

Báo Cáo Thực Hành Lập Trình Hướng Đối Tượng Lab-01

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1 The Very First Java Programs

1.1 Write, compile the first java application

1.1.1 Code

The screenshot shows the Eclipse IDE interface. The left pane displays the project structure under 'EXPLORER' with files like Count.java, NumberOfDaysInMonth.java, InputFromKeyboard.java, DisplayTriangle.java, AddTwoMatrix.java, Linear.java, and HelloWorld.java. The right pane shows the code for HelloWorld.java:

```
src > Lab01 > J HelloWorld.java ...
  1 //Phan Thanh Thang
  2 //10/2023/2027
  3 /**
  4  * package Label;
  5  */
  6 public class HelloWorld {
  7     public static void main(String[] args){
  8         System.out.println("Hello, world");
  9     }
}
```

The terminal at the bottom shows the command run in the terminal window:

```
PS D:\OOD\Lab01 & C:\Program Files\Java\jdk-22\bin\java.exe" "-XX:+ShowCodeDetailsInExceptionMessages" "-cp" "D:\OOD\Lab01\bin" "Lab01.HelloWorld"
Hello, world
PS D:\OOD\Lab01>
```

Hình 1: Bai Tap 1

1.1.2 Thực thi

The screenshot shows the Eclipse IDE interface, similar to Figure 1, but with a different terminal output. The terminal window shows the command run in the terminal window:

```
PS D:\OOD\Lab01 & C:\Program Files\Java\jdk-22\bin\java.exe" "-XX:+ShowCodeDetailsInExceptionMessages" "-cp" "D:\OOD\Lab01\bin" "Lab01.HelloWorld"
Hello, world
PS D:\OOD\Lab01>
```

Hình 2: Thực thi Bai Tap 1

1.2 Write, compile the first dialog Java program

1.2.1 Code

The screenshot shows the Eclipse IDE interface with the 'FirstDialog.java' file open in the editor. The code is as follows:

```
src > Lab02 > J FirstDialog.java ...
1 //Phan Thanh Thang
2 //7/2/2023
3 //J2SE
4
5 package lab01;
6
7 import javax.swing.JOptionPane;
8
9 public class FirstDialog {
10     public static void main(String[] args) {
11         JOptionPane.showMessageDialog(null, "Hello world, How are you?");
12         System.exit(0);
13     }
14 }
15
```

The 'PROBLEMS' tab shows no errors. The terminal window shows commands to run the program.

Hình 3: Bai Tap 2

1.2.2 Thực thi

The screenshot shows the Eclipse IDE interface with the 'FirstDialog.java' file open in the editor. A message dialog box titled 'Message' is displayed with the text 'Hello world, How are you?'. The terminal window shows the command to run the program and its output.

```
src > Lab02 > J FirstDialog.java ...
1 //Phan Thanh Thang
2 //7/2/2023
3 //J2SE
4
5 package lab01;
6
7 import javax.swing.JOptionPane;
8
9 public class FirstDialog {
10     public static void main(String[] args) {
11         JOptionPane.showMessageDialog(null, "Hello world, How are you?");
12         System.exit(0);
13     }
14 }
15
```

```
PS D:\OOP_LAB> & "C:\Program Files\Java\jdk-22\bin\java.exe" "-XX:+showCodeDetailsInExceptionMessages" "-cp" "D:\OOP_LAB\bin" "lab01.FirstDialog"
PS D:\OOP_LAB> <
PS D:\OOP_LAB> <
PS D:\OOP_LAB> dir; & "C:\Program Files\Java\jdk-22\bin\java.exe" "-XX:+showCodeDetailsInExceptionMessages" "-cp" "D:\OOP_LAB\bin"
lab01.FirstDialog
```

Hinh 4: Thực thi Bai Tap 2

1.3 Write, compile the first input dialog Java application

1.3.1 Code

The screenshot shows the Eclipse IDE interface with the code editor open to the file `HelloNameDialog.java`. The code is as follows:

```
1 //Phan Thanh Thang
2 //100235927
3 //7/2/23
4 package Lab1;
5
6 import javax.swing.JOptionPane;
7
8 public class HelloNameDialog {
9     public static void main(String[] args){
10         String result;
11         result = JOptionPane.showInputDialog("Please enter your name");
12         JOptionPane.showMessageDialog(parentComponent>null, "Hi, " + result + "!");
13         System.exit(0);
14     }
15 }
```

The terminal below the code editor shows the command: `PS D:\OOP_LAB & "C:\Program Files\Java\jdk-22\bin\java.exe" -XX:+showCodeDetailsInExceptionMessages" "-cp" "D:\OOP_LAB\bin" "Lab1.HelloNameDialog"`.

Hình 5: Bai Tap 3

1.3.2 Thực thi

The screenshot shows the Eclipse IDE interface with the code editor open to the file `HelloNameDialog.java`. A message dialog box is displayed in the foreground with the text "Hi, mang!". The terminal below the code editor shows the command: `PS D:\OOP_LAB & "C:\Program Files\Java\jdk-22\bin\java.exe" -XX:+showCodeDetailsInExceptionMessages" "-cp" "D:\OOP_LAB\bin" "Lab1.HelloNameDialog"`.

Hình 6: Thực thi Bai Tap 3

1.4 Write, compile, and run the following example

1.4.1 Code

The screenshot shows the Eclipse IDE interface with the code editor open to `ShowTwoNumbers.java`. The code implements a Java Swing application that prompts the user to enter two numbers and displays them in a dialog box. The code uses `OptionPane.showInputDialog` to get input from the user and `JOptionPane.showMessageDialog` to show the result.

```
1 //Phan Thanh Thang
2 //10/09/2027
3 //7/2/24
4 package Lab1;
5
6 import javax.swing.JOptionPane;
7
8 public class ShowTwoNumbers{
9
10    public static void main(String[] args){
11        String strnum1, strnum2;
12        strnum1 = JOptionPane.showInputDialog(parentComponent,null, message:"Please input the first number:", title:"Input the first number", JOptionPane.INFORMATION_MESSAGE);
13        strnum2 = JOptionPane.showInputDialog(parentComponent,null, message:"Please input the second number:", title:"Input the second number", JOptionPane.INFORMATION_MESSAGE);
14        strNotification += strnum1 + " and " + strnum2;
15        JOptionPane.showMessageDialog(parentComponent,null, strNotification, title:"Show two number", JOptionPane.INFORMATION_MESSAGE);
16        System.exit(status:0);
17    }
18}
19
```

Hình 7: Bai Tap 4

1.4.2 Thực thi

The screenshot shows the Eclipse IDE interface with the terminal window open, displaying the command to run the application and the resulting output. A modal dialog box is visible, prompting the user to enter two numbers. The application has been compiled and is ready to be executed.

```
PS D:\OOP_LAB & "C:\Program Files\Java\jdk-22\bin\java.exe" -XX:+showCodeDetailsInExceptionMessages "-cp" "D:\OOP_LAB\bin" "Lab1.ShowTwoNumbers"
log:
PS D:\OOP_LAB
```

You're just entered: 4 and 8

Hinh 8: Thực thi Bai Tap 4

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

1.5.1 Code

```
File Edit Selection View Go Run Terminal Help < - > D OOP_LAB
EXPLORE ... J Count.java x J NumberOfDayInMonth.java ! J InputFromKeyboard.java ! J DisplayTriangle.java ! J AddTwoMatrix.java ! J Linear.java 2 A BiCoGioThucHanhOOP D v ...
D OOP_LAB
src > Lab01 > J Count.java > ...
> xcode
> bin
> lib
> res
> Lab01
> Ex_Homework
> Report
> Lab02
> x.zip
> README.md
J Count.java 1
1 //Phan Thanh Thang
2 //202305927
3
4 package Lab01;
5
6 import java.util.Scanner;
7 public class Count {
8     public static void main(String[] args) {
9         Scanner sc = new Scanner(System.in); //Nhập số liệu
10        System.out.print("Hay nhap so thu nhat: ");
11        double a = sc.nextDouble();
12        System.out.print("Hay nhap so thu hai: ");
13        double b = sc.nextDouble();
14        System.out.println("Tong cua hai so la: " + (a+b));
15        System.out.println("Trung binh cua hai so la: " + ((a+b)/2));
16        System.out.println("Tich cua hai so la: " + (a*b));
17        System.out.println("Thuong cua hai so la: " + (a/b));
18    }
19
20 }
21

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS D:\OOP_LAB & C:\Program Files\Java\jdk-22\bin\java.exe" "-XX:+showCodeDetailsInExceptionMessages" "-cp" "D:\OOP_LAB\bin" "Lab01.ShowCount
PS D:\OOP_LAB

@ 2PC Mua dong
VIE 7:20:02 PM 9/28/2024
```

