise_65 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Number of elements: ");
        int n = scanner.nextInt();
        int[] arr = new int[n];
        int sum = 0;
        System.out.println("Enter numbers: ");
        for(int i = 0; i < n; i++) arr[i] = scanner.nextInt();
        for(int i = 0; i < n - 1; i++) {
            for(int j = i + 1; j < n; j++) {
                int temp = arr[i];
                if (arr[i] > arr[j]) {
                    arr[i] = arr[j];
                    arr[j] = temp;
                }
            }
        }
        for(int i = 0; i < n; i++) sum += arr[i];
        String result = Arrays.toString(arr);
        System.out.println(result);
        System.out.println("Sum: " + sum);
        System.out.println(("Average: " + sum/n));
    }
}
```

```
            int temp = arr[i];
            if (arr[i] > arr[j]) {
                arr[i] = arr[j];
                arr[j] = temp;
            }
        }
    }
    for(int i = 0; i < n; i++) sum += arr[i];
    String result = Arrays.toString(arr);
    System.out.println(result);
    System.out.println("Sum: " + sum);
```

Run: FirstDialog ×   HelloNameDialog ×   ShowTwoNumber ×   Exercise_64 ×   Exercise_65 ×

```
"C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 2022.3.3\lib\idea_
Number of elements: 5
Enter numbers:
1 3 5 4 6
[1, 3, 4, 5, 6]
Sum: 19
Average: 3

Process finished with exit code 0
```

6.6 Write a Java program to add two matrices of the same size.

```java
import java.util.Scanner;
public class Exercise_66 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Number of row: ");
        int m = scanner.nextInt();
        System.out.print("Number of col: ");
        int n = scanner.nextInt();
        int[][] arr1 = new int[m][n];
        int[][] arr2 = new int[m][n];
        int[][] res = new int[m][n];
        System.out.println("Enter array 1: ");
        for(int i = 0; i < m; i++) {
            for(int j = 0; j < n; j++) {
                arr1[i][j] = scanner.nextInt();
            }
        }
        System.out.println("Enter array 2: ");
        for(int i = 0; i < m; i++) {
            for(int j = 0; j < n; j++) {
                arr2[i][j] = scanner.nextInt();
            }
        }
        for(int i = 0; i < m; i++) {
            for(int j = 0; j < n; j++) {
                res[i][j] = arr1[i][j] + arr2[i][j];
            }
        }
        System.out.println("Result: ");
        for(int i = 0; i < m; i++) {
            for(int j = 0; j < n; j++) {
                System.out.print(res[i][j]);
                System.out.print(" ");
            }
            System.out.println();
        }
    }
}
```

```java
import java.util.Scanner;
public class Exercise_66 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Number of row: ");
        int m = scanner.nextInt();
        System.out.print("Number of col: ");
        int n = scanner.nextInt();
        int[][] arr1 = new int[m][n];
        int[][] arr2 = new int[m][n];
        int[][] res = new int[m][n];
        System.out.println("Enter array 1: ");
        for(int i = 0; i < m; i++) {
            for(int j = 0; j < n; j++) {
                arr1[i][j] = scanner.nextInt();
            }
        }
```

```
Run:    Exercise_66 ×

    "C:\Program Files\Java\jdk-17.0.1\bin\java.exe" "-javaagent:E:\IntelliJ IDEA Community Edition 2022.3.3\lib\idea_rt.jar=
    Number of row: 2
    Number of col: 2
    Enter array 1:
    1 2
    3 4
    Enter array 2:
    5 6
    7 8
    Result:
    6 8
    10 12

    Process finished with exit code 0
```