

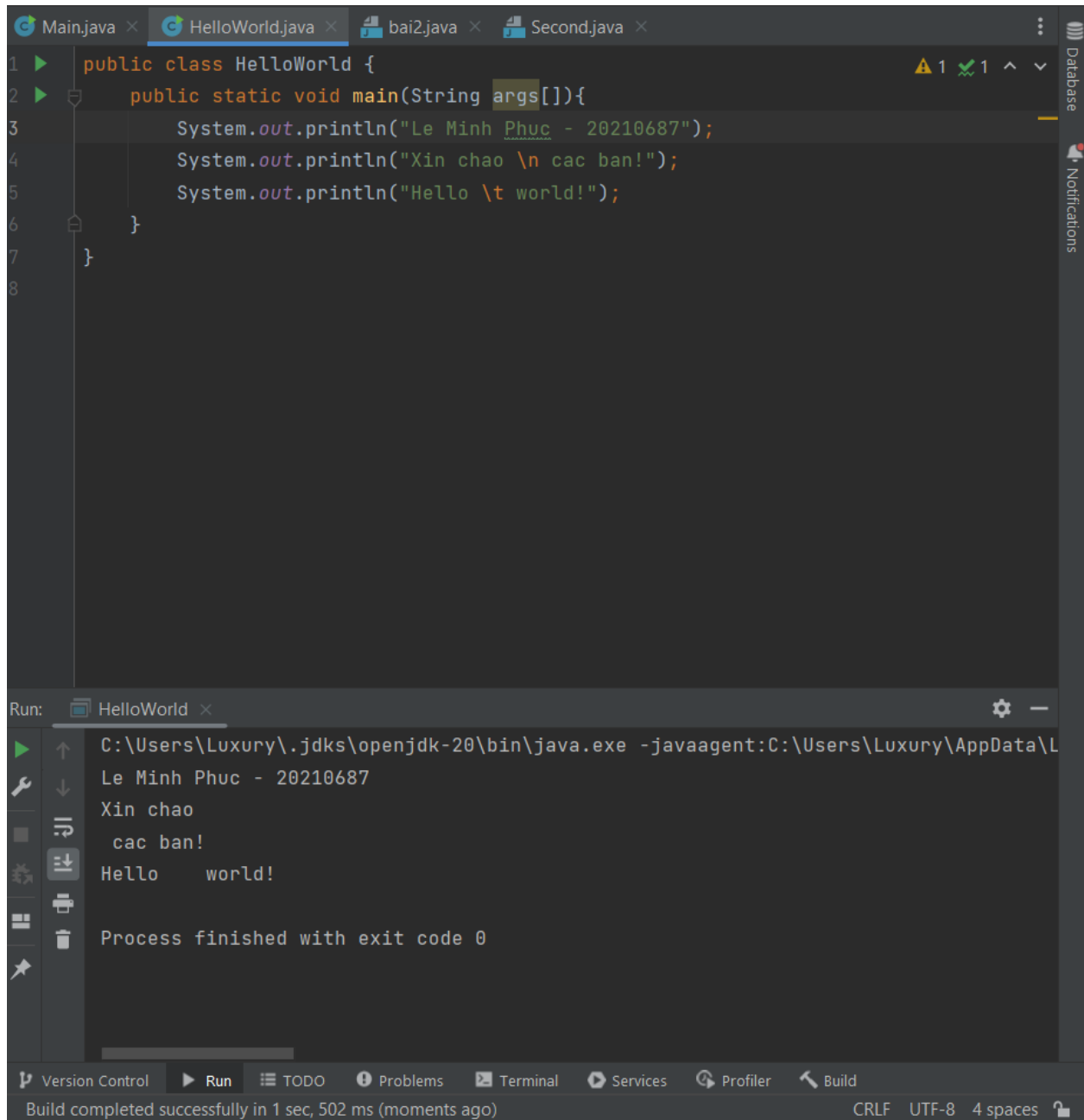
BÁO CÁO THỰC HÀNH LAB 1 LẬP TRÌNH HƯỚNG ĐỐI TƯỢNG

The Very First Java Programs

2.2.1 Write, compile the first Java application:

```
1 //Example 1: HelloWorld.java
2 //Text-printing program
3 public class HelloWorld {
4
5     public static void main(String args[]){
6         System.out.println("Xin chao \n cac ban!");
7         System.out.println("Hello \t world!");
8
9     } // end of method main
10 }
```

Kết quả



The screenshot shows an IDE with a Java file named `HelloWorld.java` open. The code defines a `HelloWorld` class with a `main` method that prints three lines of text. Below the code editor, the 'Run' window shows the execution output, which matches the printed text in the code. The status bar at the bottom indicates the build was successful.

```
1 public class HelloWorld {
2     public static void main(String args[]){
3         System.out.println("Le Minh Phuc - 20210687");
4         System.out.println("Xin chao \n cac ban!");
5         System.out.println("Hello \t world!");
6     }
7 }
8
```

Run: HelloWorld ×

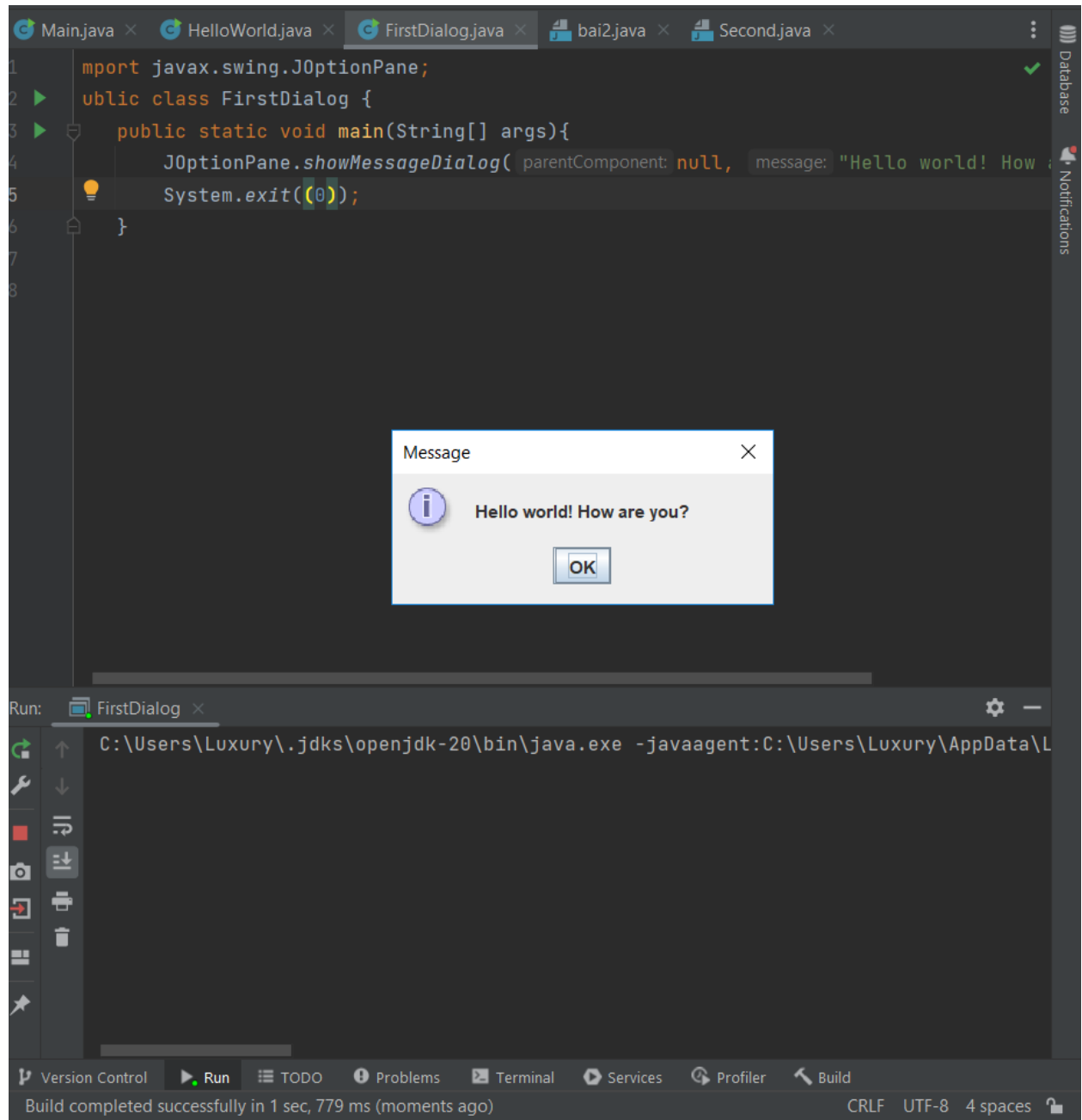
```
C:\Users\Luxury\.jdk\openjdk-20\bin\java.exe -javaagent:C:\Users\Luxury\AppData\L
Le Minh Phuc - 20210687
Xin chao
    cac ban!
Hello    world!

Process finished with exit code 0
```

