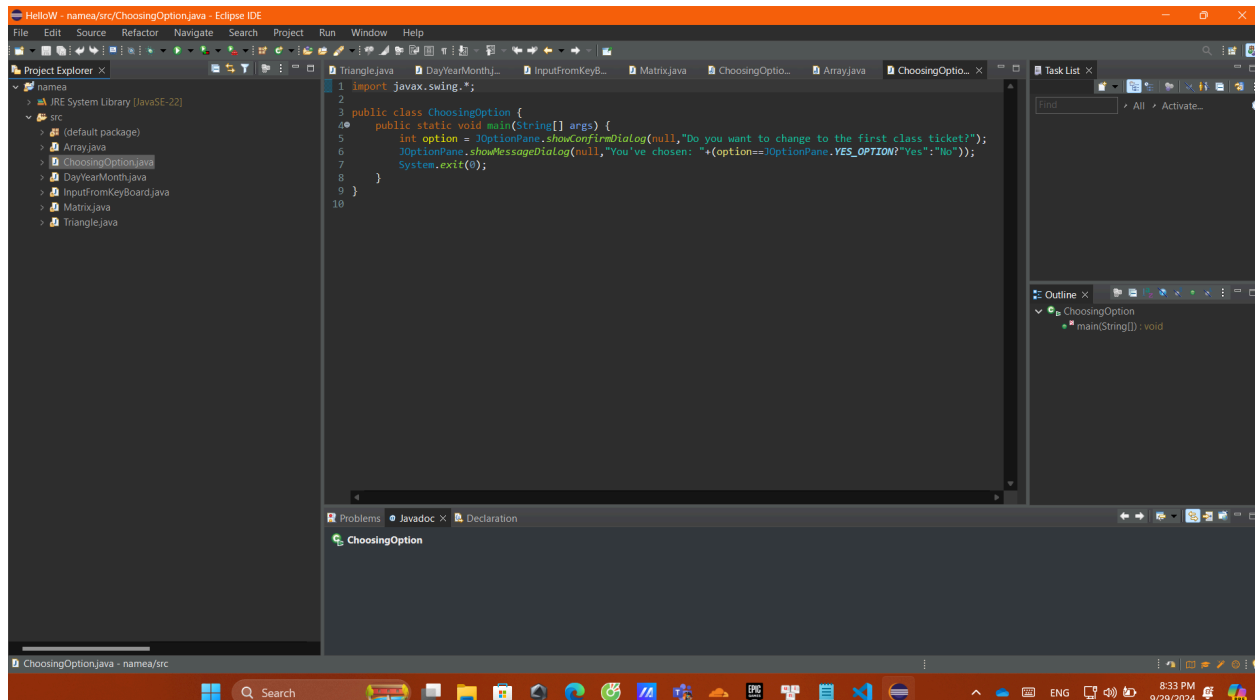


# Báo cáo Lab1 - OOP

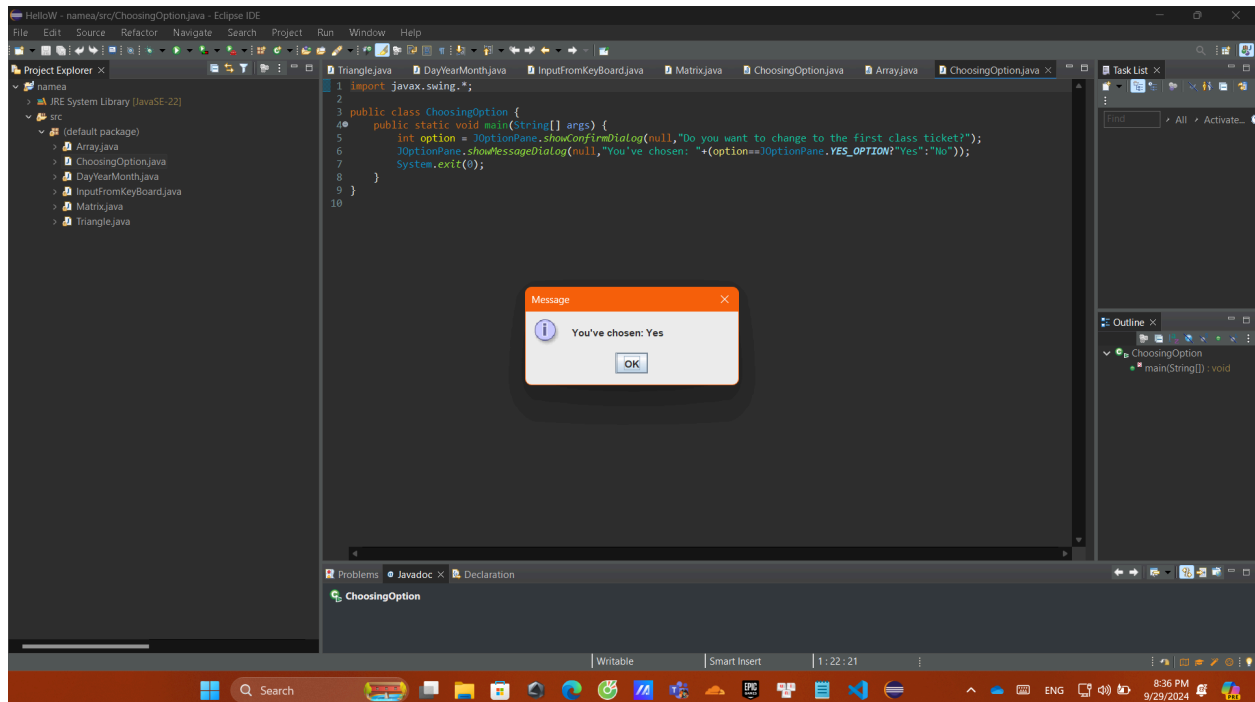
Họ và tên: Nguyễn Công Bình - 20225695

Ex1: Write, compile and run the ChoosingOption program:

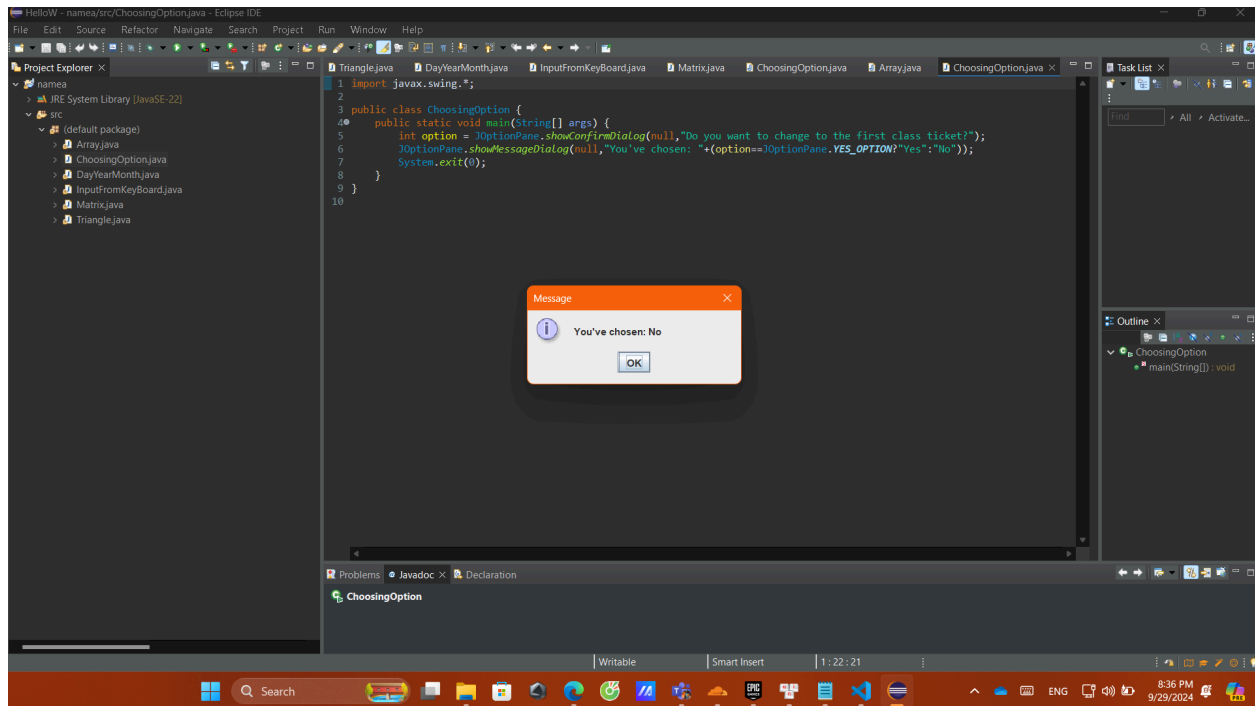
**Source code:**



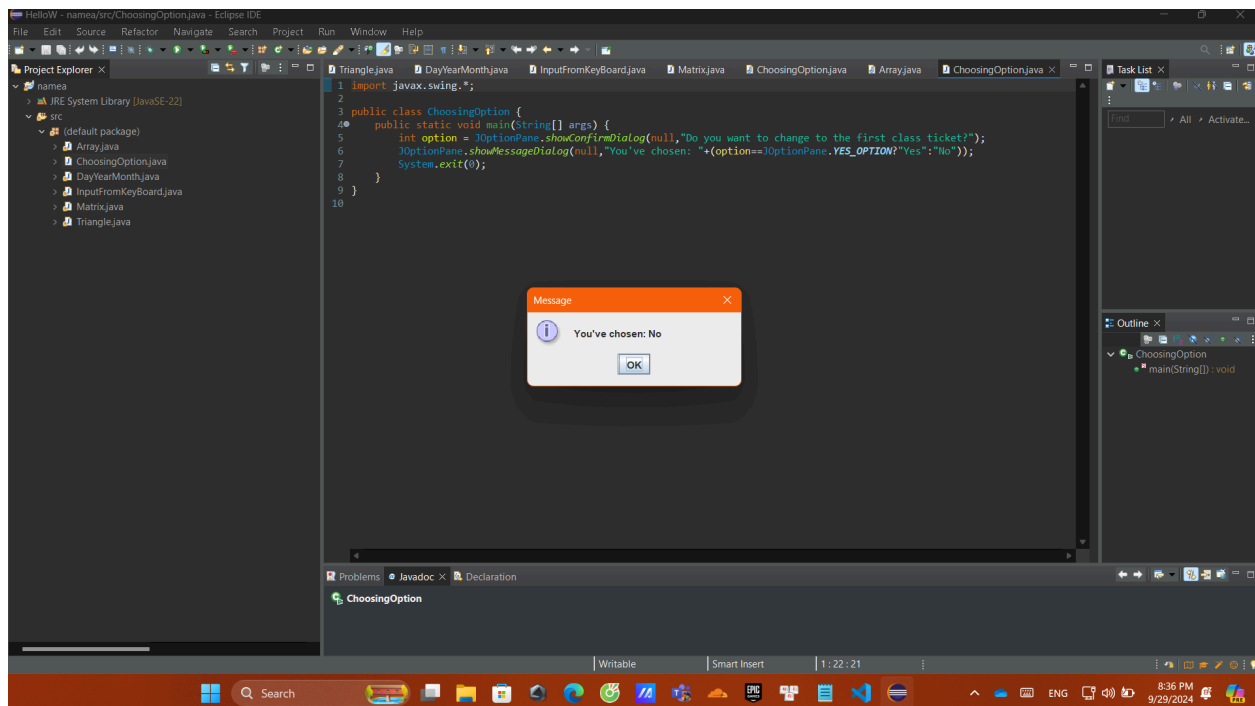
**Hoạt động:** - Khi chọn Yes



## - Khi chọn No

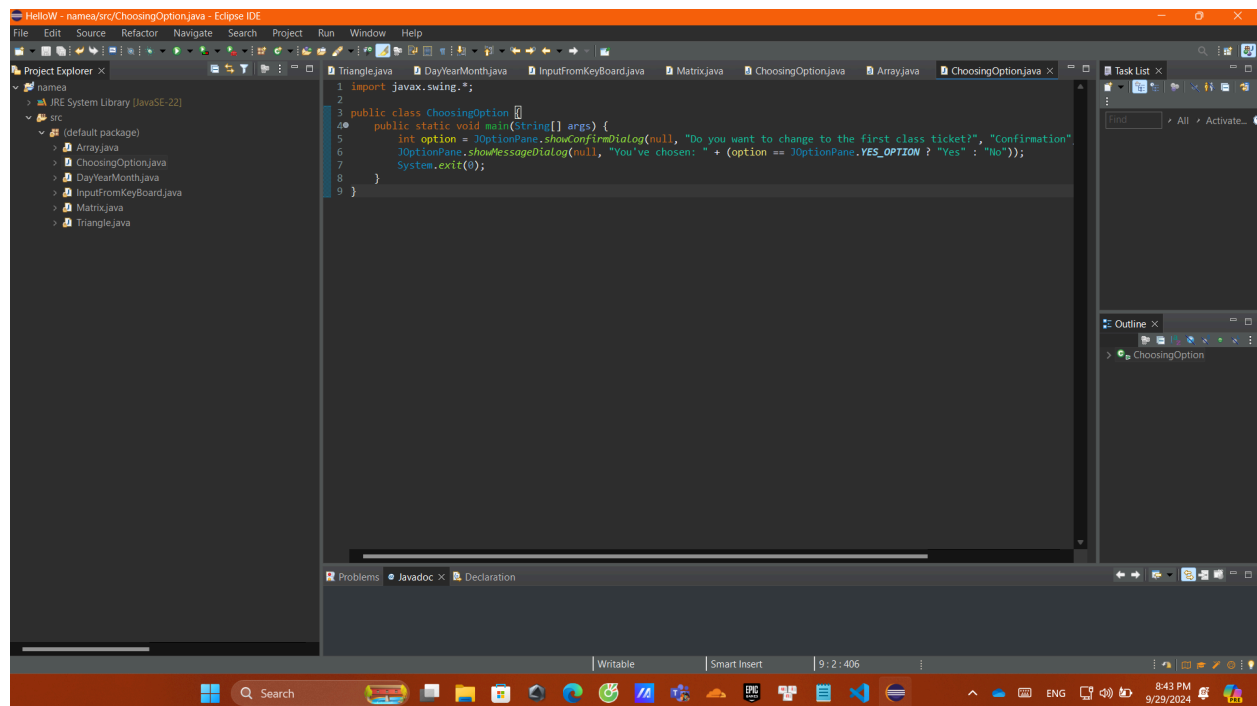


## - Khi chọn Cancel

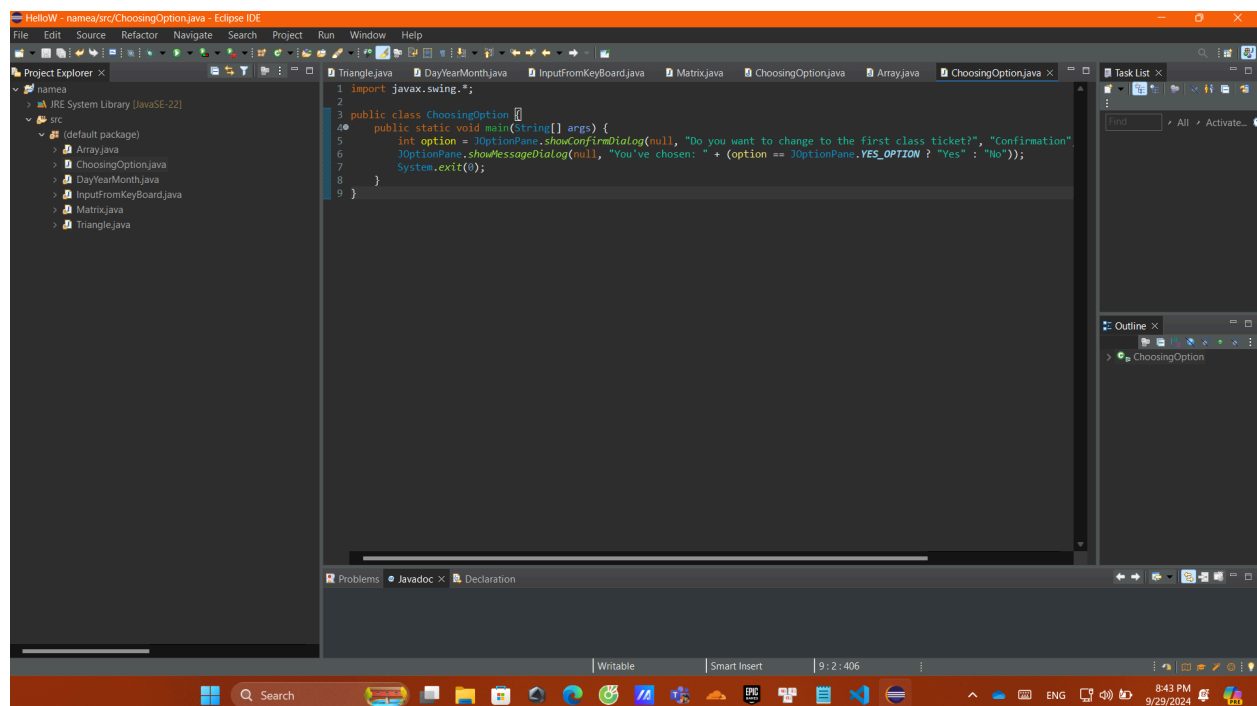


1. Khi chọn Cancel, hộp thoại sẽ hiện ra tương tự khi ta chọn No.

## 2. Cách để sửa không còn lựa chọn Cancel



Ex2: Write a program for input/output from keyboard  
Source code:



Hoạt động:

```
1 import java.util.Scanner;
2
3
4 public class InputFromKeyboard {
5     public static void main(String[] args) {
6         Scanner keyboard = new Scanner(System.in);
7         System.out.println("What's your name?");
8         String strName = keyboard.nextLine();
9         System.out.println("How old are you?");
10        int iAge = keyboard.nextInt();
11        System.out.println("How tall are you (m)?");
12        double dHeight = keyboard.nextDouble();
13        System.out.println("Mrs/Ms." + strName + ", " + iAge + " years old. " + "Your height is " + dHeight + ".");
14    }
15 }
16 }
17 }
```

Console Output:

```
<terminated> InputFromKeyboard [Java Application] C:\Users\BINH\AppData\Local\Temp\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.23.0.v20240919-1706\jre\bin\javaw.exe (Sep 29, 2024, 8:46:02 PM - 8:46:18 PM)
What's your name?
Binh
How old are you?
20
How tall are you (m)?
1.80
Mrs/Ms.Binh,20 years old. Your height is 1.8.
```

Ex3: Write a program to display a triangle with a height of n stars (\*), n is entered by users.