Hình 9: Bai Tap 5

1.5.2 Thực thi

```
File Edit Selection View Go Run Terminal Help < - > D OOP_LAB
EXPLORE ... J Count.java x J NumberOfDayInMonth.java ! J InputFromKeyboard.java ! J DisplayTriangle.java ! J AddTwoMatrix.java ! J Linear.java 2 A BiCoGioThucHanhOOP D v ...
D OOP_LAB
src > Lab01 > J Count.java > ...
> xcode
> bin
> lib
> res
> Lab01
> Ex_Homework
> Report
> Lab02
> x.zip
> README.md
J Count.java 1
1 //Phan Thanh Thang
2 //202305927
3
4 package Lab01;
5
6 import java.util.Scanner;
7 public class Count {
8     public static void main(String[] args) {
9         Scanner sc = new Scanner(System.in); //Nhập số liệu
10        System.out.print("Hay nhap so thu nhat: ");
11        double a = sc.nextDouble();
12        System.out.print("Hay nhap so thu hai: ");
13        double b = sc.nextDouble();
14        System.out.println("Tong cua hai so la: " + (a+b));
15        System.out.println("Trung binh cua hai so la: " + ((a+b)/2));
16        System.out.println("Tich cua hai so la: " + (a*b));
17        System.out.println("Thuong cua hai so la: " + (a/b));
18    }
19
20 }
21

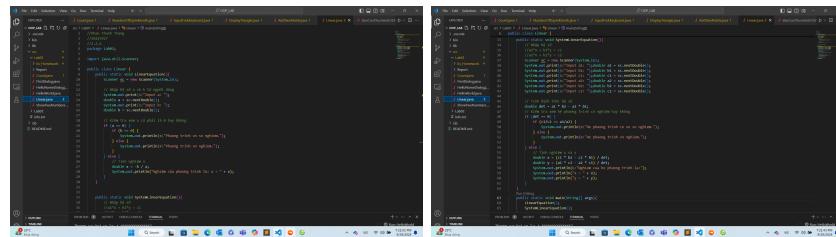
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS D:\OOP_LAB & C:\Program Files\Java\jdk-22\bin\java.exe" "-XX:+showCodeDetailsInExceptionMessages" "-cp" "D:\OOP_LAB\bin" "Lab01.Count"
Hay nhap so thu nhat: 5
Hay nhap so thu hai: 3
Tong cua hai so la: 8.0
Trung binh cua hai so la: 4.0
Tich cua hai so la: 15.0
Thuong cua hai so la: 1.6666666666666667
PS D:\OOP_LAB

@ 2PC Mua dong
VIE 7:20:28 PM 9/28/2024
```

Hình 10: Thực thi Bai Tap 5

1.6 Write a program to solve

1.6.1 Code



The image shows two side-by-side Java code editors. Both are titled 'Linear.java' and contain code for solving a linear equation of the form $ax + by = c$. The left editor's code is as follows:

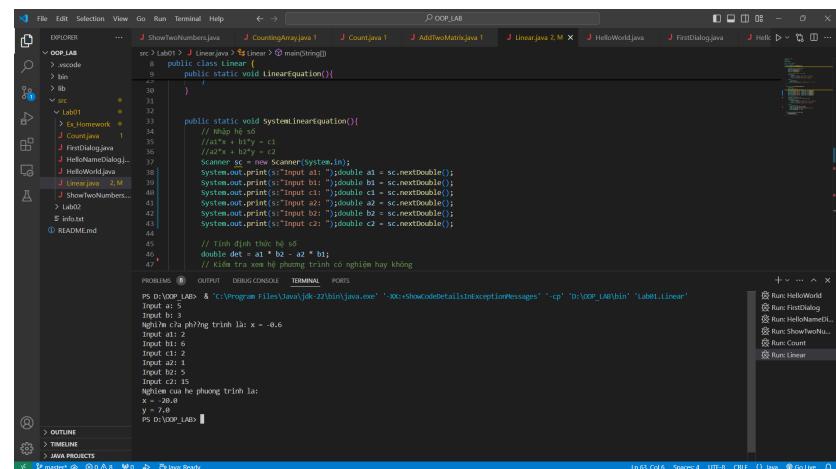
```
public class Linear {
    public static void main(String[] args) {
        double a = 5;
        double b = 6;
        double c = 1;
        double x = -0.6;
        double y = 2.0;
        System.out.println("Aphien co he phuong trinh la:");
        System.out.println("x = " + x);
        System.out.println("y = " + y);
    }
}
```