Version Control Run TODO Problems Terminal Services Profiler Build
Build completed successfully in 1 sec, 502 ms (moments ago) CRLF UTF-8 4 spaces

2.2.2 Write, compile the first dialog Java program

```
1 // Example 2: FirstDialog.java
2 import javax.swing.JOptionPane;
3 public class FirstDialog{
4     public static void main(String[] args){
5         JOptionPane.showMessageDialog(null,"Hello world! How are you?");
6         System.exit(0);
7     }
8 }
```

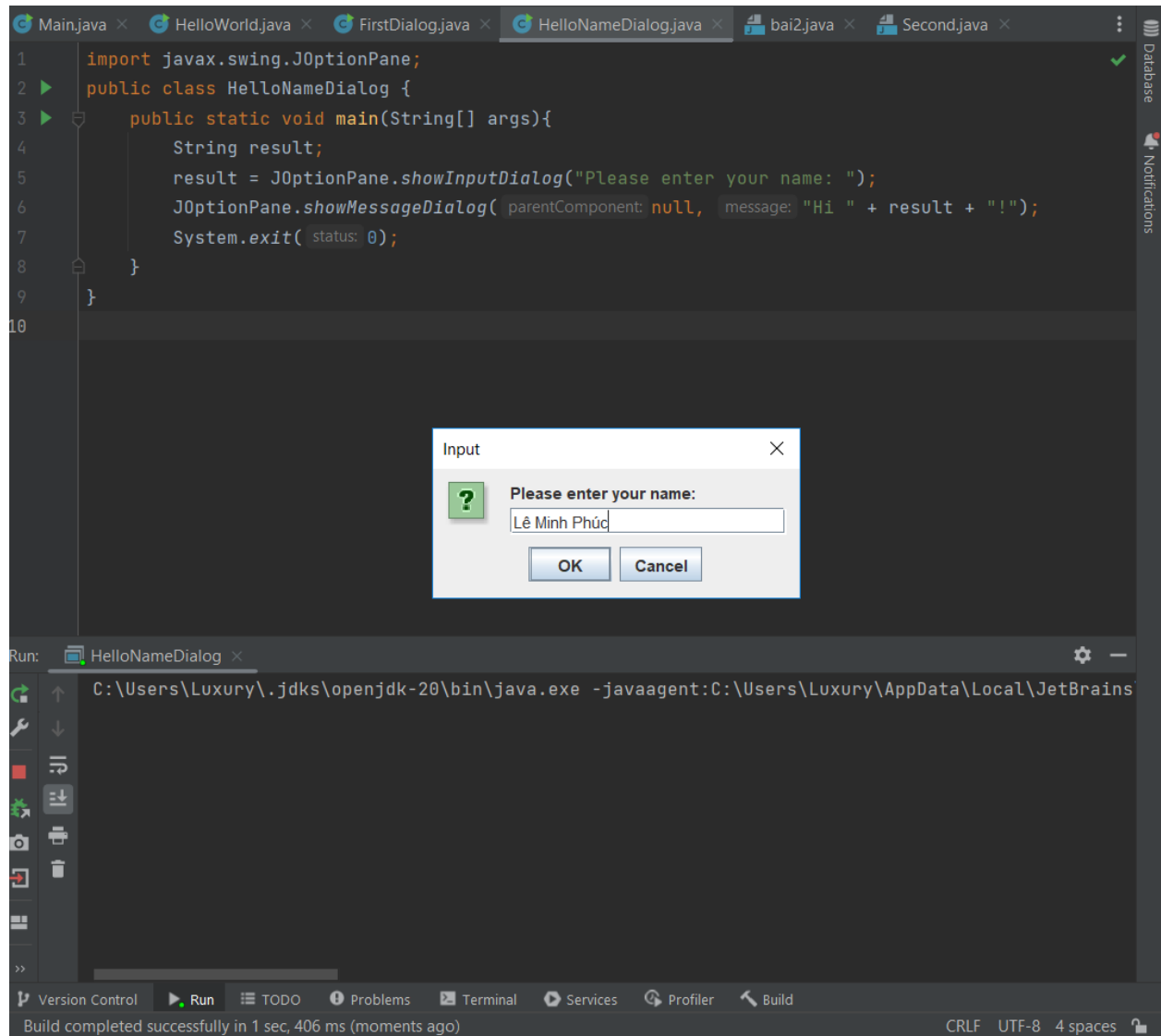


