

BÀI BÁO CÁO LẬP TRÌNH HƯỚNG ĐỐI TƯỢNG

LAB 01: Environment Setup and Java Basics

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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

Đây là code của chương trình:

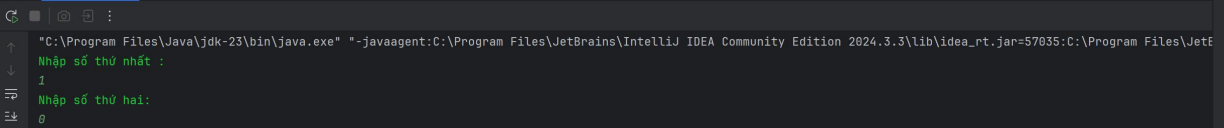
```
1  import java.util.Scanner;
2  public class maytinh {
3      public static void main(String[] args){
4          Scanner scanner = new Scanner(System.in);
5          System.out.println("Nhập số thứ nhất : ");
6          double a = scanner.nextDouble();
7          System.out.println("Nhập số thứ hai: ");
8          double b = scanner.nextDouble();
9          System.out.println("Tổng của 2 số là: " + (a+b));
10         System.out.println("Hiệu của 2 số là: " + (a-b));
11         System.out.println("Tích của 2 số là: " + a*b);
12         if(b!=0) {
13             System.out.println("Thương của 2 số là: " + a/b);
14         }else{
15             System.out.println("Không thể chia cho 0");
16         }
17         scanner.close();
18     }
19 }
20
```

Dưới đây là output của chương trình:

```
Run maytinh x
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=57022:C:\Program Files\JetB
Nhập số thứ nhất :
1
Nhập số thứ hai:
2
Tổng của 2 số là: 3.0
Hiệu của 2 số là: -1.0
Tích của 2 số là: 2.0
Thương của 2 số là: 0.5

Process finished with exit code 0
```

Trường hợp số chia $b = 0$:



```
Run maytinh x
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=57035:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin" -Dfile.encoding=UTF-8
Nhập số thứ nhất :
1
Nhập số thứ hai:
0
Tổng của 2 số là: 1.0
Hiệu của 2 số là: 1.0
Tích của 2 số là: 0.0
Không thể chia cho 0

Process finished with exit code 0

C:\Users\nguyenvan\src > maytinh > main
```

2.2.6 Write a program to solve:

For simplicity, we only consider the real roots of the equations in this task.

- The first-degree equation (linear equation) with one variable

Note: A first-degree equation with one variable can have a form such as $ax + b = 0$ ($a \neq 0$).

You should handle the case where the user input value 0 for a.

Don't forget to add and commit your work using 'git add .' and 'git commit -m <message>' command

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

Note: A system of first-degree equations with two variables x_1 and x_2 can be written as follows.

$$\begin{cases} a_{11}x_1 + a_{12}x_2 = b_1 \\ a_{21}x_1 + a_{22}x_2 = b_2 \end{cases}$$

You should handle the case where the values of the coefficients produce infinitely many solutions and the case where they produce no solution.

Hint:

Use the following determinants:

$$D = \begin{vmatrix} a_{11} & a_{12} & a_{21} & a_{22} \end{vmatrix} = a_{11}a_{22} - a_{21}a_{12} \quad D_1 = \begin{vmatrix} b_1 & a_{12} & b_2 & a_{22} \end{vmatrix} = b_1a_{22} - b_2a_{12} \quad D_2 = \begin{vmatrix} a_{11} & b_1 & a_{21} & b_2 \end{vmatrix} = a_{11}b_2 - a_{21}b_1$$

- The second-degree equation with one variable

Note: A second-degree equation with one variable (i.e., quadratic equation) can have a form such as $ax^2 + bx + c = 0$, where x is the variable, and a, b, and c are coefficients ($a \neq 0$).

You should handle the case where the values of the coefficients produce a double root & the case where they produce no root. You should also handle the case where the user input value 0 for a.

Hint:

Use the discriminant $\Delta = b^2 - 4ac$

After completing the code in section 2, you should push all of your changes, including assignment 2.2.1 to 2.2.6 to the **master** branch of the valid repository you have created.

Hint: You should use "git push origin <name of the branch that you want to push to the remote repository>", in this case is "**master**", to push all of your works to the **master** branch.

