BÁO CÁO THỰC HÀNH LAP 1  
LẬP TRÌNH HƯỚNG ĐỐI TƯỢNG

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JDK: 20, IDE: Intellij

# 2. The Very First Java Programs

## *2.2.1* Write, compile the first Java application

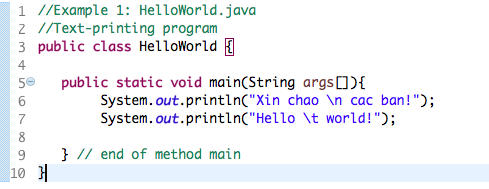


Figure 1 2.2.1 example

Result:

A screenshot of a computer

Description automatically generated

Figure 2 2.2.1 result

## 2.2.2 Write, compile the first dialog Java program



Figure 3 2.2.2 example

Kết quả: A screenshot of a computer program

Description automatically generated

Figure 4 2.2.2 result

## 2.2.3 Write, compile the first input dialog Java application

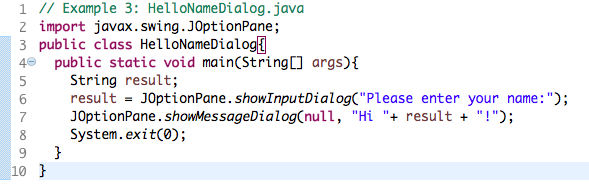


Figure 6 2.2.3 example

Kết quả:

A screenshot of a computer program

Description automatically generated

Figure7 2.2.3 result (1)

## 2.2.4 Write, compile, and run the following example:

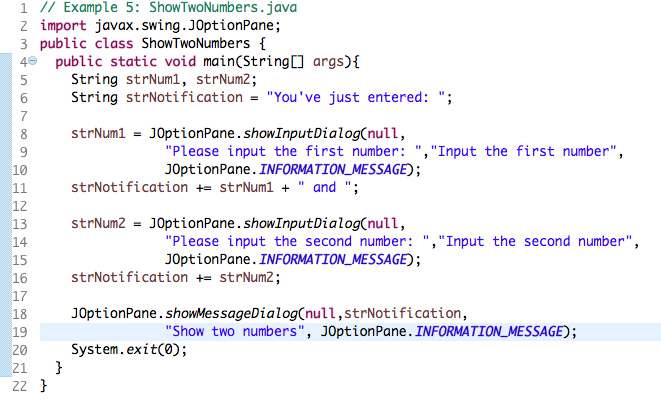


Figure 8 2.2.4 example

A screenshot of a computer

Description automatically generated

Figure 9 2.2.4 result (1)

A screenshot of a computer program

Description automatically generated

Figure 10 2.2.4 result (2)

A screenshot of a computer program

Description automatically generated

Figure 11 2.2.4 result (3)

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

**Notes**

* To convert from String to double, you can use

**double num1 = Double.parseDouble(strNum1)**

* Check the divisor of the division

Kết quả

A screen shot of a computer program

Description automatically generated

Figure 12 2.2.5 result

# 6. Exercises

## 6.1 Write, compile and run the ChoosingOption program:

****

Figure 13 6.1 example

A screen shot of a computer program

Description automatically generated

Figure 14 6.1 code

A screenshot of a computer

Description automatically generated

Figure 15 6.1 result (1)

IF cancel:

A screen shot of a computer

Description automatically generated

Figure 16 6.1 result (2)

IF yes:

A screen shot of a computer

Description automatically generated

Figure 18 6.1 result (3)

IF No:

A screenshot of a computer

Description automatically generated

Figure 19 6.1 result (4)

### Questions:

* What happens if users choose “Cancel”? – Result is No
* How to customize the options to users, e.g. only two options: “Yes” and “No”, OR “I do” and “I don’t” (Suggestion: Use Javadocs or using Eclipse/Netbean IDE help).