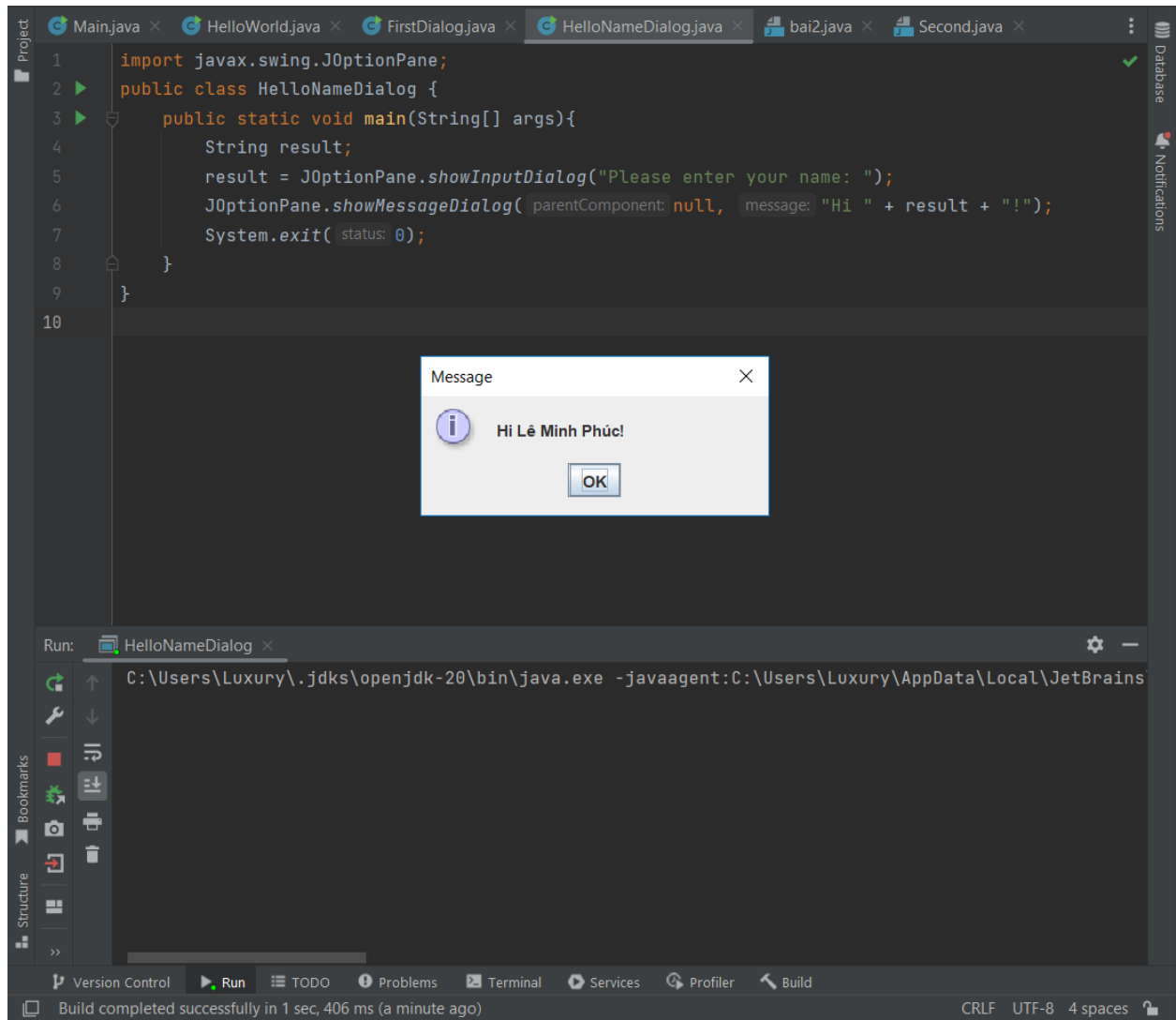
2.2.3 Write, compile the first input dialog Java application

```

1  // Example 3: HelloNameDialog.java
2  import javax.swing.JOptionPane;
3  public class HelloNameDialog{
4      public static void main(String[] args){
5          String result;
6          result = JOptionPane.showInputDialog("Please enter your name:");
7          JOptionPane.showMessageDialog(null, "Hi " + result + "!");
8          System.exit(0);
9      }
10 }

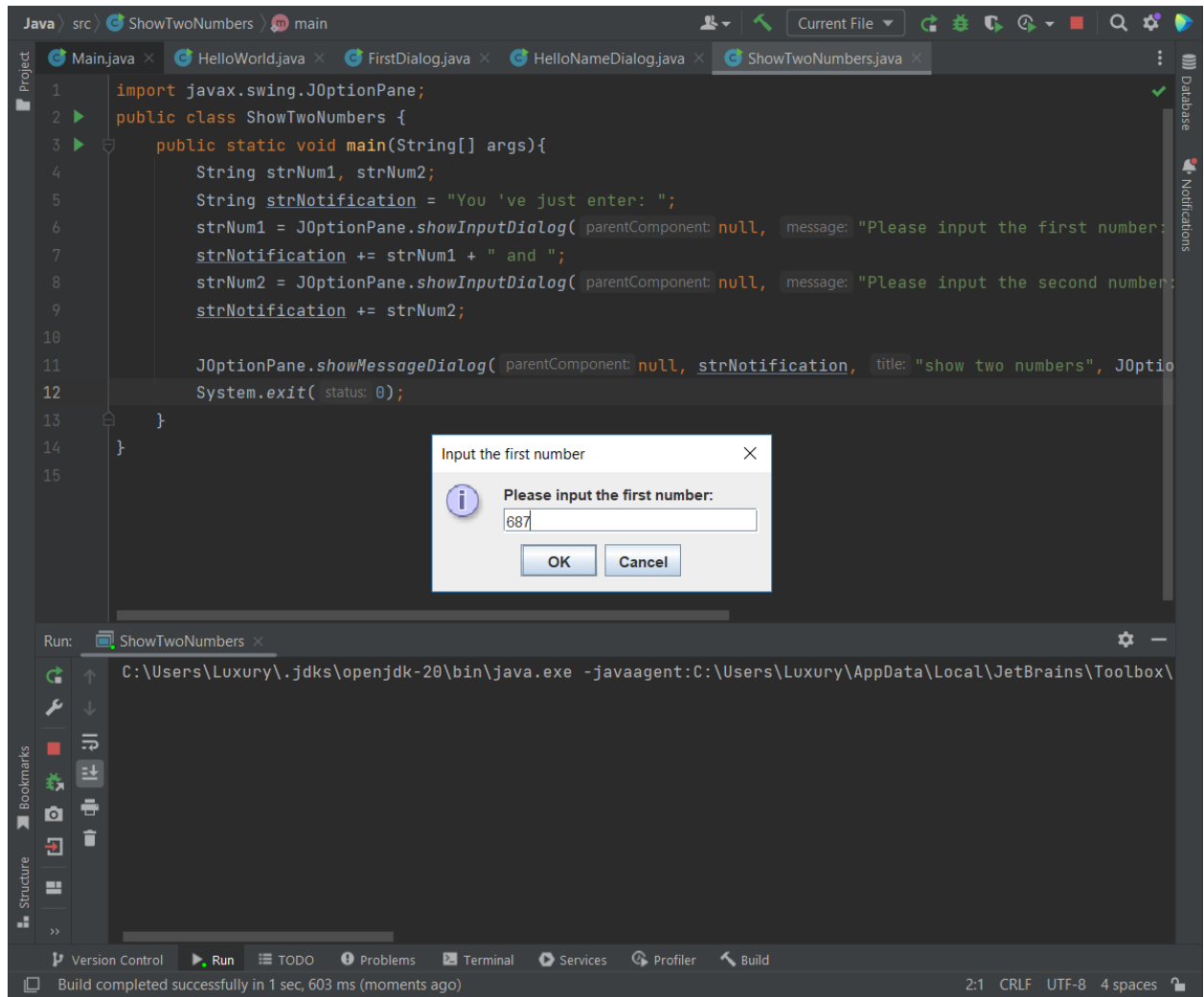
```