The right editor's code is as follows:

```
public class Linear {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Nhap a: ");
        double a1 = sc.nextDouble();
        System.out.print("Nhap b: ");
        double b1 = sc.nextDouble();
        System.out.print("Nhap c: ");
        double c1 = sc.nextDouble();
        System.out.print("Nhap a1: ");
        double a2 = sc.nextDouble();
        System.out.print("Nhap b1: ");
        double b2 = sc.nextDouble();
        System.out.print("Nhap c1: ");
        double c2 = sc.nextDouble();
        double det = a1 * b2 - a2 * b1;
        if (det == 0) {
            System.out.println("Khong tra xem he phuong trinh co nghiem hay khong");
        } else {
            double x = (c1 * b2 - c2 * b1) / det;
            double y = (a1 * c2 - a2 * c1) / det;
            System.out.println("Nghiem co he phuong trinh la:");
            System.out.println("x = " + x);
            System.out.println("y = " + y);
        }
    }
}
```

Hình 11: Bai Tap 6

1.6.2 Thực thi



The image shows the Eclipse IDE interface with the 'OOP LAB' project selected. The 'Linear.java' file is open in the editor. The terminal window at the bottom shows the output of running the program:

```
PS D:\OOP_LAB & "C:\Program Files\Java\jdk-22\bin\java.exe" "-XX:+showCodeDetailsInExceptionMessages" "-cp" "D:\OOP_LAB\bin" "Lab01.Linear"
Input a: 5
Input b: 6
Input c: 1
Input a1: 2
Input b1: 6
Input c1: 1
Input a2: 1
Input b2: 5
Input c2: 15
Aphien co he phuong trinh la:
x = -0.6
y = 2.0
PS D:\OOP_LAB
```

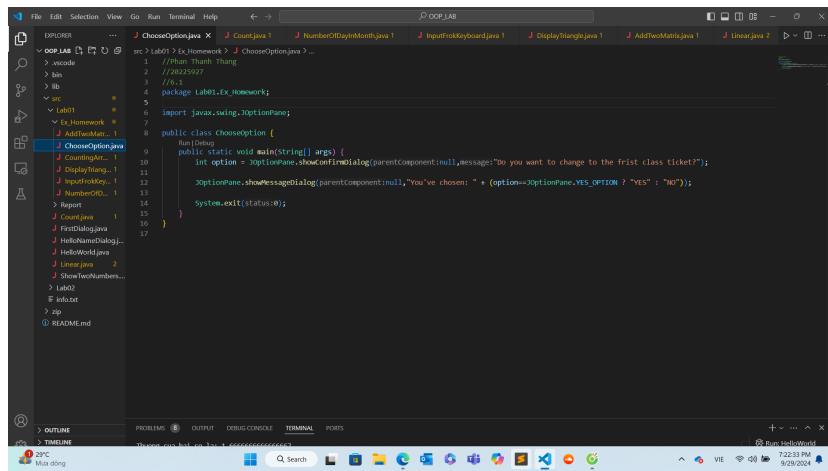
The terminal also lists several run configurations for other files in the project.

Hình 12: Thực thi Bai Tap 6

2 Exercises

2.1 Write, compile and run the ChoosingOption program

2.1.1 Code



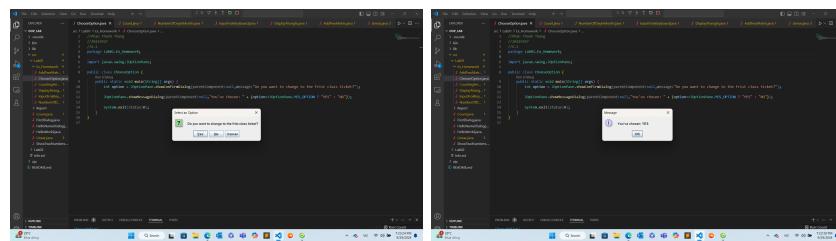
```
JD_OOP_LAB
File Edit Selection View Go Run Terminal Help < - > JD_OOP_LAB
J Choosoption.java X J Count.java 1 J NumberOfDayInMonth.java 1 J InputTrickyKeyboard.java 1 J DisplayTriangle.java 1 J AddTwoMatrix.java 1 J Linear.java 2 ...
J OOP_LAB ...
src > Label1Ex_Homework > J Choosoption.java ...
1 //Phan Thanh Thang
2 //190223927
3 //7.6.1
4 package Label1Ex_Homework;
5 import javax.swing.JOptionPane;
6
7 public class Choosoption {
8     public static void main(String[] args) {
9         int option = JOptionPane.showConfirmDialog(parentComponent:null,message:"Do you want to change to the first class ticket?");
10        if(option == JOptionPane.YES_OPTION) {
11            JOptionPane.showMessageDialog(parentComponent,null,"You've chosen: " + (option==JOptionPane.YES_OPTION ? "YES" : "NO"));
12        }
13        System.exit(status);
14    }
15 }
16 }
17 }
18 }
19 }
20 }
21 }
22 }
23 }
24 }
25 }
26 }
27 }
28 }
29 }
30 }
31 }
32 }
33 }
34 }
35 }
36 }
37 }

Count.java 1
FirstDialog.java 1
HelloNameDialog.java 1
HelloWorld.java 2
Linear.java 2
NumberOfDays...
> Lab02
> info.txt
> zip
@ README.md

OUTLINE PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PAGES
29PC Mult doing
Windows Taskbar: 72231 PM 9/29/2024
```

Hình 13: Bai Tap 1

2.1.2 Thực thi



Hình 14: Thực thi Bai Tap 1

2.2 Write a program for input/output from keyboard

2.2.1 Code

The screenshot shows the Eclipse IDE interface with the project 'OOP_LAB' selected in the left-hand Explorer view. The code editor displays the Java file 'InputFromKeyboard.java'. The code reads a name, age, and height from the user using a Scanner object.

```
public class InputFromKeyboard {
    public static void main(String[] args) {
        Scanner keyboard = new Scanner(System.in);
        System.out.println("What is your name? ");
        String name = keyboard.nextLine(); // nhập tên có dấu cách
        System.out.println("How old are you? ");
        int age = keyboard.nextInt();
        keyboard.nextLine(); // xong trả lời lệnh khi nhập tuổi
        System.out.println("How tall are you(n)? ");
        double height = keyboard.nextDouble();
        //Xuat thong tin
        System.out.println("\n\n" + name + " " + age + " " + height + " m");
    }
}
```

Hình 15: Bài Tập 2

2.2.2 Thực thi

The screenshot shows the Eclipse IDE interface with the project 'OOP_LAB' selected in the left-hand Explorer view. The code editor displays the Java file 'InputFromKeyboard.java'. The terminal window shows the output of the program, which asks for a name, age, and height, and then prints them back to the user.

```
What is your name?
Thang
How old are you?
20
How tall are you(n)?
1.17

_____
Name: Thang
Age: 20
Your height is: 1.17 m
```

Hình 16: Thực thi Bài Tập 2

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

2.3.1 Code

The screenshot shows the Eclipse IDE interface with the Java workspace titled 'OOP_LAB'. The 'DISPLAY' view is active, showing the code for 'DisplayTriangle.java'. The code reads a height from the user and prints a triangle of stars. The terminal window shows the execution of the program, asking for a name and height, and then displaying a triangle of stars.

```
public class DisplayTriangle {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int n = input.nextInt();
        for(int i = 0;i<n;){
            for(int j = 0; j < n-i;j++){
                System.out.print("*");
            }
            for(int k = 0;k < i+1;k++){
                System.out.print(" ");
            }
            System.out.print("\n");
        }
    }
}
```

Output:

```
Mr. Phap, Thanh Thang
How old are you?
20
How tall are you(a)?
1.17

*****
 ****
  ***
   **
    *
```

Hình 17: Bài Tập 3

2.3.2 Thực thi

The screenshot shows the Eclipse IDE interface with the Java workspace titled 'OOP_LAB'. The 'DISPLAY' view is active, showing the code for 'DisplayTriangle.java'. The code reads a height from the user and prints a triangle of stars. The terminal window shows the execution of the program, asking for a name and height, and then displaying a triangle of stars.

```
public class DisplayTriangle {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int n = input.nextInt();
        for(int i = 0;i<n;){
            for(int j = 0; j < n-i;j++){
                System.out.print("*");
            }
            for(int k = 0;k < i+1;k++){
                System.out.print(" ");
            }
            System.out.print("\n");
        }
    }
}
```

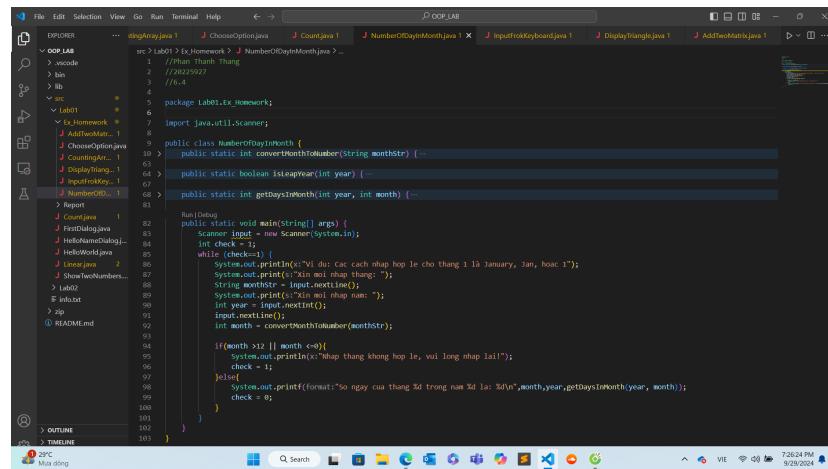
Output:

```
PS D:\OOP_LAB & "C:\Program Files\Java\jdk-22\bin\java.exe" "-Djava.awt_WM=detailsInExceptionMessages" "-cp" "D:\OOP_LAB\bin" "Lab1.Ex_Homework.DisplayTriangle"
*****
 ****
  ***
   **
    *
```

Hình 18: Thực thi Bài Tập 3

2.4 Write a program to display the number of days of a month, which is entered by users (both month and year). If it is an invalid month/year, ask the user to enter again

2.4.1 Code



```

package Lab01.Ex_Homework;

import java.util.Scanner;

public class NumberOfDaysInMonth {
    public static int convertMonthToNumber(String monthStr) {
        if (monthStr.equalsIgnoreCase("Jan")) {
            return 1;
        } else if (monthStr.equalsIgnoreCase("Feb")) {
            return 2;
        } else if (monthStr.equalsIgnoreCase("Mar")) {
            return 3;
        } else if (monthStr.equalsIgnoreCase("Apr")) {
            return 4;
        } else if (monthStr.equalsIgnoreCase("May")) {
            return 5;
        } else if (monthStr.equalsIgnoreCase("Jun")) {
            return 6;
        } else if (monthStr.equalsIgnoreCase("Jul")) {
            return 7;
        } else if (monthStr.equalsIgnoreCase("Aug")) {
            return 8;
        } else if (monthStr.equalsIgnoreCase("Sep")) {
            return 9;
        } else if (monthStr.equalsIgnoreCase("Oct")) {
            return 10;
        } else if (monthStr.equalsIgnoreCase("Nov")) {
            return 11;
        } else if (monthStr.equalsIgnoreCase("Dec")) {
            return 12;
        } else {
            System.out.println("Vui long nhap hop le, vui long nhap lai!");
            return -1;
        }
    }

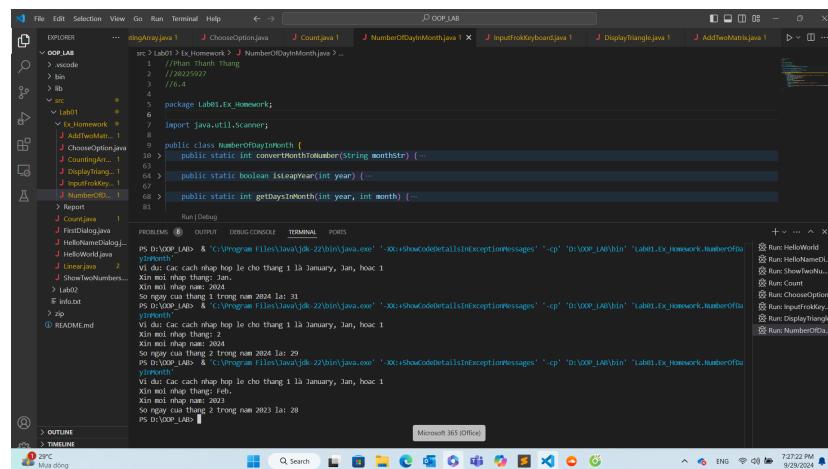
    public static boolean isLeapYear(int year) {
        if (year % 4 == 0 & year % 100 != 0) {
            return true;
        } else if (year % 400 == 0) {
            return true;
        } else {
            return false;
        }
    }

    public static int getDaysInMonth(int year, int month) {
        if (month < 1 || month > 12) {
            System.out.println("Vui long nhap hop le, vui long nhap lai!");
            return -1;
        } else {
            if (isLeapYear(year)) {
                if (month == 2) {
                    return 29;
                } else if (month == 4 || month == 6 || month == 9 || month == 11) {
                    return 30;
                } else {
                    return 31;
                }
            } else {
                if (month == 2) {
                    return 28;
                } else if (month == 4 || month == 6 || month == 9 || month == 11) {
                    return 30;
                } else {
                    return 31;
                }
            }
        }
    }
}

```

Hình 19: Bài Tập 4

2.4.2 Thực thi



```

PS D:\OOP_LAB> & "C:\Program Files\Java\jdk-22\bin\java.exe" "-Xmx512m" "-cp" "D:\OOP_LAB\bin" "Lab01.Ex_Homework.NumberOfDayInMonth"
Vui long nhap hop le cho thang 1 la January, Jan, hoac
Xin moi nhap thang: Jan.
So ngay cua thang 1 trong nam 2024 la: 31
PS D:\OOP_LAB> & "C:\Program Files\Java\jdk-22\bin\java.exe" "-Xmx512m" "-cp" "D:\OOP_LAB\bin" "Lab01.Ex_Homework.NumberOfDayInMonth"
Vui long nhap hop le cho thang 1 la January, Jan, hoac
Xin moi nhap thang: Feb.
Xin moi nhap nam: 2023
So ngay cua thang 2 trong nam 2023 la: 28
PS D:\OOP_LAB>

```

Hình 20: Thực thi Bài Tập 4

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

2.5.1 Code

```
File Edit Selection View Go Run Terminal Help <- > | D:\OOP_LAB | ...
```

```
src > Lab07>Ex_Homework > J CountingArray.java | J ChooseOption.java | J Count.java | J NumberOfDayMonth.java | J InputFromKeyboard.java | J DisplayTriangle.java | J AddTwoMatrix.java | ...
```

```
...> OOP_LAB
```

```
|-> EXPLORER
```

```
> src
```

```
> bin
```

```
> lib
```

```
> Lab07
```

```
> Ex_Homework
```

```
> J AddTwoMatrix...
```

```
J CountingArray...
```

```
J ChooseOption...
```

```
J Count...
```

```
J DisplayTriangle...
```

```
J InputFromKeybo...
```

```
J NumberOfDay...
```

```
J Report...
```

```
J Count.java
```

```
J FirstDialog.java
```

```
J HelloNameDialog...
```

```
J HelloWorld.java
```

```
J Linear.java
```

```
J ShowTwoNumbers...
```

```
J Lab02
```

```
|-> README.md
```

```
> OUTLINE
```

```
> TIMELINE
```

```
|-> PROBLEMS
```

```
|-> OUTPUT
```

```
|-> DEBUG CONSOLE
```

```
|-> TERMINAL
```

```
|-> PORTS
```

```
|-> RUN
```

```
D:\OOP_LAB & C:\Program Files\Java\jdk-22\bin\java.exe -XX:+showCodeDetails=exceptionMessages -cp "D:\OOP_LAB\bin" "Lab07.Ex_Homework.CountingArr...
```

```
Phap_Thanh_Thang
```

```
1 //Phap_Thanh_Thang
```

```
2 //7/20225927
```

```
3 //
```

```
4 package Lab07.Ex_Homework;
```

```
5
```

```
6 import java.util.Arrays;
```

```
7 import java.util.Scanner;
```

```
8
```

```
9 public class CountingArray {
```

```
10     public static double avg (int[] arr){
```

```
11         public static void print(int[] arr){
```

```
12             public static double sum(int[] arr){
```

```
13                 Run(Debug)
```

```
14                 public static void main(String[] args) {
```

```
15                     Scanner input = new Scanner(System.in);
```

```
16                     System.out.print("Nhap so luong phan tu cua mang: ");
```

```
17                     int n = input.nextInt();
```

```
18                     int[] array = new int[n];
```

```
19                     for(int i = 0;i < n;i++){
```

```
20                         array[i] = input.nextInt();
```

```
21                     }
```

```
22                     Arrays.sort(array);
```

```
23                     print(array);
```

```
24                     double temp = avg(array);
```

```
25                     double sum = sum(array);
```

```
26                     System.out.printf("Gia tri tong cua mang: %d\n",sum);
```

```
27                     System.out.printf("Gia tri trung binh cua mang: %.2f",temp);
```

```
28                 }
```

```
29             }
```

```
30         }
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```
31     }
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```

Hình 21: Bài Tập 5

2.5.2 Thực thi

```
File Edit Selection View Go Run Terminal Help <- > | D:\OOP_LAB | ...
```

```
src > Lab07>Ex_Homework > J CountingArray.java | J ChooseOption.java | J Count.java | J NumberOfDayMonth.java | J InputFromKeyboard.java | J DisplayTriangle.java | J AddTwoMatrix.java | ...
```

```
...> OOP_LAB
```

```
|-> EXPLORER
```

```
> src
```

```
> bin
```

```
> lib
```

```
> Lab07
```

```
> Ex_Homework
```

```
> J AddTwoMatrix...
```

```
J CountingArray...
```

```
J ChooseOption...
```

```
J Count...
```

```
J DisplayTriangle...
```

```
J InputFromKeybo...
```

```
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```
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```
J ShowTwoNumbers...
```