Dưới đây là code của chương trình bậc nhất 1 ẩn:

```

1  import java.util.Scanner;
2  public class giaiptbac1 {
3      public static void main(String[] args){
4          Scanner scanner = new Scanner(System.in);
5          System.out.println("nhap he so cho phuong trinh bac nhat (ax + b = 0): ");
6          System.out.print("a: ");
7          double a = scanner.nextDouble();
8          System.out.print("b: ");
9          double b = scanner.nextDouble();
10         giai(a, b);
11         scanner.close();
12     }
13
14     public static void giai(double a, double b){ 1 usage
15         if (a == 0){
16             if (b == 0){
17                 System.out.println("phuong trinh co vo so nghiem. ");
18             }else{
19                 System.out.println("phuong trinh vo nghiem. ");
20             }
21         }else{
22             double x = -b/a;
23             System.out.println("nghiem cua phuong trinh la: x = " + x);
24         }
25     }
26 }
27
28

```

Dưới đây là output của chương trình:

```

"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=57151:C:\Program Files\JetB
nhap he so cho phuong trinh bac nhat (ax + b = 0):
a: 2
b: 1
nghiem cua phuong trinh la: x = -0.5

Process finished with exit code 0
|

```

Trường hợp a=b=0:

```

"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=57159:C:\Program Files\JetB
nhap he so cho phuong trinh bac nhat (ax + b = 0):
a: 0
b: 0
phuong trinh co vo so nghiem.

Process finished with exit code 0

```

Phương trình bậc nhất 2 ẩn:

```

1  import java.util.Scanner;
2  public class giaihept {
3      public static void main(String[] args){
4          Scanner scanner = new Scanner(System.in);
5          System.out.println("nhap he so cho he phuong trinh bac nhap:");
6          System.out.print("a11: ");
7          double a11 = scanner.nextDouble();
8          System.out.print("a12: ");
9          double a12 = scanner.nextDouble();
10         System.out.print("b1: ");
11         double b1 = scanner.nextDouble();
12         System.out.print("a21: ");
13         double a21 = scanner.nextDouble();
14         System.out.print("a22: ");
15         double a22 = scanner.nextDouble();
16         System.out.print("b2: ");
17         double b2 = scanner.nextDouble();
18         giai(a11,a12,b1,a21,a22,b2);
19         scanner.close();
20     }
21
22     public static void giai(double a11,double a12,double b1,double a21,double a22,double b2) { 1 usage
23         double D = a11 *a22 - a12 *a21;
24         double D1 = b1 *a22 - b2 *a12;
25         double D2 = a11 *b2 - a21 *b1;
26
27         if (D == 0){
28             if (D1 == 0&&D2 == 0){
29                 System.out.println("he phuong trinh co vo so nghiem.");
30             }else{
31                 System.out.println("he phuong trinh vo nghiem.");
32             }
33         }else{
34             double x1 = D1 / D;
35             double x2 = D2 / D;
36             System.out.println("nghiem cua he: x1 = " + x1 + ", x2 = " + x2);
37         }
38     }
39 }

```

Output của chương trình:

```

Run  giaihept x
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=57193:C:\Program Files\Jet
nhap he so cho he phuong trinh bac nhap:
a11: 11
a12: 12
b1: 13
a21: 14
a22: 15
b2: 16
nghiem cua he: x1 = -1.0, x2 = 2.0

Process finished with exit code 0

```

Tất cả hệ số = 0:

```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=57196:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\conf -Didea.copyright.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\copyright -Didea.home.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin -Didea.platform.prefix=JDK -Didea.vendor.id=jetbrains -Didea.version=2024.3.3 -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin\idea_rt.jar=57196:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin
nhap he so cho he phuong trinh bac nhut:
a11: 0
a12: 0
b1: 0
a21: 0
a22: 0
b2: 0
he phuong trinh co vo so nghiem.
Process finished with exit code 0
```

Hệ phương trình bậc 2 1 ẩn:

```
1  import java.util.Scanner;
2  public class giaiPhuongTrinhBac2 {
3      public static void main(String[] args){
4          Scanner scanner = new Scanner(System.in);
5          System.out.println("nhap he so cho phuong trinh bac hai (ax^2 + bx + c = 0):");
6          System.out.print("a: ");
7          double a = scanner.nextDouble();
8          System.out.print("b: ");
9          double b = scanner.nextDouble();
10         System.out.print("c: ");
11         double c = scanner.nextDouble();
12         giai(a,b,c);
13         scanner.close();
14     }
15
16     public static void giai(double a,double b,double c) { 1 usage
17         if (a == 0){
18             giaiBac1(b,c);
19             return;
20         }
21
22         double delta = b * b - 4 * a * c;
23         if (delta > 0){
24             double x1 = (-b + Math.sqrt(delta)) / (2 * a);
25             double x2 = (-b - Math.sqrt(delta)) / (2 * a);
26             System.out.println("phuong trinh co hai nghiem phan biet: x1 = " + x1 + ", x2 = " + x2);
27         } else if (delta == 0){
28             double x = -b / (2 * a);
29             System.out.println("phuong trinh co nghiem kep: x = " + x);
30
31             System.out.println("phuong trinh co nghiem kep: x = " + x);
32         } else{
33             System.out.println("phuong trinh vo nghiem.");
34         }
35     }
36
37     public static void giaiBac1(double a, double b) { 1 usage
38         if (a == 0){
39             if (b == 0){
40                 System.out.println("phuong trinh co vo so nghiem.");
41             } else {
42                 System.out.println("phuong trinh vo nghiem.");
43             }
44         } else{
45             double x = -b / a;
46             System.out.println("nghiem cua phuong trinh la: x = " + x);
47         }
48     }
49 }
```

Nghiem kep:

```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=57247:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\conf -Didea.copyright.notification=false -Didea.log.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\log -Didea.platform.prefix=Java -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin\idea_rt.jar 57247
nhap he so cho phuong trinh bac hai (ax^2 + bx + c = 0):
a: 1
b: 2
c: 1
phuong trinh co nghiem kep: x = -1.0

Process finished with exit code 0
```

2 nghiệm phân biệt:

```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=57257:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\conf -Didea.copyright.notification=false -Didea.log.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\log -Didea.platform.prefix=Java -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin\idea_rt.jar 57257
nhap he so cho phuong trinh bac hai (ax^2 + bx + c = 0):
a: 2
b: 3
c: 1
phuong trinh co hai nghiem phan biet: x1 = -0.5, x2 = -1.0

Process finished with exit code 0
```

Vô nghiệm :

```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=57264:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\conf -Didea.copyright.notification=false -Didea.log.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\log -Didea.platform.prefix=Java -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin\idea_rt.jar 57264
nhap he so cho phuong trinh bac hai (ax^2 + bx + c = 0):
a: 1
b: 3
c: 5
phuong trinh vo nghiem.

Process finished with exit code 0
```

6.1 Write, compile and run the ChoosingOption program:

```
1 import javax.swing.JOptionPane;
2 public class ChoosingOption {
3     public static void main(String[] args){
4         int option = JOptionPane.showConfirmDialog( parentComponent: null, message: "Do you want to change to the first class ticket?");
5         JOptionPane.showMessageDialog( parentComponent: null, message: "You've chosen: "+(option==JOptionPane.YES_OPTION?"Yes":"No"));
6         System.exit( status: 0);
7     }
8 }
9
```

```
1 import javax.swing.JOptionPane;
2 public class ChoosingOption {
3     public static void main(String[] args){
4         int option = JOptionPane.showConfirmDialog( parentComponent: null, message: "Do you want to change to the first class ticket?");
5         JOptionPane.showMessageDialog( parentComponent: null, message: "You've chosen: " + (option==JOptionPane.YES_OPTION?"Yes":"No"));
6         System.exit( status: 0);
7     }
8 }
9
```

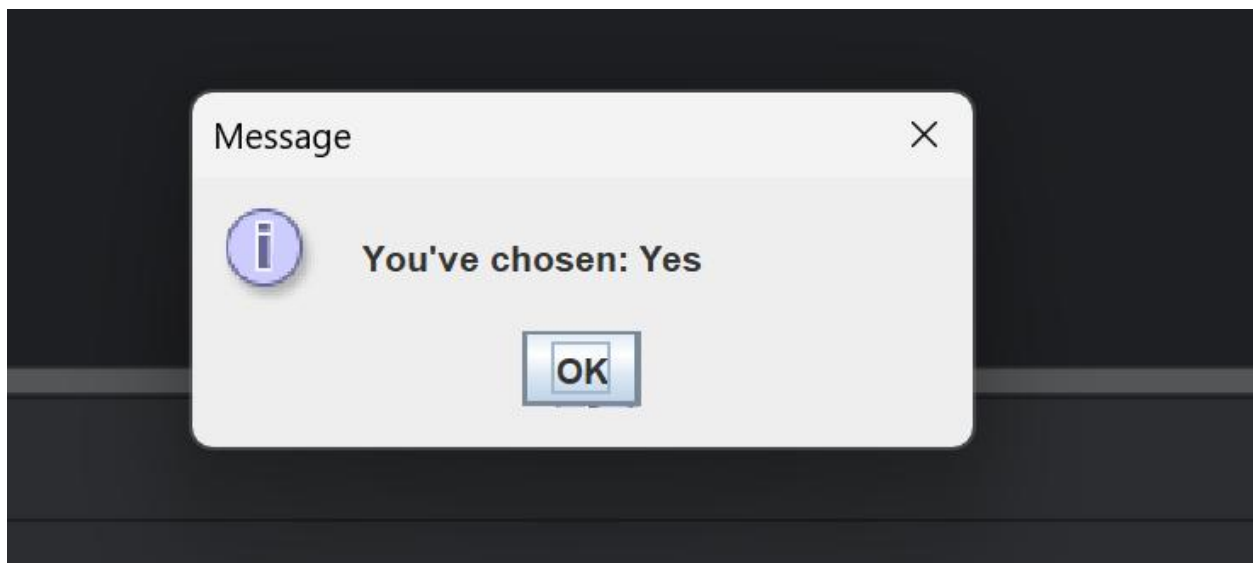
Select an Option

Do you want to change to the first class ticket?

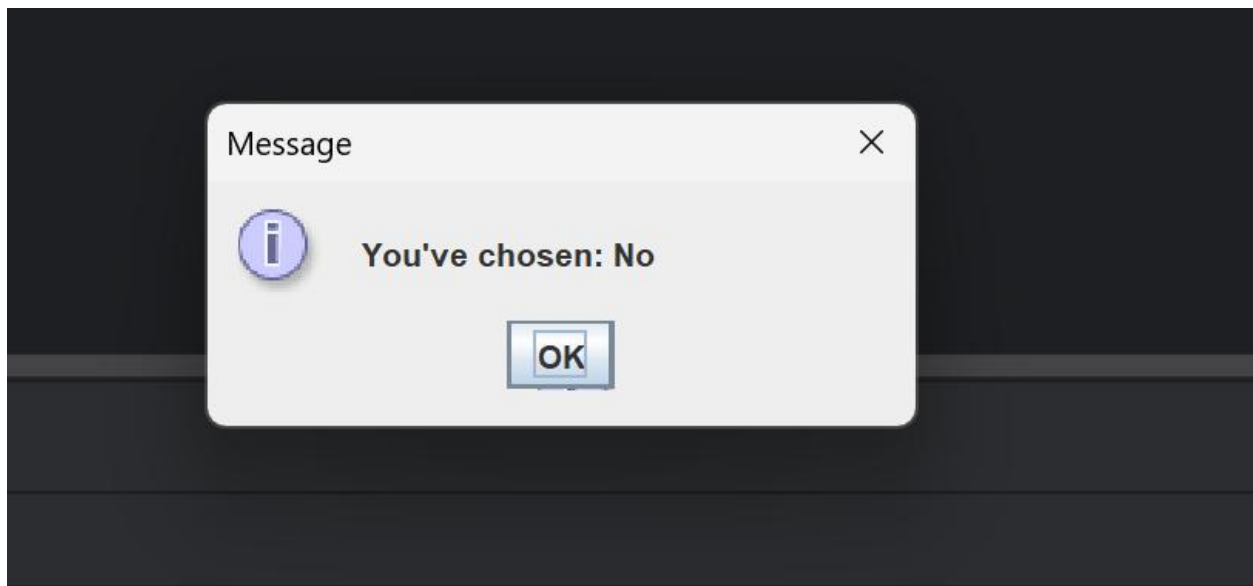
Yes No Cancel

-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=57277:C:\Program Files\JetF

9:1 CRLF UTF-8 4 spaces



Chạy lần 2:



6.2 Write a program for input/output from keyboard:

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

Output của chương trình:

```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=57627:C:\Program Files\JetB
What's your name?
tuan
How old are you?
20
How tall are you?
172
Mrs/Ms.tuan, 20 years old. Your height is 172.0

Process finished with exit code 0
|
```

gption > src > @ inputoutput 14:6 CRLF UTF-8 4 spaces

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

E.g. $n=5$:

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

Dưới đây là code của chương trình:

```
1 import java.util.Scanner;
2 public class tamgiacsao {
3     public static void main(String[] args){
4         Scanner scanner = new Scanner(System.in);
5         System.out.println("nhap so dong: ");
6         int row = scanner.nextInt();
7         for(int i=1;i<=row;i++){
8             for(int k=row-i;k>0;k--) { //số khoảng trắng đầu dòng
9                 System.out.print(" ");
10            }
11            for(int j=1;j<=(2*i-1);j++) { //số dấu *
12                System.out.print("*");
13            }
14            System.out.println();
15        }
16    }
```

Output của chương trình:

```
nhap so dong:
5
*
***
*****
*****
*****

Process finished with exit code 0
```

6.4 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.

Note: 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.

```

1  import java.util.Scanner;
2  public class ngaytrongthang {
3      public static void main(String[] args) {
4          Scanner scanner = new Scanner(System.in);
5          System.out.println("nhap thang va nam: ");
6          String thangchu = scanner.next();
7          int nam = scanner.nextInt();
8          if (nam < 1000){
9              System.out.println("nam khong hop le");
10             scanner.close();
11             return;
12         }
13         int thang = chuyendoithang(thangchu);
14         if (thang == -1){
15             System.out.println("thang khong hop le");
16             scanner.close();
17             return;
18         }
19
20         boolean namnhuan =(nam % 4 == 0 && (nam % 100 != 0 || nam % 400 == 0));
21
22         int songay;
23         if (thang == 1 || thang == 3 || thang == 5 || thang == 7 || thang == 8 || thang == 10 || thang == 12){
24             songay =31;
25         } else if (thang == 4 || thang == 6 || thang == 9 || thang == 11){
26             songay =30;
27         } else {
28             songay = namnhuan ? 29 : 28;
29         }
30
31         System.out.println("thang " +thangchu + " nam " +nam + " co " +songay + " ngay");
32         scanner.close();
33     }
34     public static int chuyendoithang(String thangchu) { 1 usage
35         switch (thangchu.toLowerCase()) {
36             case "jan": return 1;
37             case "feb": return 2;
38             case "mar": return 3;
39             case "apr": return 4;
40             case "may": return 5;
41             case "jun": return 6;
42             case "jul": return 7;
43             case "aug": return 8;
44             case "sep": return 9;
45             case "oct": return 10;
46             case "nov": return 11;
47             case "dec": return 12;
48             default: return -1;
49         }
50     }
51 }

```

Output của chương trình:

Năm nhuận:

```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=58163:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\conf -Didea.copyright.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\copyright -Didea.home.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin -Didea.platform.prefix=JDK -Didea.vendor.id=jetbrains -Didea.version=2024.3.3 -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin\idea_rt.jar=58163:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin
nhap thang va nam:
feb 2024
thang feb nam 2024 co 29 ngay
Process finished with exit code 0
```

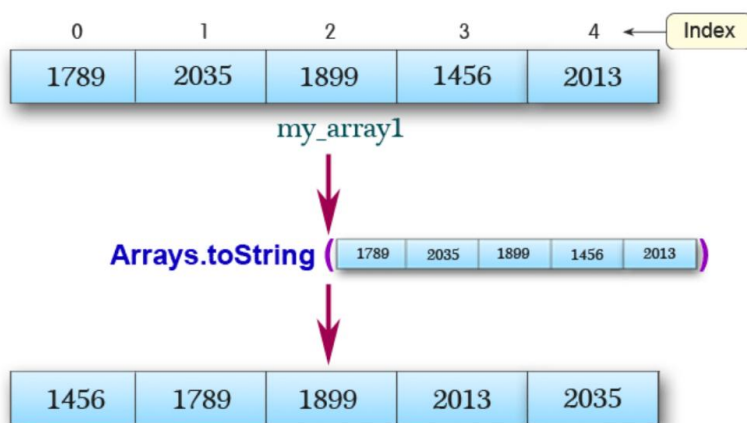
Không hợp lệ:

```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=58265:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\conf -Didea.copyright.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\copyright -Didea.home.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin -Didea.platform.prefix=JDK -Didea.vendor.id=jetbrains -Didea.version=2024.3.3 -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin\idea_rt.jar=58265:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin
nhap thang va nam:
fet 2024
thang khong hop le
Process finished with exit code 0
```