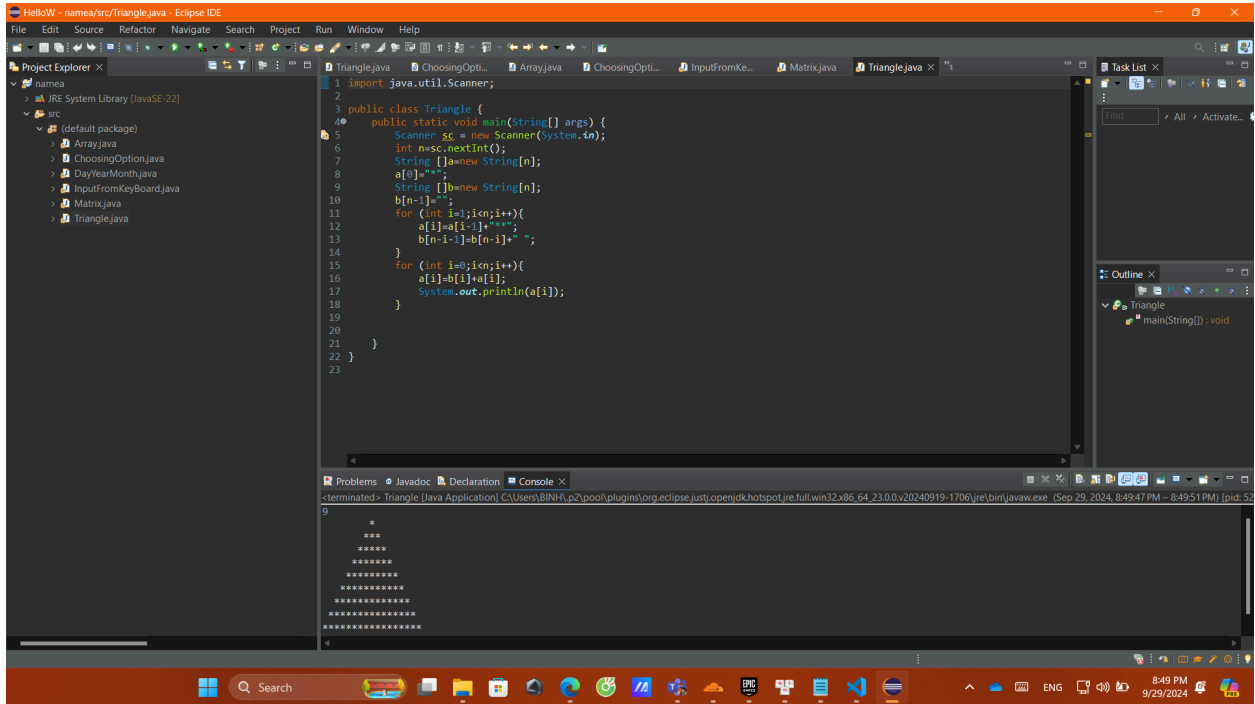
Source code:

```
1 import java.util.Scanner;
2
3 public class Triangle {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         int n = sc.nextInt();
7         String []a = new String[n];
8         a[0] = "*";
9         String []b = new String[n];
10        b[n-1] = "*";
11        for (int i = 1; i < n; i++) {
12            a[i] = a[i-1] + " * ";
13            b[n-i-1] = b[n-i] + " * ";
14        }
15        for (int i = 0; i < n; i++) {
16            a[i] = b[i] + a[i];
17            System.out.println(a[i]);
18        }
19    }
20 }
21 }
22 }
23 }
```

Console Output:

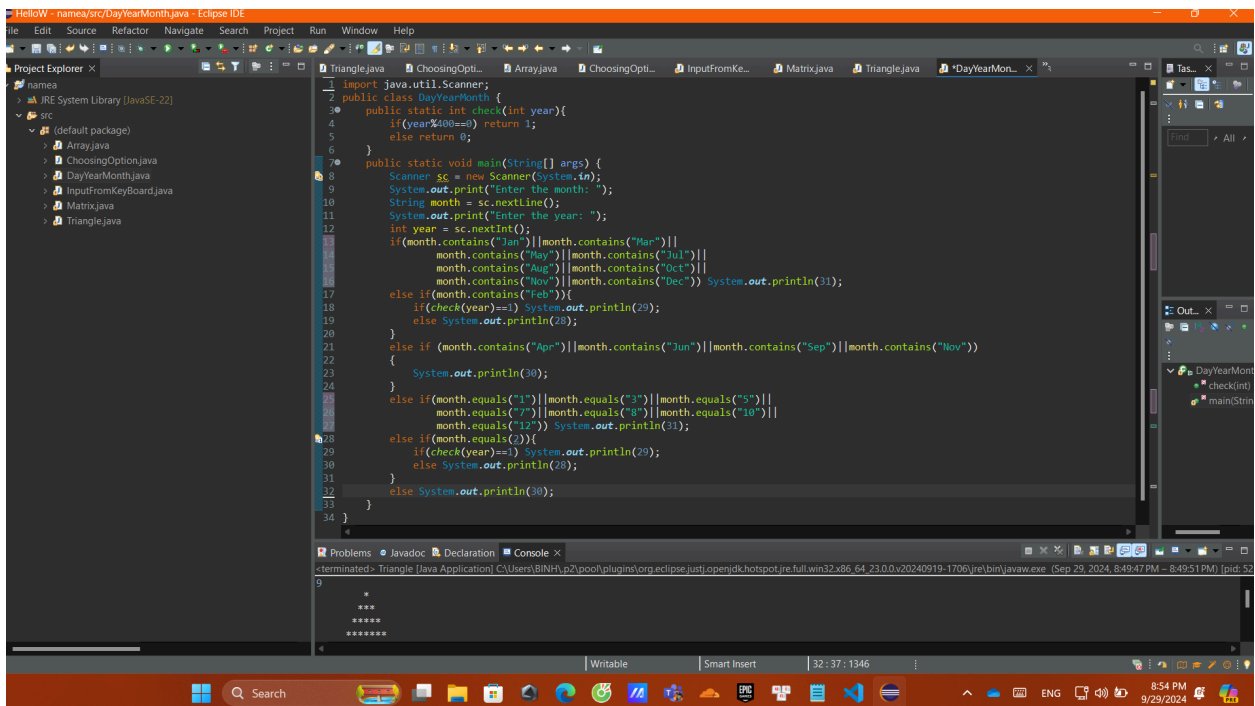
```
Triangle [Java Application] C:\Users\BINH\AppData\Local\Temp\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.23.0.v20240919-1706\jre\bin\javaw.exe (Sep 29, 2024, 8:49:18 PM) [pid: 29468]
5
*
* *
* * *
* * * *
* * * * *
```

