

Homework 2

1. Convert the following if-else statement to switch statement.

```
if(i==1)
    System.out.println("!");
else if(i==2)
    System.out.println("@");
else if(i==3)
    System.out.println("#");
else
    System.out.println("*");
```

```
package homework;

public class Hw2Ex01 {
    public static void main(String[] args){
        int i = 0;

        switch(i) {
            case 1:
                System.out.println("!");
                break;
            case 2:
                System.out.println("@");
                break;
            case 3:
                System.out.println("#");
                break;
            default:
                System.out.println("*");
        }
    }
}
```

2. Write a program that takes a 2-digit positive integer (10~99) from the user, and then checks if ten's digit number and one's digit number are the same or not.

Example of how the input and output should look like:

Input 2digit number (10~99): 77

Yes! two numbers are same!

Input 2digit number (10~99): 95

No! two numbers are NOT same!

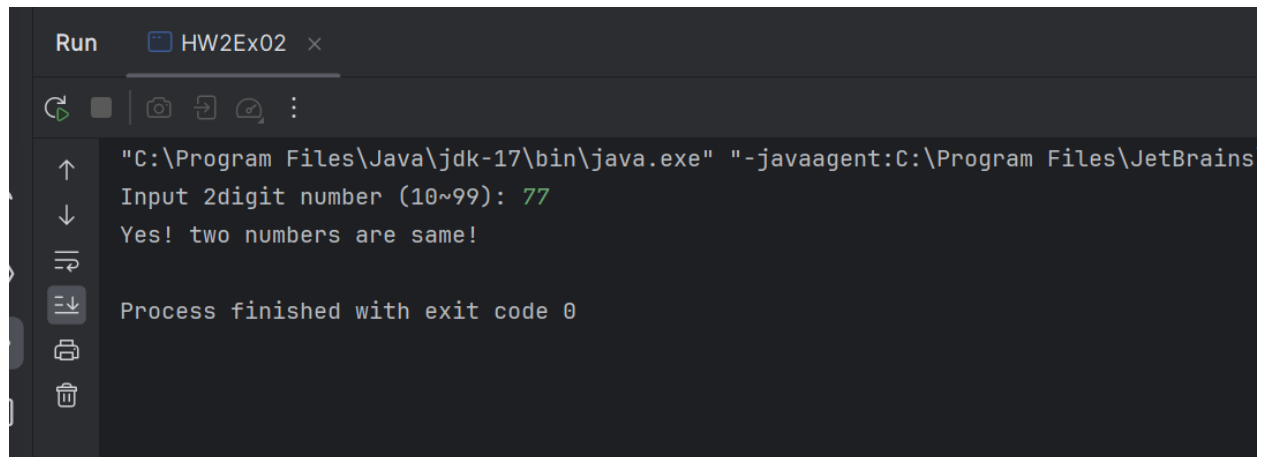
```
package homework;

import java.util.Scanner;

public class HW2Ex02 {
    public static void main(String[] args){
        Scanner scan = new Scanner(System.in);

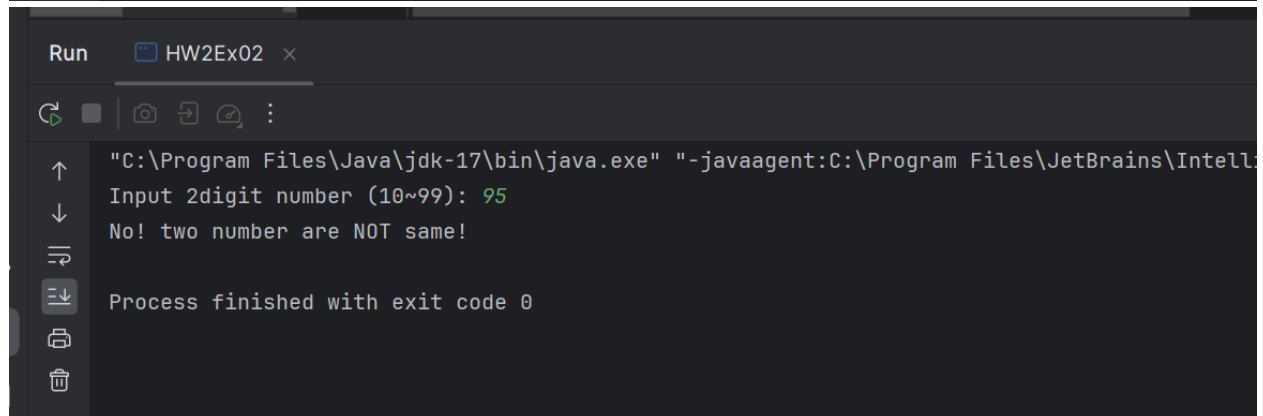
        System.out.print("Input 2digit number (10~99): ");
        int num = scan.nextInt();

        if(num % 11 == 0) {
            System.out.println("Yes! two numbers are same!");
        }else {
            System.out.println(("No! two number are NOT same!"));
        }
    }
}
```