Năm không nhuận:

```
"C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=58278:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\conf -Didea.copyright.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\copyright -Didea.home.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin -Didea.platform.prefix=JDK -Didea.vendor.id=jetbrains -Didea.version=2024.3.3 -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin\idea_rt.jar=58278:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin
nhap thang va nam:
feb 2023
thang feb nam 2023 co 28 ngay
Process finished with exit code 0
```

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



Code của chương trình:

```

1  import java.util.Arrays;
2  import java.util.Scanner;
3  public class mang{
4      public static void main(String[] args){
5          Scanner scanner = new Scanner(System.in);
6          System.out.print("nhap so phan tu cua mang: ");
7          int n = scanner.nextInt();
8          int[] mang1 = new int[n];
9          System.out.println("nhap " + n + " phan tu:");
10         for (int i = 0; i < n; i++) {
11             mang1[i] = scanner.nextInt();
12         }
13         System.out.println("mang ban dau: " + Arrays.toString(mang1));
14         Arrays.sort(mang1);
15         System.out.println("mang sau khi sap xep: " + Arrays.toString(mang1));
16         int tong = 0;
17         for (int so : mang1) {
18             tong += so;
19         }
20         double trungbinh = (double) tong / n;
21
22         System.out.println("tong cac phan tu trong mang: " + tong);
23         System.out.println("gia tri trung binh cua cac phan tu: " + trungbinh);
24
25         scanner.close();
26     }
27 }
28

```

Dưới đây là output của chương trình:

```

C:\Program Files\Java\jdk-23\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=58540:C:\Program Files\Jet
nhap so phan tu cua mang: 4
nhap 4 phan tu:
1 2
3 4
mang ban dau: [1, 2, 3, 4]
mang sau khi sap xep: [1, 2, 3, 4]
tong cac phan tu trong mang: 10
gia tri trung binh cua cac phan tu: 2.5

Process finished with exit code 0

```

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

Note: You must create a new Java project for this exercise.

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

Dưới đây là code của chương trình:

```

1  import java.util.Scanner;
2  public class matran {
3      public static void main(String[] args) {
4          Scanner sc = new Scanner(System.in);
5
6          System.out.print("nhap so hang: ");
7          int r = sc.nextInt();
8          System.out.print("nhap so cot: ");
9          int c = sc.nextInt();
10
11         int[][] mat1 = new int[r][c];
12         int[][] mat2 = new int[r][c];
13         int[][] tongmat = new int[r][c];
14
15         System.out.println("nhap cac phan tu cua ma tran thu nhât:");
16         for (int i = 0; i < r; i++) {
17             for (int j = 0; j < c; j++) {
18                 mat1[i][j] = sc.nextInt();
19             }
20         }
21
22         System.out.println("nhap cac phan tu cua ma tran thu hai:");
23         for (int i = 0; i < r; i++) {
24             for (int j = 0; j < c; j++) {
25                 mat2[i][j] = sc.nextInt();
26             }
27         }
28
29         for (int i = 0; i < r; i++) {
30             for (int j = 0; j < c; j++) {
31                 tongmat[i][j] = mat1[i][j] + mat2[i][j];
32             }
33         }
34
35         System.out.println("tong cua hai ma tran:");
36         for (int i = 0; i < r; i++) {
37             for (int j = 0; j < c; j++) {
38                 System.out.print(tongmat[i][j] + " ");
39             }
40             System.out.println();
41         }
42
43         sc.close();
44     }
45 }
46

```

Output của chương trình:

```

C:\Program Files\Java\jdk-23\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=58660:C:\Program Files\Jet
nhap so hang: 2
nhap so cot: 2
nhap cac phan tu cua ma tran thu nhât:
1 2
3 4
nhap cac phan tu cua ma tran thu hai:
5 6
7 8
tong cua hai ma tran:
6 7
9 11
Process finished with exit code 0

```