```
J Lab02
```

```
|-> README.md
```

```
> OUTLINE
```

```
> TIMELINE
```

```
|-> PROBLEMS
```

```
|-> OUTPUT
```

```
|-> DEBUG CONSOLE
```

```
|-> TERMINAL
```

```
|-> PORTS
```

```
|-> RUN
```

```
PS D:\OOP_LAB & C:\Program Files\Java\jdk-22\bin\java.exe -XX:+showCodeDetails=exceptionMessages -cp "D:\OOP_LAB\bin" "Lab07.Ex_Homework.CountingArr...
```

```
Nhap so luong phan tu cua mang: 7
```

```
1 2 3 4 5 6 8 9
```

```
Gia tri tong cua mang: 35.00
```

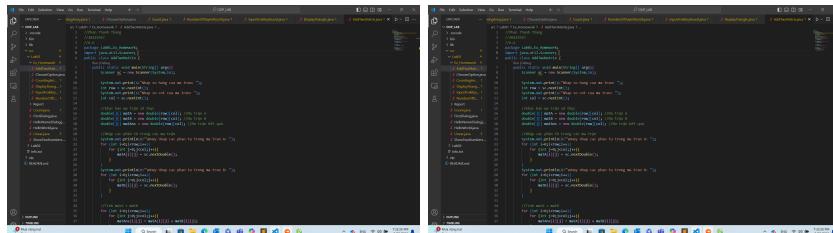
```
Gia tri trung binh cua mang: 5.00
```

```
PS D:\OOP_LAB &
```

Hình 22: Thực thi Bài Tập 5

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

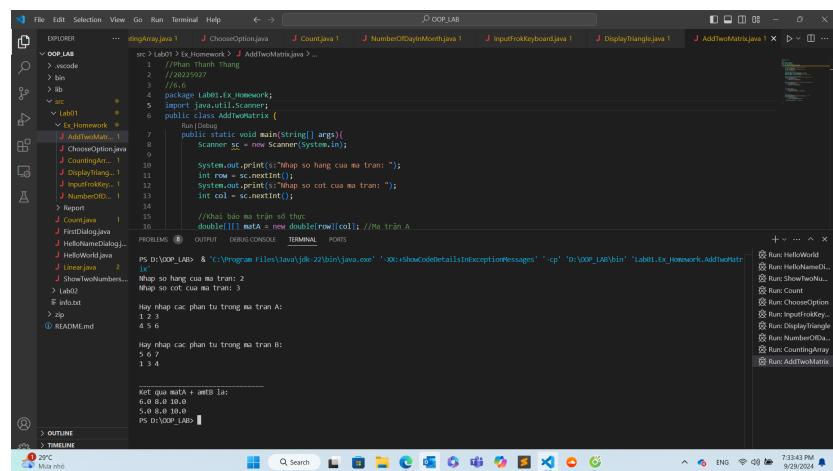
2.6.1 Code



```
public class AddTwoMatrix {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Nhap so hang cua ma tran: ");
        int row = sc.nextInt();
        System.out.print("Nhap so cot cua ma tran: ");
        int col = sc.nextInt();
        double[][] matA = new double[row][col]; // Ma tran A
        System.out.println("Hay nhap cac phan tu trong ma tran A:");
        for (int i = 0; i < row; i++) {
            for (int j = 0; j < col; j++) {
                matA[i][j] = sc.nextDouble();
            }
        }
        double[][] matB = new double[row][col]; // Ma tran B
        System.out.println("Hay nhap cac phan tu trong ma tran B:");
        for (int i = 0; i < row; i++) {
            for (int j = 0; j < col; j++) {
                matB[i][j] = sc.nextDouble();
            }
        }
        double[][] result = new double[row][col];
        for (int i = 0; i < row; i++) {
            for (int j = 0; j < col; j++) {
                result[i][j] = matA[i][j] + matB[i][j];
            }
        }
        System.out.println("Ket qua matA + matB la:");
        for (int i = 0; i < row; i++) {
            for (int j = 0; j < col; j++) {
                System.out.print(result[i][j] + " ");
            }
            System.out.println();
        }
    }
}
```

Hình 23: Bài Tập 6

2.6.2 Thực thi



```
PS D:\OOP_LAB & "C:\Program Files\Java\jdk-22\bin\java.exe" -XX:+ShowCodeDetailsInExceptionMessages -cp "D:\OOP_LAB\bin" Lab01_Ex_Homework.AddTwoMatrix
Map so hang cua ma tran: 2
Map so cot cua ma tran: 3
Map so hang cua ma tran: 2
Map so cot cua ma tran: 3
Hay nhap cac phan tu trong ma tran A:
1 2 3
4 5 6
7 8 9
Ket qua matA + matB la:
6.0 8.0 10.0
5.0 8.0 9.0
1.0 3.0 4.0
```

Hình 24: Thực thi Bài Tập 6