The screenshot shows the Run window for the class HW2Ex02. The command line shows the execution of java.exe with the javaagent option. The input is 77, and the output is "Yes! two numbers are same!". The process finished with exit code 0.

```
Run HW2Ex02 x
"C:\Program Files\Java\jdk-17\bin\java.exe" "-javaagent:C:\Program Files\JetBrains
Input 2digit number (10~99): 77
Yes! two numbers are same!
Process finished with exit code 0
```



The screenshot shows the Run window for the class HW2Ex02. The command line shows the execution of java.exe with the javaagent option. The input is 95, and the output is "No! two number are NOT same!". The process finished with exit code 0.

```
Run HW2Ex02 x
"C:\Program Files\Java\jdk-17\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\Intell
Input 2digit number (10~99): 95
No! two number are NOT same!
Process finished with exit code 0
```

3. Write a simple calculator program. The available arithmetic operators should be +, -, *, and / operators. Operands and operators must be separated by whitespaces. The program must print the "Cannot divide by 0" string when a user tries to use the "divide by 0" operation. Use a switch-case statement.

Example of how the input and output should look like:

Operation >>100 / 2

100/2= 50

Operation >>500 * 30

500*30= 15000

Operation >>300 - 200

300-200= 100

Operation >>1 / 0

cannot divide by 0.

```
package homework;


import java.util.Scanner;

public class Hw2Ex03 {
    public static void main(String[] args) {
        Scanner scan = new Scanner(System.in);

        System.out.print("Operation >> ");
        int n = scan.nextInt();
        String operator = scan.next();
        int m = scan.nextInt();

        switch(operator) {
            case "+":
                int resultAdd = n + m;
                System.out.println(n + operator + m + "= " + resultAdd);
                break;
            case "-":
                int resultSub = n - m;
                System.out.println(n + operator + m + "= " + resultSub);
                break;
            case "*":
                int resultMul = n * m;
                System.out.println(n + operator + m + "= " + resultMul);
                break;
            case "/":
                if(m == 0) {
                    System.out.println("cannot divide by 0.");
                } else {
                    int resultDivide = n / m;
                }
            default:
                break;
        }
    }
}
```

```
        System.out.println(n + operator + m + "= " +
resultDivide);
    }
    break;
default:
    System.out.println("Invalid operator.");
}
}
```



The image shows a 'Run' console window for a program named 'Hw2Ex03'. The console output displays the command to run the Java program, the user input '300 - 2', the resulting output '300-2= 298', and a confirmation that the process finished with exit code 0.

```
Run Hw2Ex03 x
"C:\Program Files\Java\jdk-17\bin\java.exe" "-javaagent:C:\Program Files\JetBr
Operation >> 300 - 2
300-2= 298
Process finished with exit code 0
```



The image shows a 'Run' console window for the same program 'Hw2Ex03'. The console output displays the command to run the Java program, the user input '4 / 0', the resulting output 'cannot divide by 0.', and a confirmation that the process finished with exit code 0.

```
Run Hw2Ex03 x
"C:\Program Files\Java\jdk-17\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\Intelli
Operation >> 4 / 0
cannot divide by 0.
Process finished with exit code 0
|
```