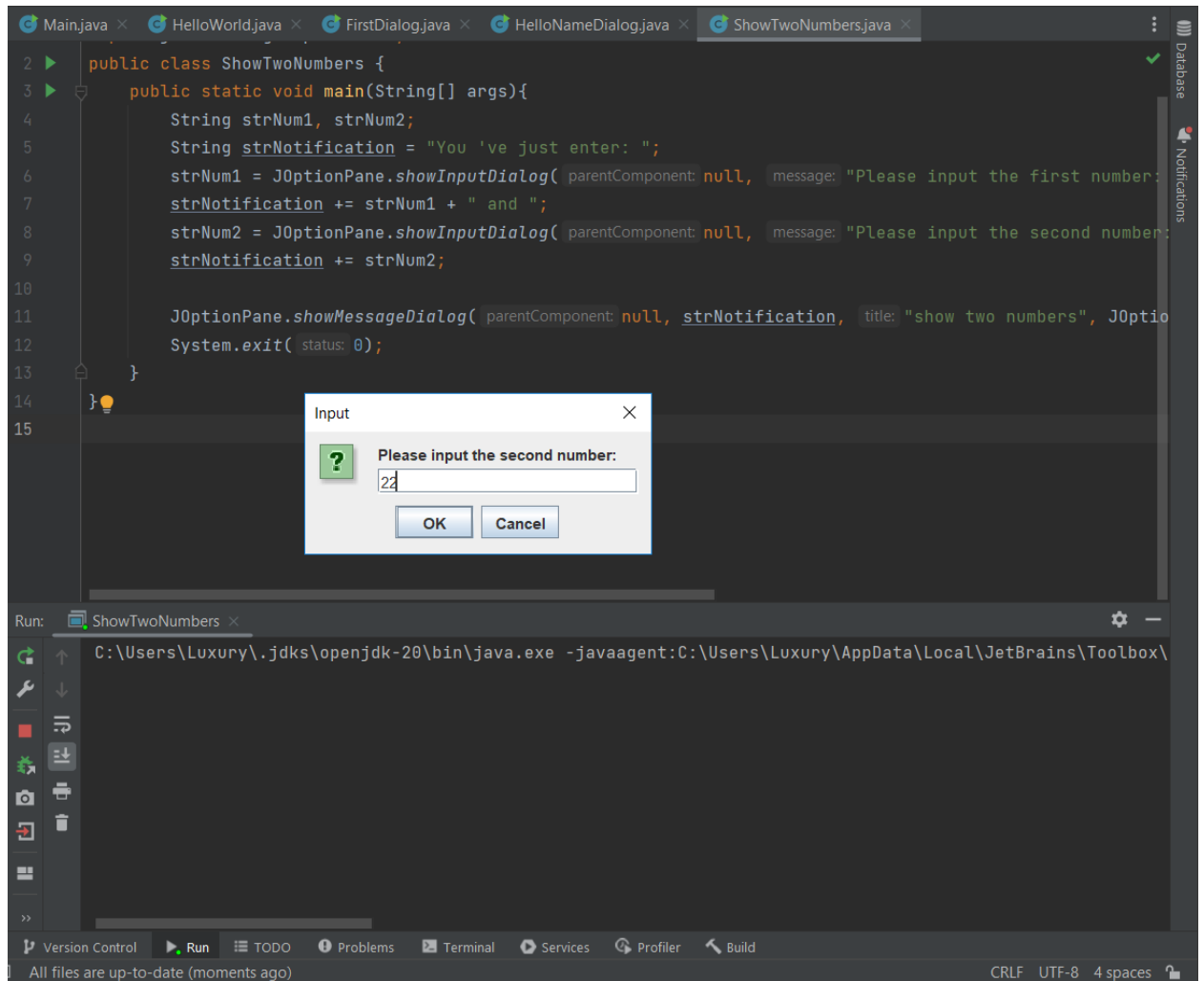


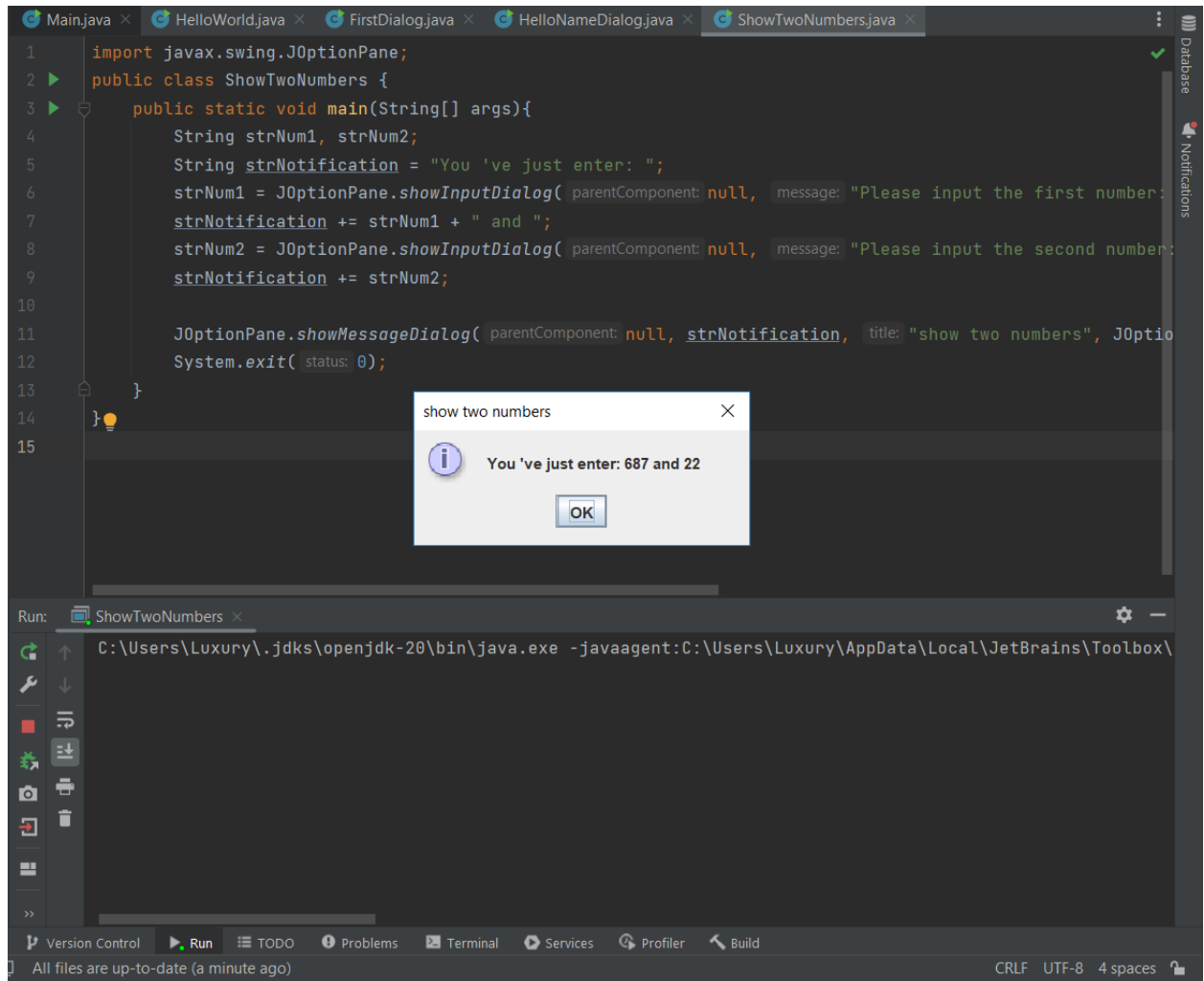


2.2.4 Write, compile, and run the following example:

```
1 // Example 5: ShowTwoNumbers.java
2 import javax.swing.JOptionPane;
3 public class ShowTwoNumbers {
4     public static void main(String[] args){
5         String strNum1, strNum2;
6         String strNotification = "You've just entered: ";
7
8         strNum1 = JOptionPane.showInputDialog(null,
9             "Please input the first number: ", "Input the first number",
10             JOptionPane.INFORMATION_MESSAGE);
11         strNotification += strNum1 + " and ";
12
13         strNum2 = JOptionPane.showInputDialog(null,
14             "Please input the second number: ", "Input the second number",
15             JOptionPane.INFORMATION_MESSAGE);
16         strNotification += strNum2;
17
18         JOptionPane.showMessageDialog(null, strNotification,
19             "Show two numbers", JOptionPane.INFORMATION_MESSAGE);
20         System.exit(0);
21     }
22 }
```