Code can change to:

A screen shot of a computer program

Description automatically generated

Figure 20 6.1 Question code

Result:   
A screenshot of a computer

Description automatically generated

Figure 21 6.1 Question result

## 6.2 Write a program for input/output from keyboard



Figure 22 6.2 example

Kết quả:

A screen shot of a computer program

Description automatically generated

Figure 23 6.2 code

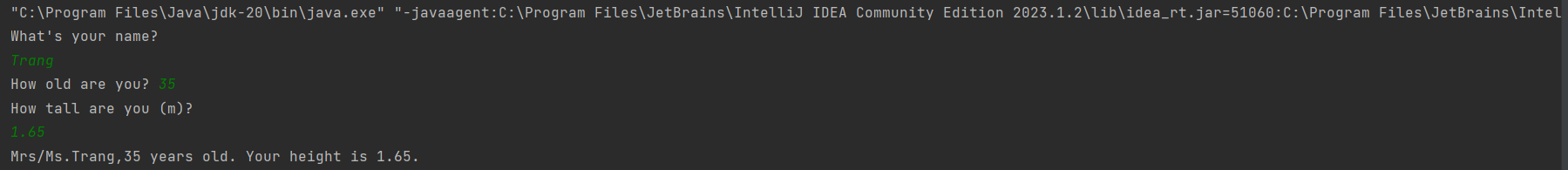


Figure 24 6.2 result

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

Kết quả:

A screen shot of a computer program

Description automatically generated

Figure 25 6.3 code

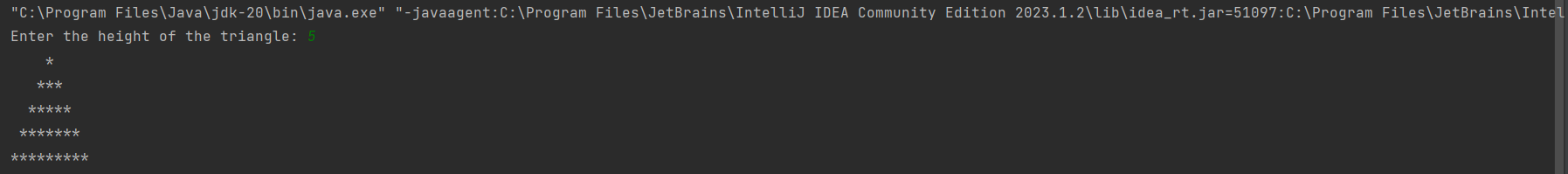


Figure 26 6.3 result

## 6.4 Write a program to display the number of days of a month, which is entered by users (both month and year).

You must create a new Java project for this exercise.

* The user can either enter a month in its full name, abbreviation, in 3 letters, or in number. To illustrate, the valid inputs of *January* are January, Jan., Jan, and 1.
* The user must enter a year in a non-negative number and enter all the digits. For instance, the valid inputs of year *1999* is only 1999, but not 99, “one thousand nine hundred ninety-nine”, or anything else.
* A year is either a common year of 365 days or a leap year of 366 days. Every year that is divisible by 4 is a leap year, except for years that are divisible by 100, but not by 400. For instance, year 1800 is not a leap year, yet year 2000 is a leap year. In a year, there are twelve months, which are listed in order as follows.

Result:

A computer screen shot of a program

Description automatically generated

Figure 27 6.4 code (1)

A screenshot of a computer program

Description automatically generated

Figure 28 6.4 code (2)

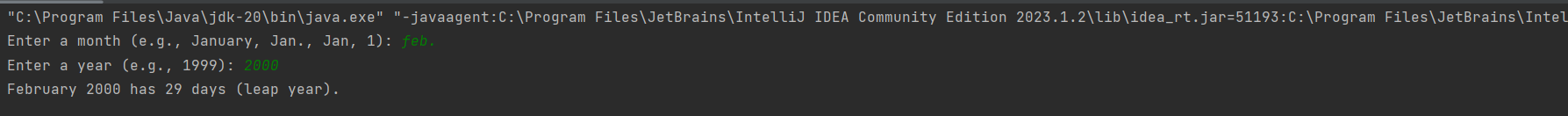


Figure 29 6.4 result

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

Result:

A screenshot of a computer program

Description automatically generated

Figure 30 6.5 code

A black screen with many small colored objects

Description automatically generated with medium confidence

Figure 31 6.5 result

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

- The matrices can be entered by the user or constants.