Hoạt động:



Ex4: Write a program to display the number of days of a month

Source code:



Hoạt động:

The screenshot shows the Eclipse IDE with a Java project named 'namea'. The 'src' package contains several files, including 'Triangle.java', 'ChoosingOption.java', 'Array.java', 'ChoosingOption.java', 'InputFromKeyboard.java', 'Matrix.java', and 'DayYearMonth.java'. The 'DayYearMonth.java' file is open in the editor, showing the following code:

```
1 import java.util.Scanner;
2 public class DayYearMonth {
3     public static int check(int year){
4         if(year%400==0) return 1;
5         else return 0;
6     }
7     public static void main(String[] args) {
8         Scanner sc = new Scanner(System.in);
9         System.out.print("Enter the month: ");
10        String month = sc.nextLine();
11        System.out.print("Enter the year: ");
12        int year = sc.nextInt();
13        if(month.contains("Jan")||month.contains("Mar")||
14           month.contains("May")||month.contains("Jul")||
15           month.contains("Aug")||month.contains("Oct")||
16           month.contains("Nov")||month.contains("Dec")) System.out.println(31);
17        else if(month.contains("Feb")){
18            if(check(year)==1) System.out.println(29);
19            else System.out.println(28);
20        }
21        else if (month.contains("Apr")||month.contains("Jun")||month.contains("Sep")||month.contains("Nov"))
22        {
23            System.out.println(30);
24        }
25        else if(month.equals("1")||month.equals("3")||month.equals("5")||
26           month.equals("7")||month.equals("8")||month.equals("10")||
27           month.equals("12")) System.out.println(31);
28        else if(month.equals("2")){
29            if(check(year)==1) System.out.println(29);
30            else System.out.println(28);
31        }
32        else System.out.println(30);
33    }
34 }
```

The console output shows the program execution:

```
<terminated> DayYearMonth [Java Application] C:\Users\BINHA\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.23.0.v20240919-1706\jre\bin\javaw.exe (Sep 29, 2024, 8:55:18 PM - 8:55:26 PM)
Enter the month: Jan
Enter the year: 2022
31
```

The screenshot shows the Eclipse IDE with a Java project named 'namea'. The 'src' package contains several files, including 'Triangle.java', 'ChoosingOption.java', 'Array.java', 'ChoosingOption.java', 'InputFromKeyboard.java', 'Matrix.java', and 'DayYearMonth.java'. The 'DayYearMonth.java' file is open in the editor, showing the following code:

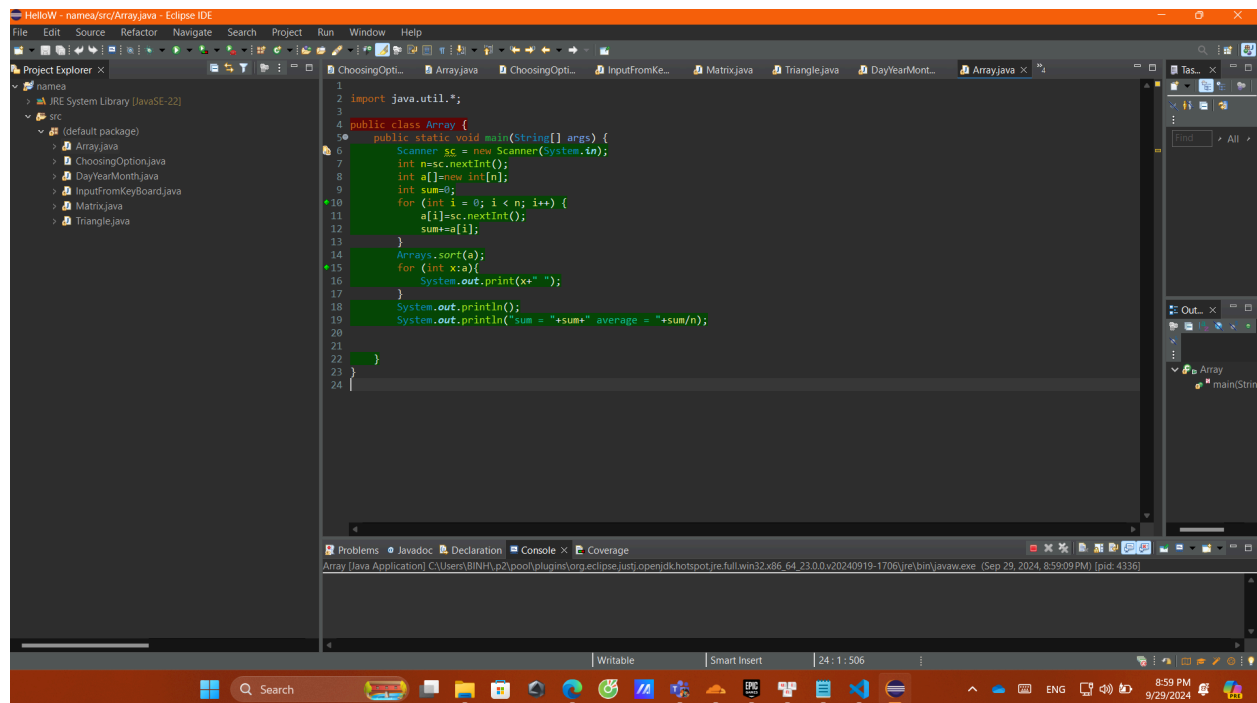
```
1 import java.util.Scanner;
2 public class DayYearMonth {
3     public static int check(int year){
4         if(year%400==0) return 1;
5         else return 0;
6     }
7     public static void main(String[] args) {
8         Scanner sc = new Scanner(System.in);
9         System.out.print("Enter the month: ");
10        String month = sc.nextLine();
11        System.out.print("Enter the year: ");
12        int year = sc.nextInt();
13        if(month.contains("Jan")||month.contains("Mar")||
14           month.contains("May")||month.contains("Jul")||
15           month.contains("Aug")||month.contains("Oct")||
16           month.contains("Nov")||month.contains("Dec")) System.out.println(31);
17        else if(month.contains("Feb")){
18            if(check(year)==1) System.out.println(29);
19            else System.out.println(28);
20        }
21        else if (month.contains("Apr")||month.contains("Jun")||month.contains("Sep")||month.contains("Nov"))
22        {
23            System.out.println(30);
24        }
25        else if(month.equals("1")||month.equals("3")||month.equals("5")||
26           month.equals("7")||month.equals("8")||month.equals("10")||
27           month.equals("12")) System.out.println(31);
28        else if(month.equals("2")){
29            if(check(year)==1) System.out.println(29);
30            else System.out.println(28);
31        }
32        else System.out.println(30);
33    }
34 }
```

The console output shows the program execution:

```
<terminated> DayYearMonth [Java Application] C:\Users\BINHA\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.23.0.v20240919-1706\jre\bin\javaw.exe (Sep 29, 2024, 8:56:07 PM - 8:56:15 PM)
Enter the month: Feb
Enter the year: 2020
28
```

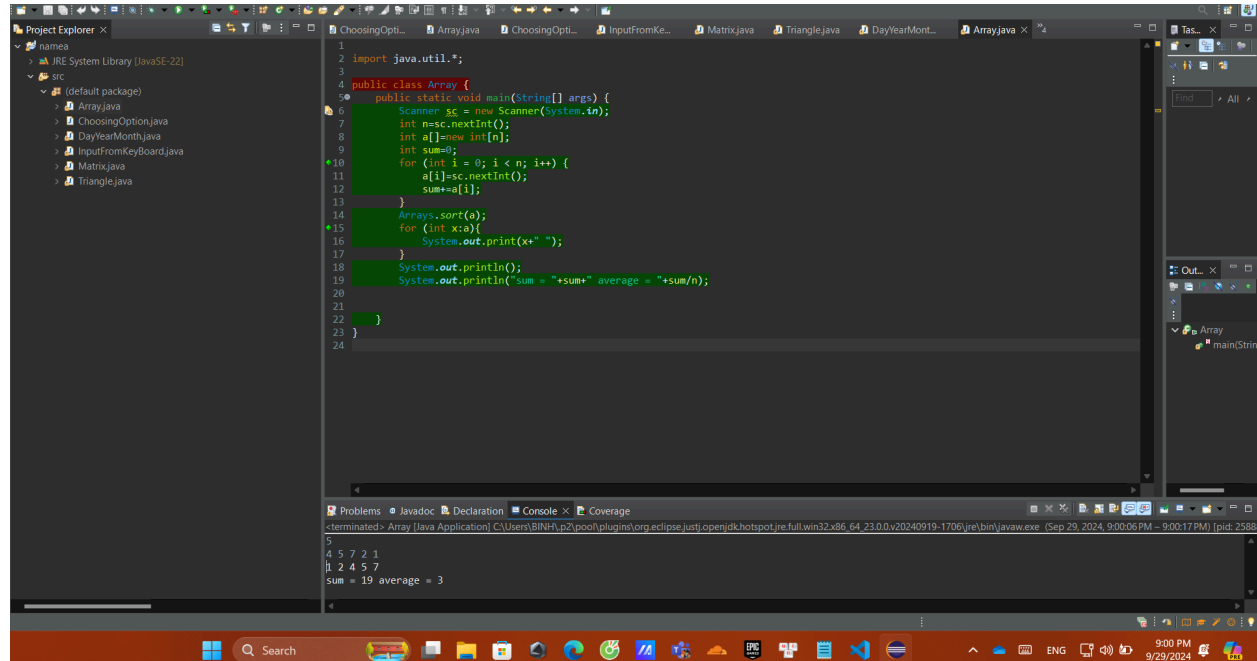
Ex5: Write a Java program to sort a numeric array, and calculate the sum and average value of array elements.