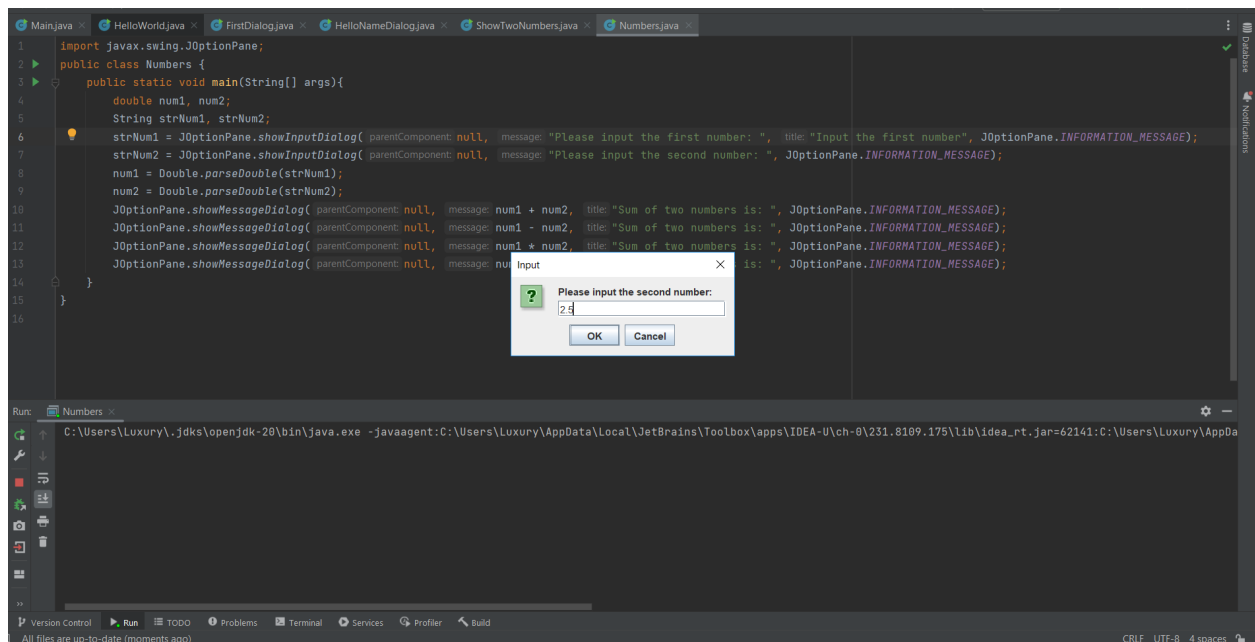
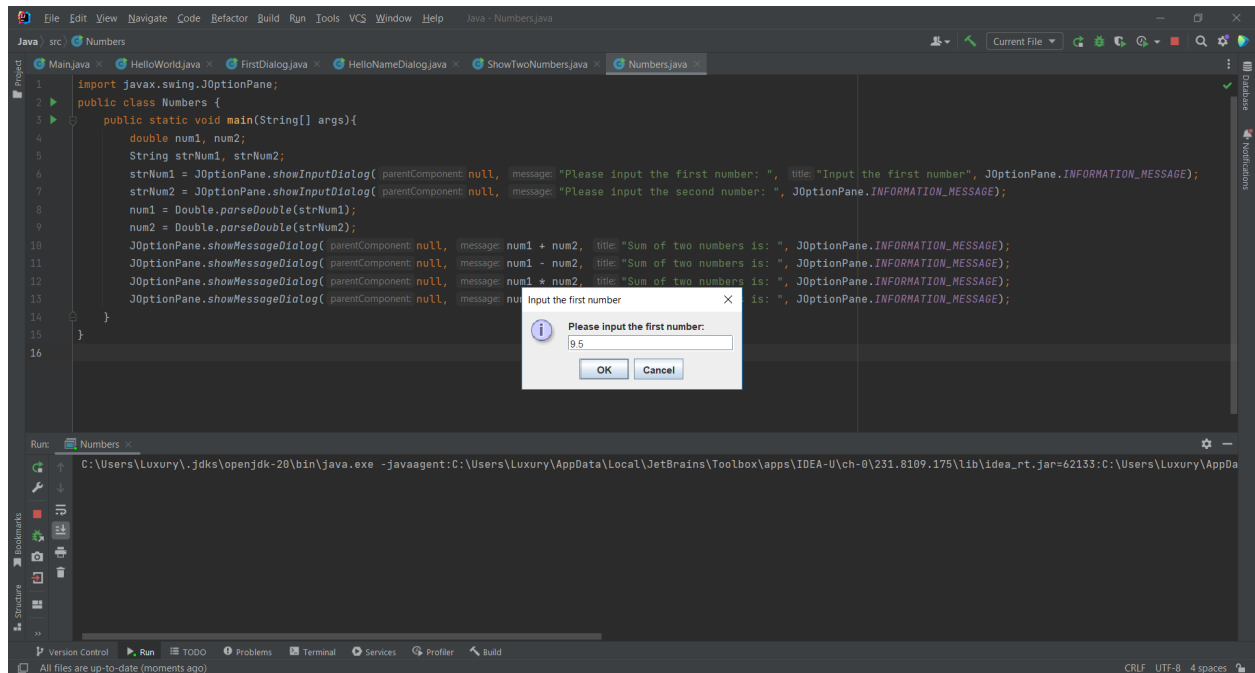


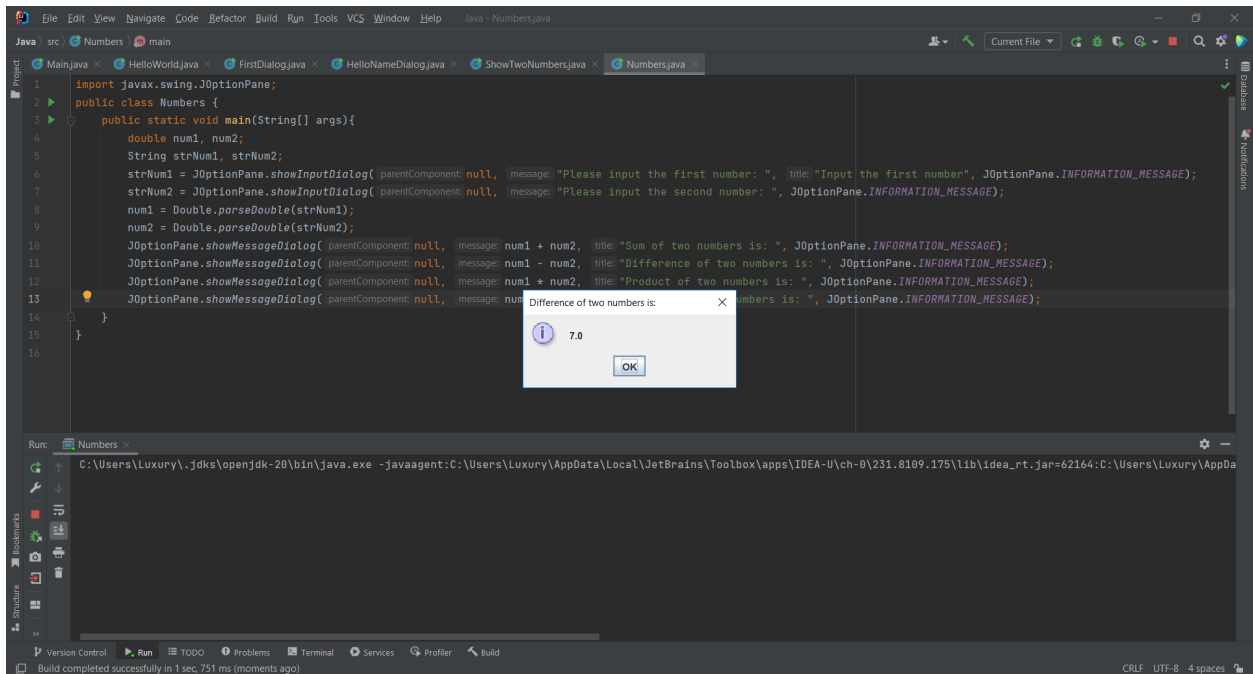
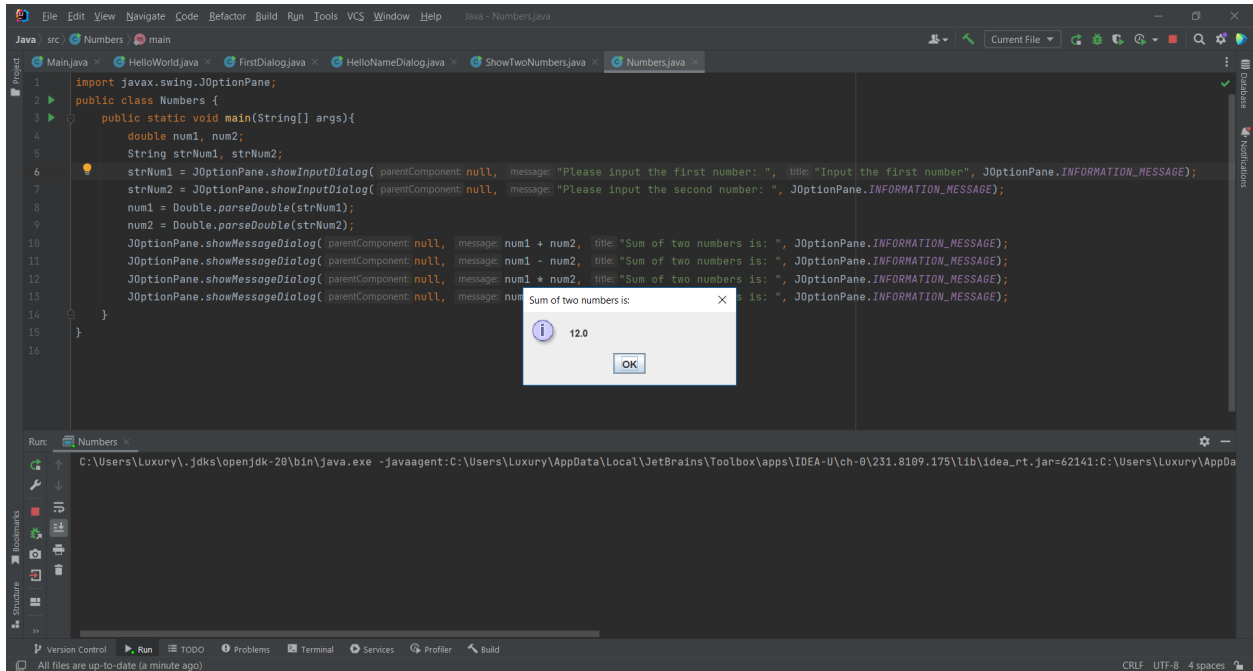


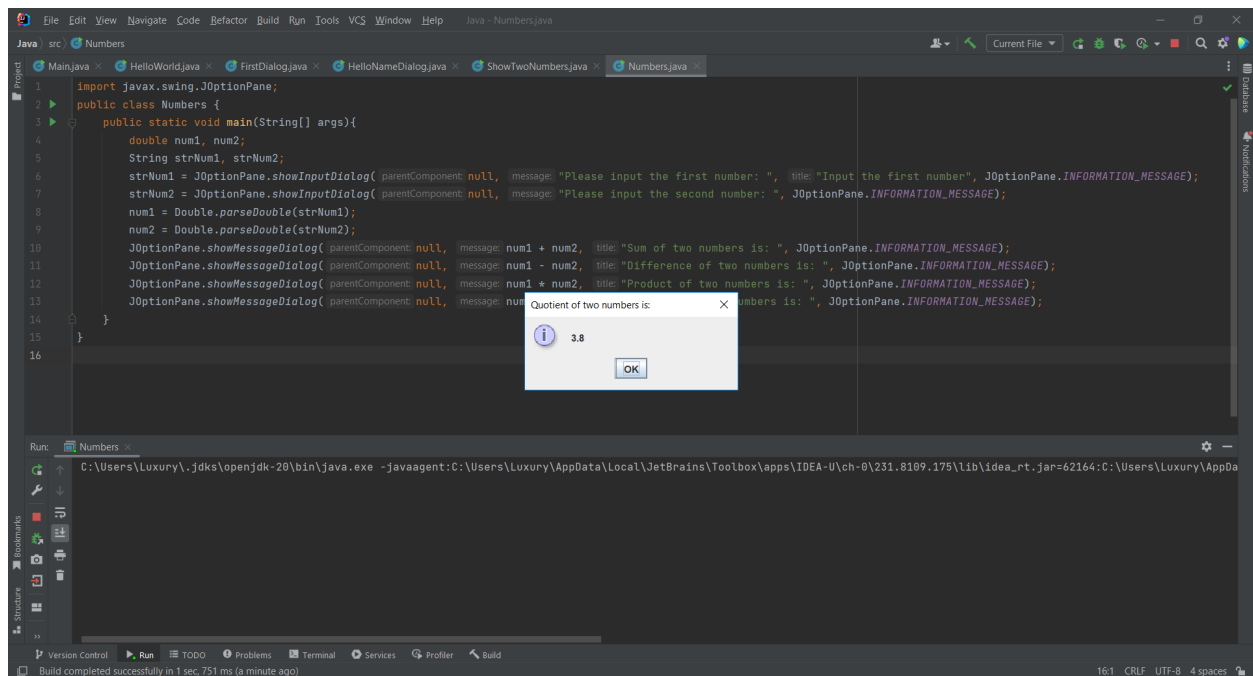
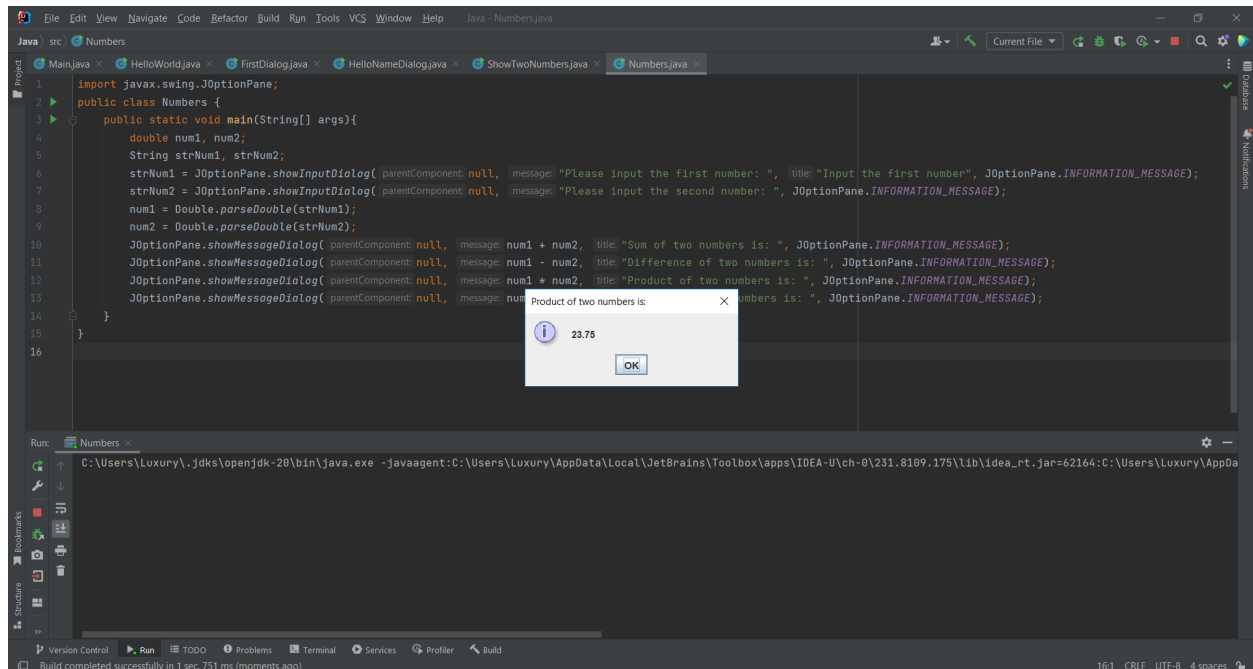
```
1 import javax.swing.JOptionPane;
2 public class ShowTwoNumbers {
3     public static void main(String[] args){
4         String strNum1, strNum2;
5         String strNotification = "You 've just enter: ";
6         strNum1 = JOptionPane.showInputDialog( parentComponent: null, message: "Please input the first number: ");
7         strNotification += strNum1 + " and ";
8         strNum2 = JOptionPane.showInputDialog( parentComponent: null, message: "Please input the second number: ");
9         strNotification += strNum2;
10
11         JOptionPane.showMessageDialog( parentComponent: null, strNotification, title: "show two numbers", JOptionPane.INFORMATION_MESSAGE);
12         System.exit( status: 0);
13     }
14 }
15
```

The screenshot shows an IDE with a Java file named `ShowTwoNumbers.java`. The code prompts the user for two numbers using `JOptionPane.showInputDialog` and then displays a message box titled "show two numbers" with the text "You 've just enter: 687 and 22". The message box has an "OK" button. The IDE's Run window shows the command: `C:\Users\Luxury\.jdk\openjdk-20\bin\java.exe -javaagent:C:\Users\Luxury\AppData\Local\JetBrains\Toolbox\`. The status bar at the bottom indicates "All files are up-to-date (a minute ago)" and "CRLF UTF-8 4 spaces".

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







2.2.6:

1. Linear equation

```

1  import java.util.Scanner;
2  public class Linear_equation {
3      public static void main(String[] args) {
4          Scanner myObj = new Scanner(System.in); // Create a Scanner object
5          System.out.println("Enter first number: ");
6          Double a = myObj.nextDouble(); // Read user input
7          System.out.println("Enter second number: ");
8          Double b = myObj.nextDouble();
9          if (b == 0){
10             if (a == 0) System.out.println("Infinite Solution!");
11             else System.out.println("No Solution!");
12         }
13         else {
14             Double Res = -b / a;
15             System.out.println("The result is: x = " + Res);
16         }
17     }
18 }
19
Run: Linear_equation
C:\Users\Luxury\jdk-openjdk-20\bin\java.exe -javaagent:C:\Users\Luxury\AppData\Local\JetBrains\Toolbox\apps\IDEA-U\ch-0\231.8109.175\lib\idea_rt.jar=62886:C:\Users\Luxury\AppData\Local\JetBrains\Toolbox\apps\IDEA-U\ch-0\231.8109.175\bin\java.exe
Enter first number:
Enter second number:
The result is: x = -0.6
Process finished with exit code 0

```

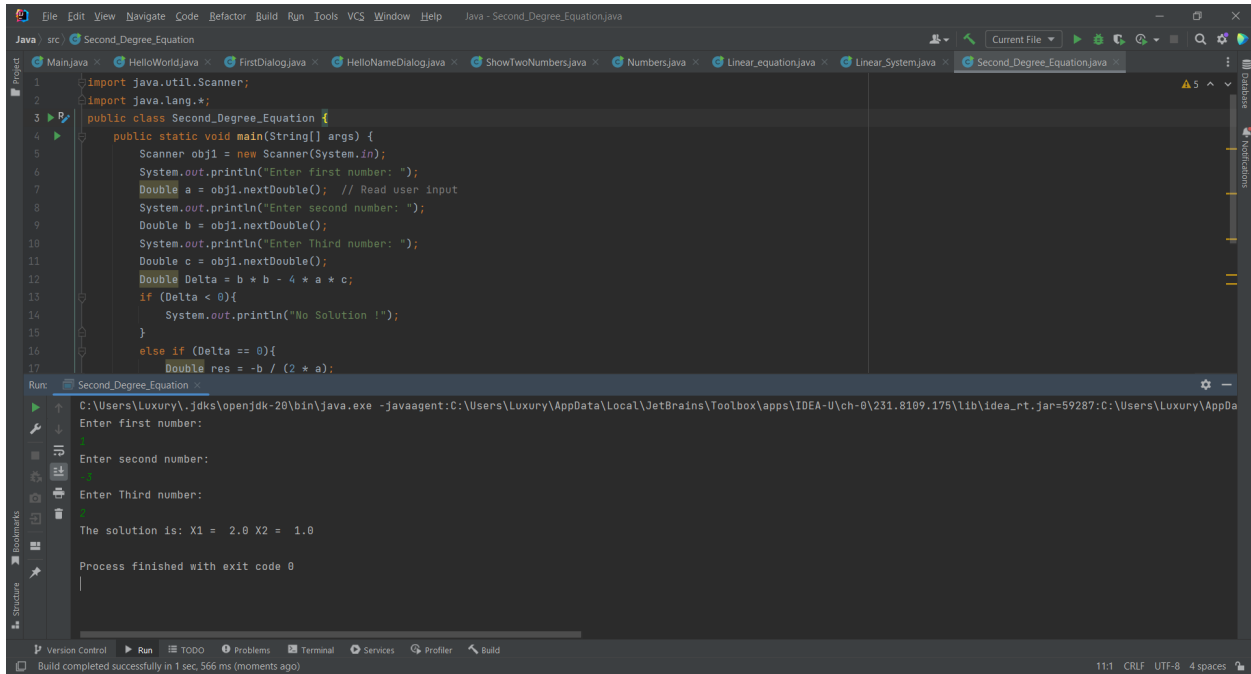
2. Linear system

```

12  System.out.println("Enter Third left number: ");
13  Double a21 = obj1.nextDouble();
14  System.out.println("Enter Fourth left number: ");
15  Double a22 = obj1.nextDouble();
16  System.out.println("Enter second right number: ");
17  Double b2 = obj1.nextDouble();
18  Double Det = Math.abs(a11 * a22 - a12 * a21);
19  Double Dx = Math.abs(b1 * a22 - b2 * a12);
20  Double Dy = Math.abs(b1 * a21 - b2 * a11);
21  if (Det == 0){
22      System.out.println("There are infinite solutions or No solution");
23  }
24  else {
25      Double x = Dx / Det;
26      Double y = Dy / Det;
27      System.out.println("Solution is: X = " + x + " Y = " + y);
28  }

```

3. The Second Degree Equation



```
1 import java.util.Scanner;
2 import java.lang.*;
3 public class Second_Degree_Equation {
4     public static void main(String[] args) {
5         Scanner obj1 = new Scanner(System.in);
6         System.out.println("Enter first number: ");
7         Double a = obj1.nextDouble(); // Read user input
8         System.out.println("Enter second number: ");
9         Double b = obj1.nextDouble();
10        System.out.println("Enter Third number: ");
11        Double c = obj1.nextDouble();
12        Double Delta = b * b - 4 * a * c;
13        if (Delta < 0){
14            System.out.println("No Solution !");
15        }
16        else if (Delta == 0){
17            Double res = -b / (2 * a);
```

Run: Second_Degree_Equation

C:\Users\Luxury\.jdk\openjdk-20\bin\java.exe -javaagent:C:\Users\Luxury\AppData\Local\JetBrains\Toolbox\apps\IDEA-U\ch-0\231.8109.175\lib\idea_rt.jar=59287:C:\Users\Luxury\AppData\Local\JetBrains\Toolbox\apps\IDEA-U\ch-0\231.8109.175\bin\idea.exe

Enter first number: 2.0

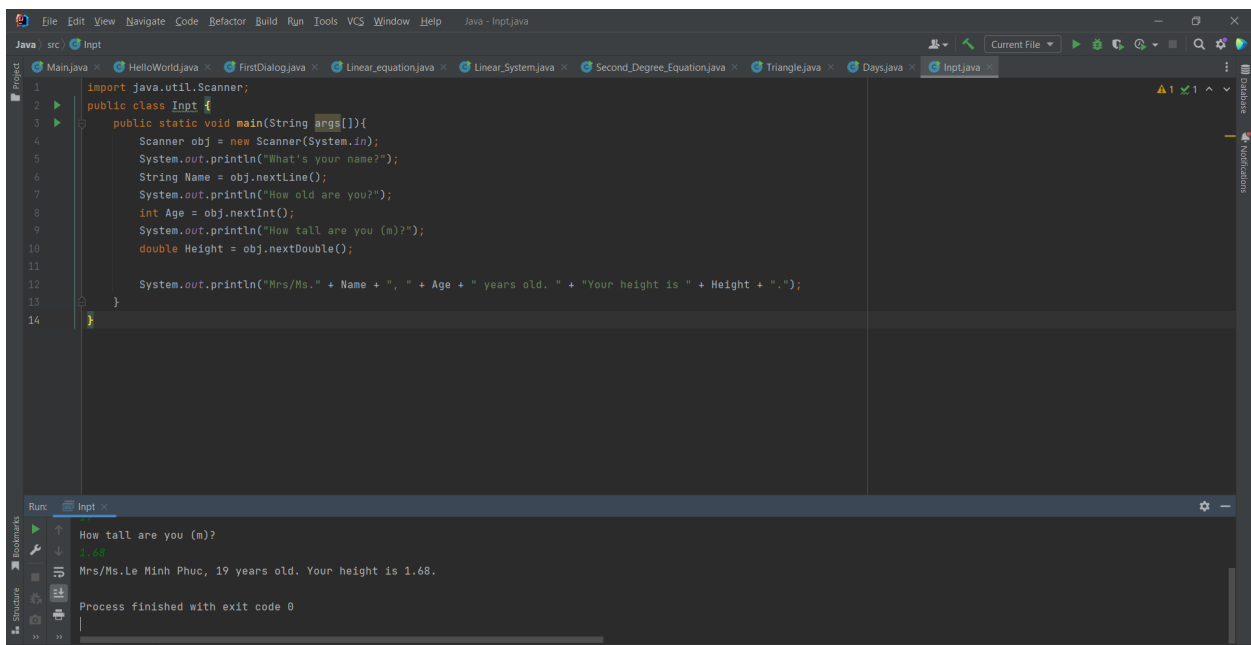
Enter second number: 1.0

Enter Third number: 1.0

The solution is: X1 = 2.0 X2 = 1.0

Process finished with exit code 0

6.2: Input from keyboard



```
1 import java.util.Scanner;
2 public class Inpt {
3     public static void main(String args[]){
4         Scanner obj = new Scanner(System.in);
5         System.out.println("What's your name?");
6         String Name = obj.nextLine();
7         System.out.println("How old are you?");
8         int Age = obj.nextInt();
9         System.out.println("How tall are you (m)?");
10        double Height = obj.nextDouble();
11
12        System.out.println("Mrs/Ms." + Name + ", " + Age + " years old. " + "Your height is " + Height + ".");
13    }
14 }
```

Run: Inpt

How tall are you (m)? 1.68

Mrs/Ms. Le Minh Phuc, 19 years old. Your height is 1.68.

Process finished with exit code 0

6.3: Triangle

```

1 import java.util.Scanner;
2 public class Triangle {
3     public static void main(String[] args) {
4         Scanner obj1 = new Scanner(System.in);
5         System.out.print("Nhap so canh: \n");
6         int n = obj1.nextInt();
7         int m = (n - 1) * 2 + 1;
8         int dem = 1;
9         for (int i = 1; i <= n; ++i) {
10             for (int j = 1; j <= (m - dem) / 2; ++j)
11                 System.out.print(" ");
12             for (int j = 1; j <= dem; ++j)
13                 System.out.print("*");
14             for (int j = 1; j <= (m - dem) / 2; ++j)
15                 System.out.print(" ");
16             dem += 2;
17             System.out.print("\n");
18         }
19     }
20 }

```

Run: Triangle

```

C:\Users\Luxury\.jdk\openjdk-20\bin\java.exe -javaagent:C:\Users\Luxury\AppData\Local\JetBrains\Toolbox\apps\IDEA-U\ch-0\231.8109.175\lib\idea_rt.jar=60321:C:\Users\Luxury\AppData\Local\JetBrains\Toolbox\apps\IDEA-U\ch-0\231.8109.175\bin\java.exe
Nhap so canh:
5
*
***
*****
*****
*****

```

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

```

7 System.out.print("Nhap nam: \n");
8 int year = obj1.nextInt();
9 if (month != 2) {
10     if (month == 1 || month == 3 || month == 5 || month == 7 || month == 8 || month == 10 || month == 12) System.out.print("There are 31 days \n");
11     else System.out.print("There are 30 days \n");
12 }
13 else {
14     if (year % 100 == 0) {
15         if ((year / 100) % 4 == 0) System.out.print("There are 29 days \n");
16         else System.out.print("There are 28 days \n");
17     }
18     else {
19         if (year % 4 == 0) System.out.print("There are 29 days \n");
20         else System.out.print("There are 28 days \n");
21     }
22 }

```

Run: Days

```

C:\Users\Luxury\.jdk\openjdk-20\bin\java.exe -javaagent:C:\Users\Luxury\AppData\Local\JetBrains\Toolbox\apps\IDEA-U\ch-0\231.8109.175\lib\idea_rt.jar=60850:C:\Users\Luxury\AppData\Local\JetBrains\Toolbox\apps\IDEA-U\ch-0\231.8109.175\bin\java.exe
Nhap thang:
2
Nhap nam:
2021
There are 28 days
Process finished with exit code 0

```

6.5: Arrays

```

1 import java.util.Arrays;
2 import java.util.Scanner;
3 public class array {
4     public static void main(String[] args){
5         Scanner obj = new Scanner(System.in);
6         System.out.println("Nhap so so hang: ");
7         int n = obj.nextInt();
8         int a[] = new int[n];
9         for (int i = 0; i < n; ++ i)
10            a[i] = obj.nextInt();
11         Arrays.sort(a);
12         for (int i = 0; i < n; ++ i)
13            System.out.print(a[i] + " ");
14         System.out.print("\n");
15         int sum = 0;
16         for (int i = 0; i < n; ++ i)
17            sum += a[i];
18         double avrg = (double)sum / (double)n;
19         System.out.println("The sum is: " + sum);
20         System.out.println("The Average is: " + avrg);
21     }
22 }

```

Run: array

```

1 2 3 4 5 6
The sum is: 21
The Average is: 3.5
Process finished with exit code 0

```

6.6: Matrices

```

16 a[i][j] = obj.nextInt();
17 }
18 System.out.println("Input the Second Matrix: ");
19 for (int i = 0; i < n; ++ i){
20     for (int j = 0; j < m; ++ j)
21         b[i][j] = obj.nextInt();
22 }
23 for (int i = 0; i < n; ++ i){
24     for (int j = 0; j < m; ++ j)
25         res[i][j] = a[i][j] + b[i][j];
26 }
27 System.out.println("Answer is : ");
28 for (int i = 0; i < n; ++ i){
29     for (int j = 0; j < m; ++ j)
30         System.out.print(res[i][j] + " ");
31     System.out.print("\n");
32 }
33 }
34 }
35 }
36 }

```

Run: matrices

```

Input the column:
Input the first Matrix:
Input the Second Matrix:
Answer is :
4
6

```