Result:

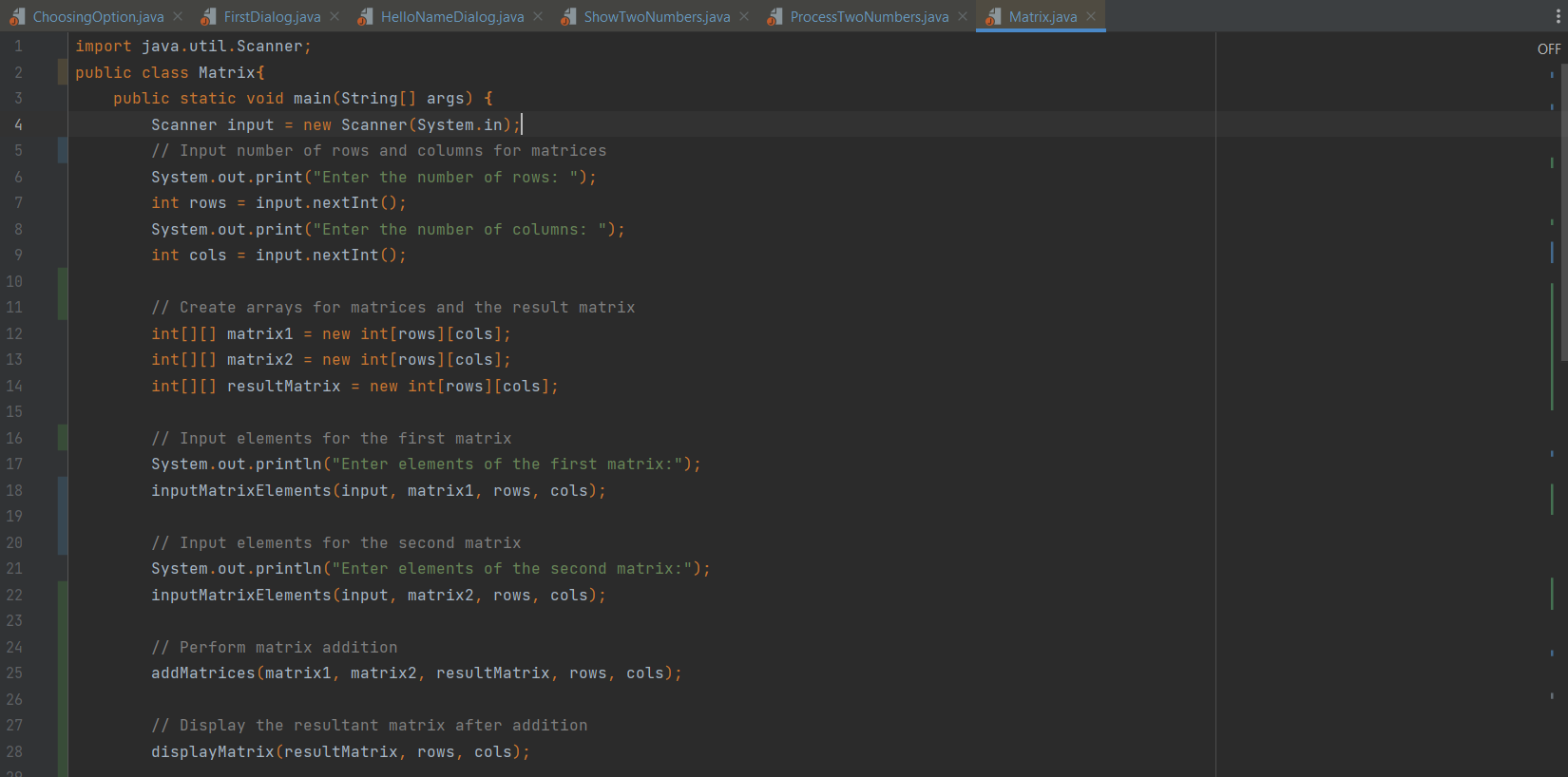


Figure 32 6.6 code (1)

A screen shot of a computer

Description automatically generated

Figure 33 6.6 code (2)

A black rectangular object with white dots

Description automatically generated

Figure 34 6.6 result