Source code:



```
1 import java.util.*;
2
3
4 public class Array {
5     public static void main(String[] args) {
6         Scanner sc = new Scanner(System.in);
7         int n=sc.nextInt();
8         int a[]=new int[n];
9         int sum=0;
10        for (int i = 0; i < n; i++) {
11            a[i]=sc.nextInt();
12            sum+=a[i];
13        }
14        Arrays.sort(a);
15        for (int x:a){
16            System.out.print(x+" ");
17        }
18        System.out.println();
19        System.out.println("sum = "+sum+" average = "+sum/n);
20    }
21 }
22
23
24 }
```

Hoạt động:

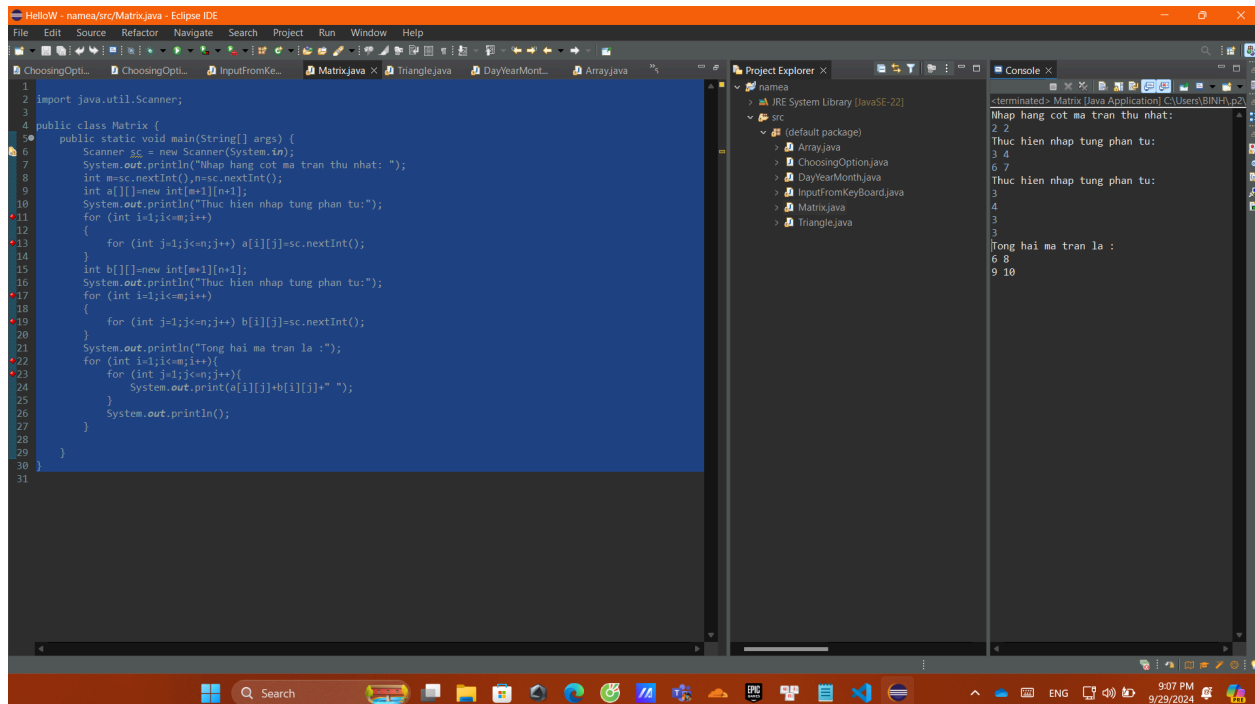


```
1 import java.util.*;
2
3
4 public class Array {
5     public static void main(String[] args) {
6         Scanner sc = new Scanner(System.in);
7         int n=sc.nextInt();
8         int a[]=new int[n];
9         int sum=0;
10        for (int i = 0; i < n; i++) {
11            a[i]=sc.nextInt();
12            sum+=a[i];
13        }
14        Arrays.sort(a);
15        for (int x:a){
16            System.out.print(x+" ");
17        }
18        System.out.println();
19        System.out.println("sum = "+sum+" average = "+sum/n);
20    }
21 }
22
23
24 }
```

```
5
4 5 7 2 1
1 2 4 5 7
sum = 19 average = 3
```

Ex6: Write a Java program to add two matrices of the same size.

Source code:



## Hoạt động:

