

SELECTION STATEMENTS

IN THE NAME OF ALLAH

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

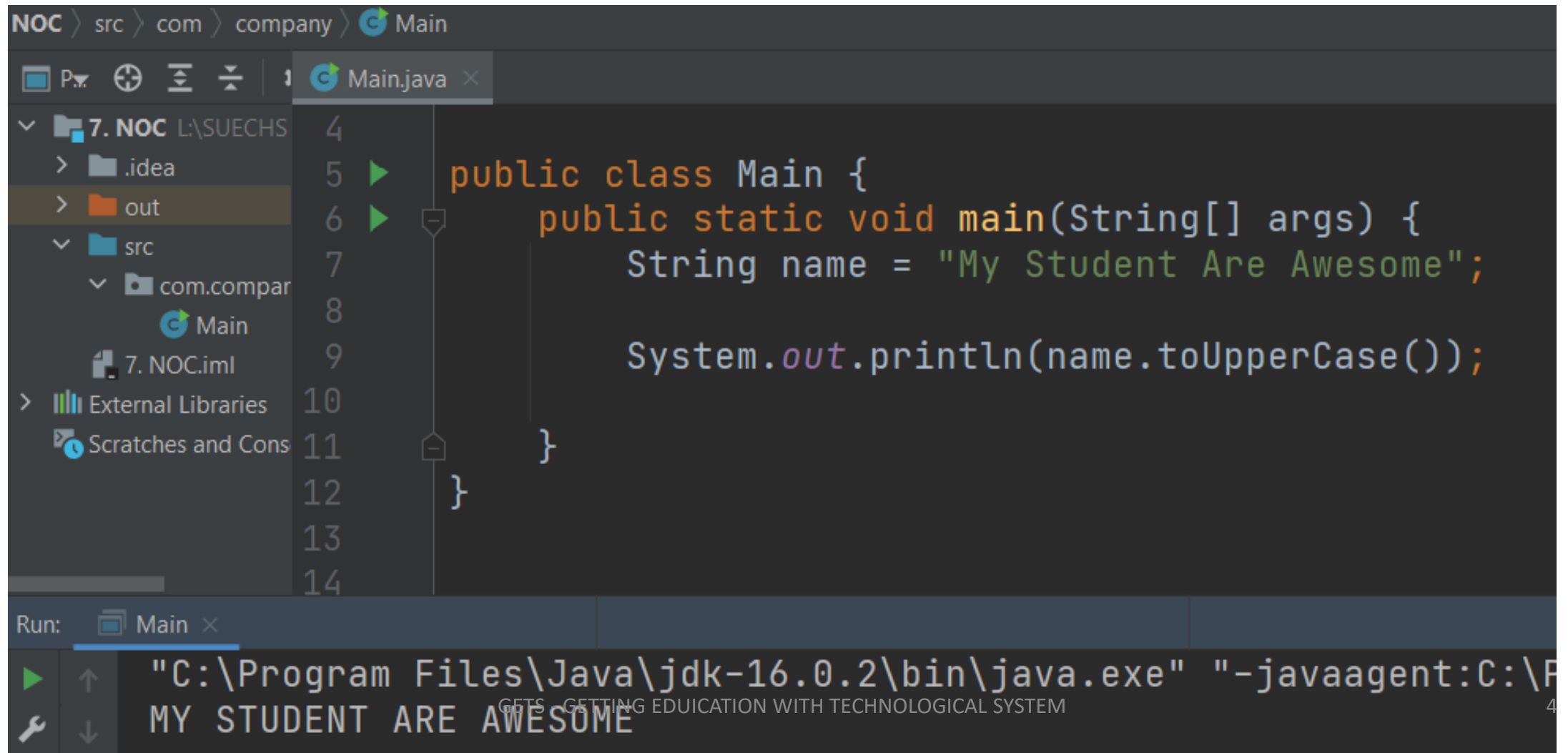
THE GRACIOUS, THE MERCIFUL.



GETS - GETTING EDUCATION WITH TECHNOLOGICAL SYSTEM

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How to make your text in Uppercase or Lowercase using methods....



The screenshot shows an IDE with a project named '7. NOC'. The file explorer on the left shows the project structure, including 'src/com/compar/Main'. The main editor displays the following Java code in 'Main.java':

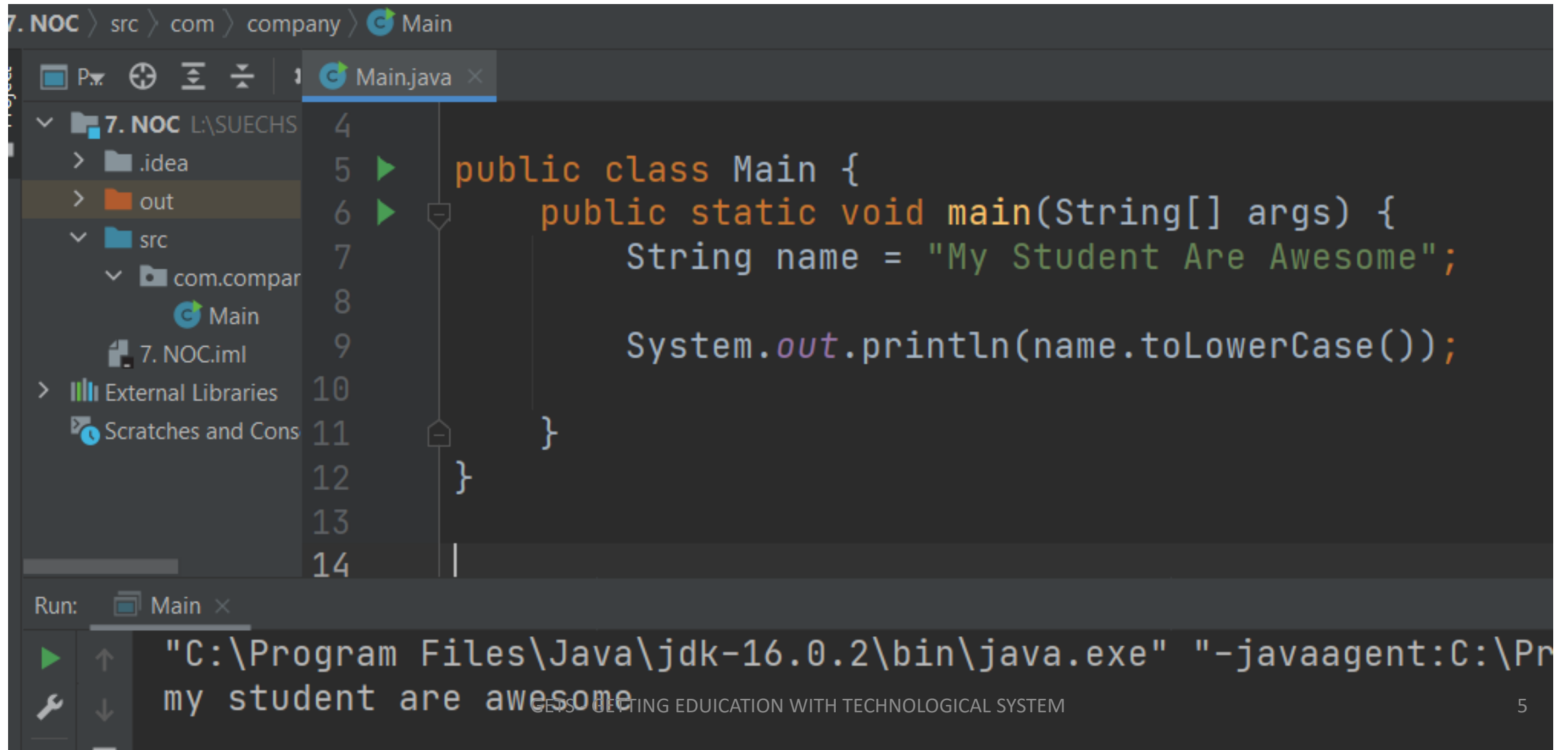
```
4  
5 public class Main {  
6     public static void main(String[] args) {  
7         String name = "My Student Are Awesome";  
8  
9         System.out.println(name.toUpperCase());  
10  
11     }  
12 }  
13  
14
```

Below the code editor, the 'Run' tab shows the execution command and output:

```
Run: C:\Program Files\Java\jdk-16.0.2\bin\java.exe "-javaagent:C:\P  
MY STUDENT ARE AWESOME
```

The output 'MY STUDENT ARE AWESOME' is displayed in all uppercase letters, demonstrating the use of the `toUpperCase()` method.

For Lowercase...



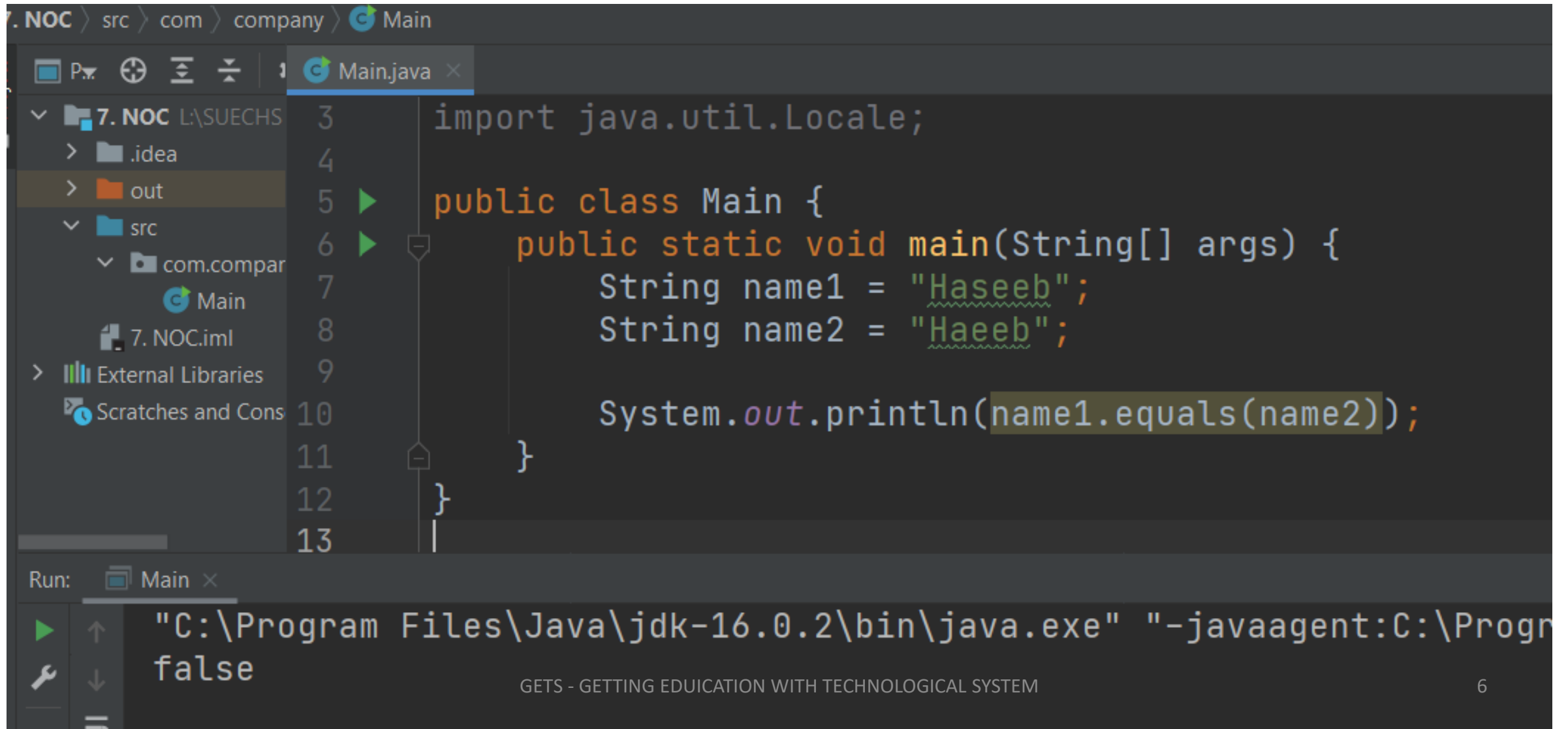
The screenshot shows an IDE window with a project named '7. NOC'. The file explorer on the left shows the project structure, including 'src' and 'com.compar' packages. The main editor displays the code for 'Main.java'. The code defines a 'Main' class with a 'main' method that prints the lowercase version of the string 'My Student Are Awesome'. The output window at the bottom shows the command used to run the program and the resulting output 'my student are awesome'.

```
4  
5 public class Main {  
6     public static void main(String[] args) {  
7         String name = "My Student Are Awesome";  
8  
9         System.out.println(name.toLowerCase());  
10  
11     }  
12 }  
13  
14
```

Run: Main

"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Pr
my student are awesome

Comparing the String that are equal or not



The screenshot shows an IDE with a project named '7. NOC'. The file explorer on the left shows the project structure: '7. NOC' (L:\SUECHS) containing '.idea', 'out', 'src', and '7. NOC.iml'. The 'src' folder contains a 'com.compar' package with a 'Main' class. The 'Main.java' file is open, showing the following code:

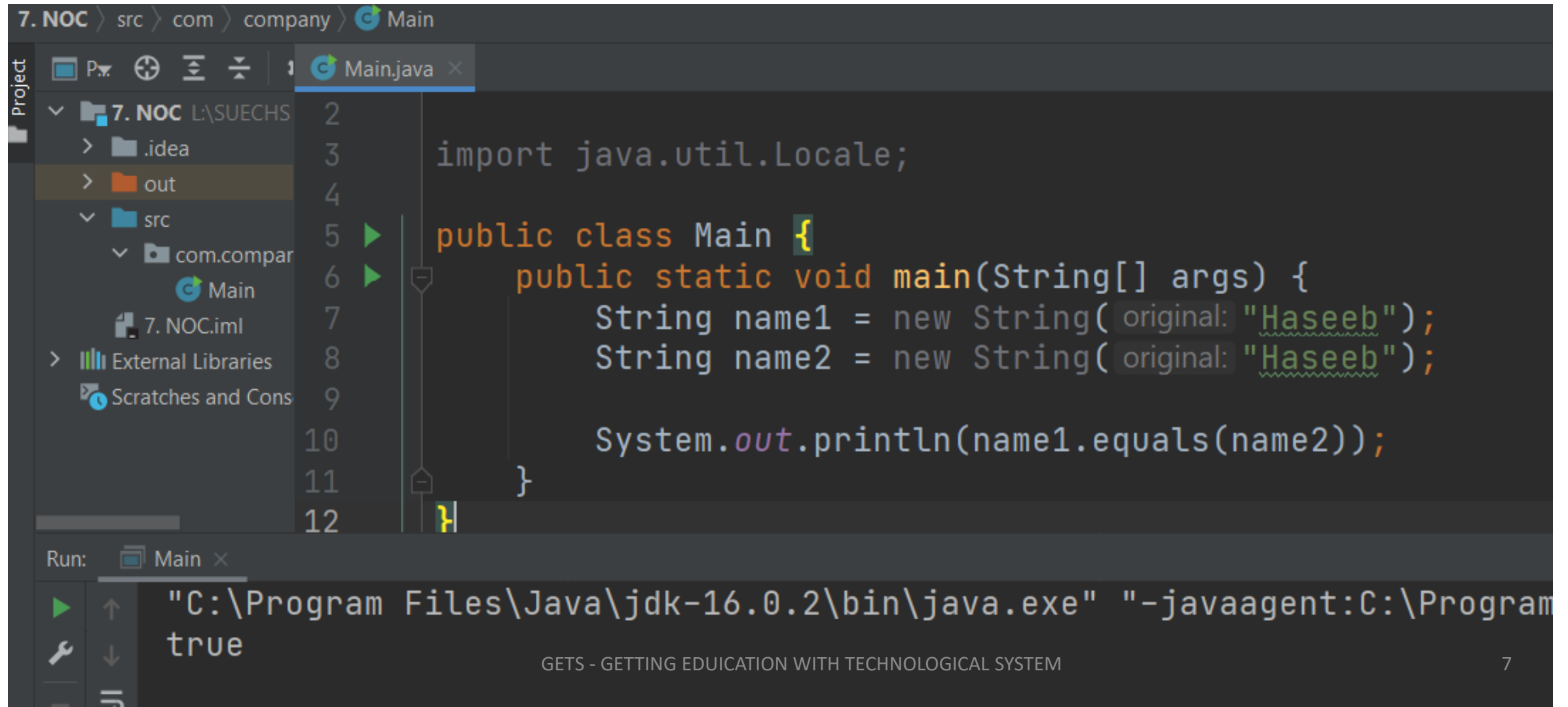
```
3 import java.util.Locale;
4
5 public class Main {
6     public static void main(String[] args) {
7         String name1 = "Haseeb";
8         String name2 = "Haeeb";
9
10        System.out.println(name1.equals(name2));
11    }
12 }
13
```

The code compares two strings, "Haseeb" and "Haeeb", using the `equals` method. The output of the program is shown in the Run console at the bottom:

```
Run: Main
"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Progrn
false
```

The output shows that the strings are not equal, resulting in `false`.

Comparing the String that are equal or not using creating the object method



The screenshot shows an IDE with a project named '7. NOC'. The file explorer on the left shows the project structure: '7. NOC' (L:\SUECHS) containing '.idea', 'out', 'src', 'com.compar' (containing 'Main'), and '7. NOC.iml'. The 'Main.java' file is open in the editor. The code is as follows:

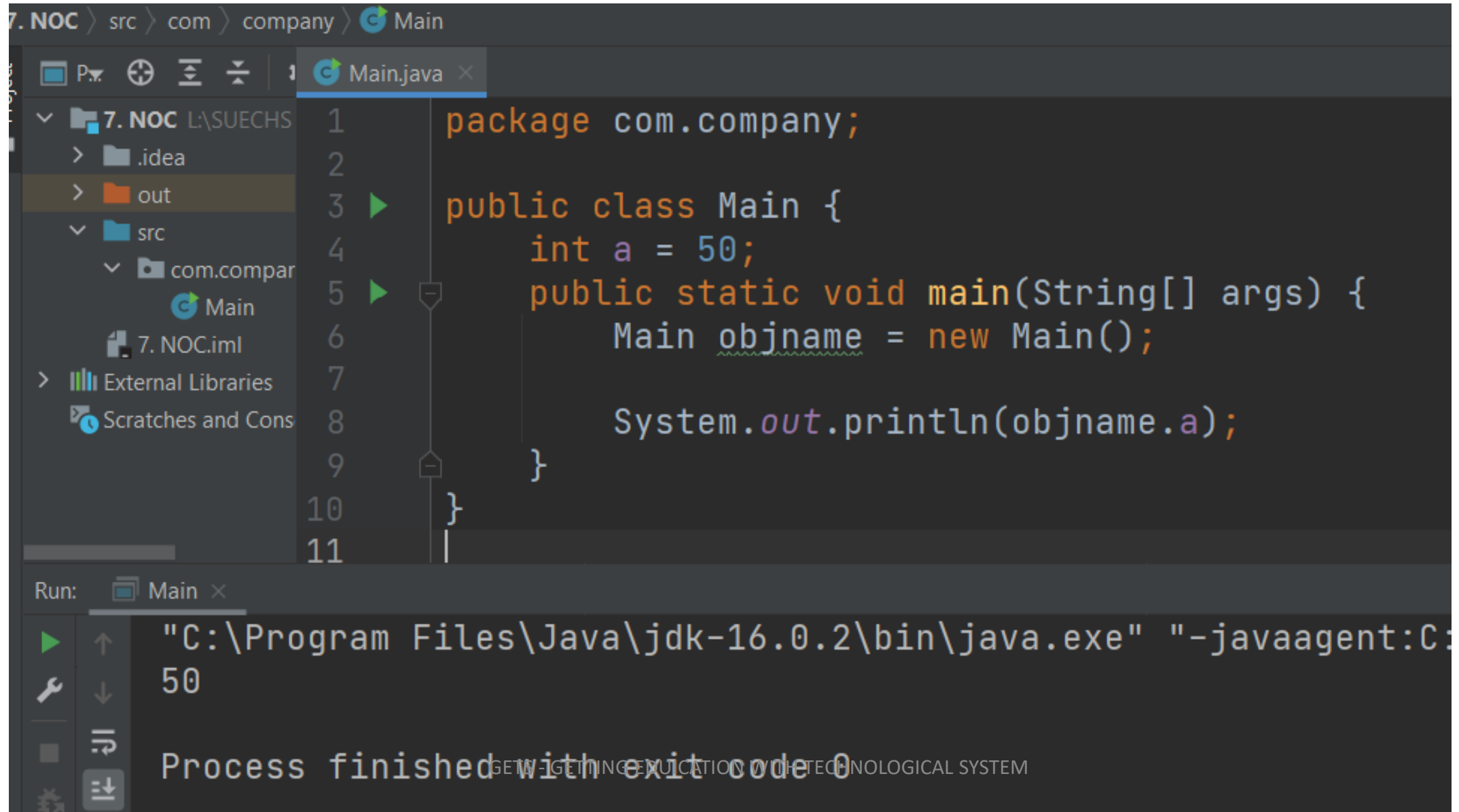
```
2  
3 import java.util.Locale;  
4  
5 public class Main {  
6     public static void main(String[] args) {  
7         String name1 = new String(original: "Haseeb");  
8         String name2 = new String(original: "Haseeb");  
9  
10        System.out.println(name1.equals(name2));  
11    }  
12
```

Below the editor, the 'Run' tab shows the execution of 'Main'. The command executed is: `"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files\Java\jdk-16.0.2\bin\javaagent.jar" -Dcom.sun.management.jmxremote=true`. The output is `true`.

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7

Instance Variable



The screenshot displays an IDE window with a project named '7. NOC'. The file explorer on the left shows the project structure, including 'src' and 'out' directories. The main editor shows the file 'Main.java' with the following code:

```
1 package com.company;  
2  
3 public class Main {  
4     int a = 50;  
5     public static void main(String[] args) {  
6         Main objname = new Main();  
7  
8         System.out.println(objname.a);  
9     }  
10 }  
11
```

Below the code editor, the 'Run' tab is active, showing the command used to execute the program:

```
"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:  
50  
Process finished with exit code 0
```

The output of the program is '50', which is the value of the instance variable 'a'.

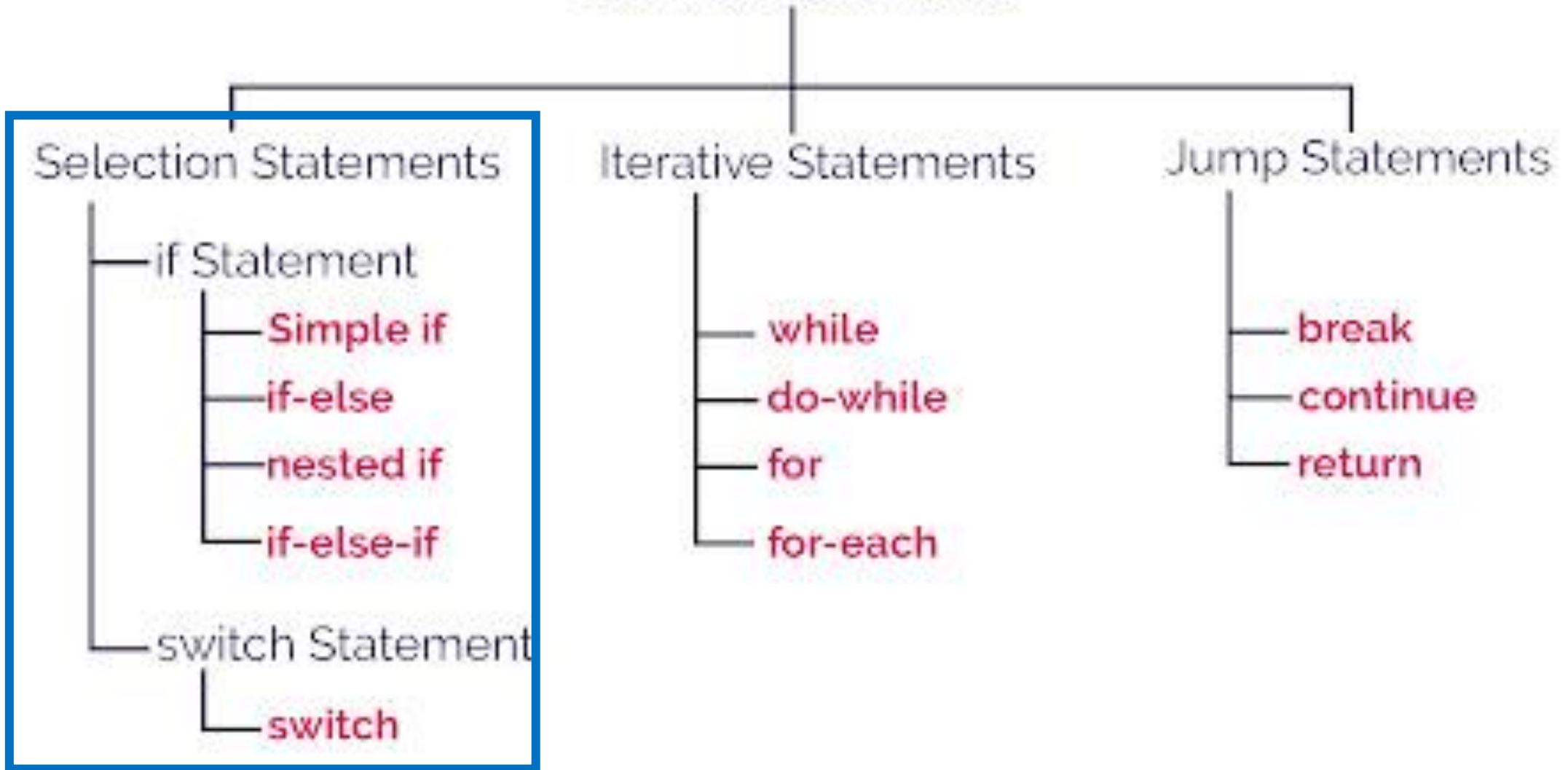
LECTURE: 5

JAVA CONTROL STATEMENTS



Control flow statements let you control the flow of the execution of the code in your program.

Control Statements



SELECTION STATEMENTS:

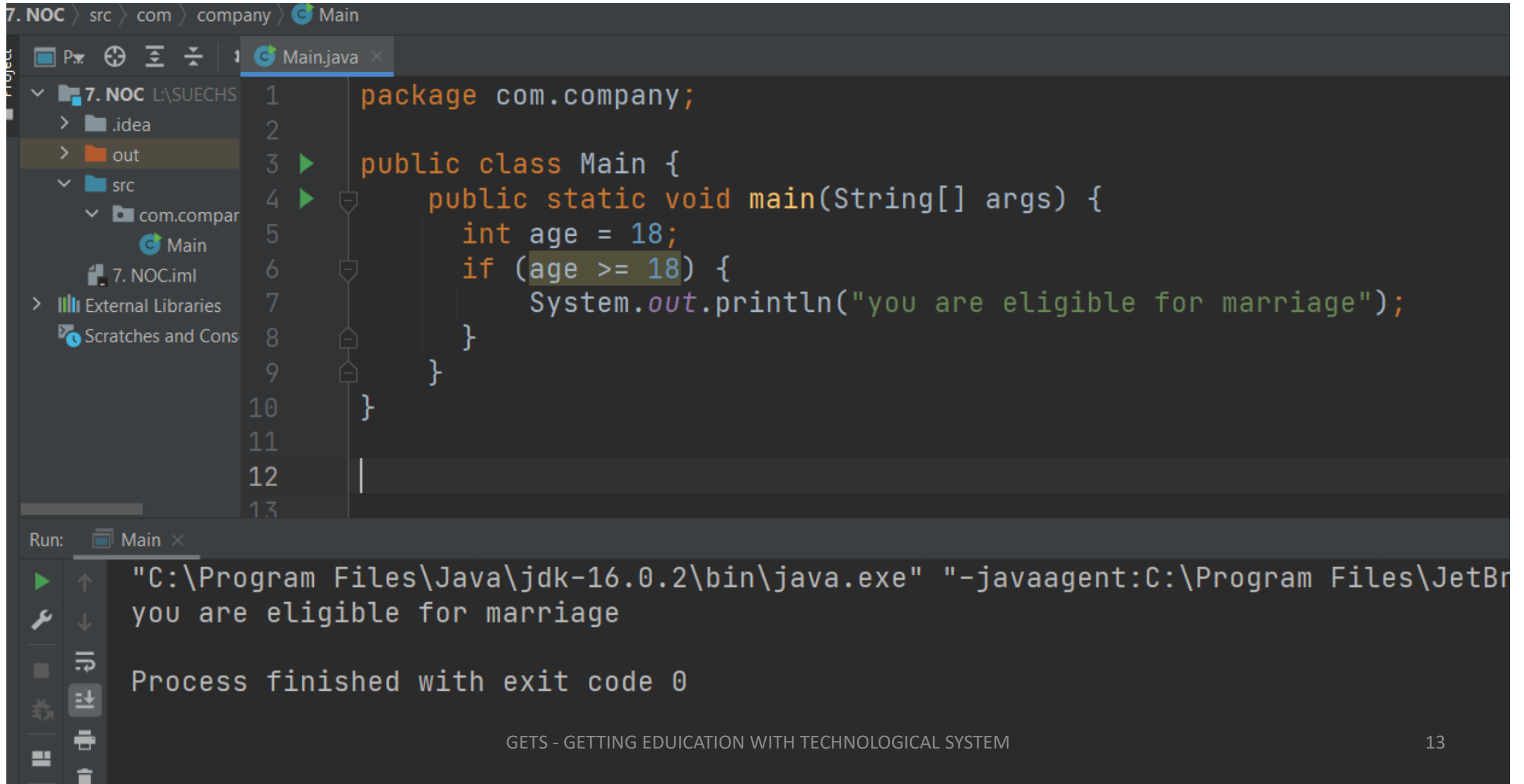
1.IF STATEMENT

2.IF-ELSE STATEMENT

3.IF ELSE-IF...ELSE-IF ELSE STATEMENT

4.NESTED IF STATEMENT

Java If Condition



The screenshot displays an IDE window for a Java project named '7. NOC'. The project structure on the left includes 'src' and 'out' folders, with 'Main' as the current file. The code in 'Main.java' defines a 'Main' class with a 'main' method that checks if a person is eligible for marriage based on their age. The code is as follows:

```
1 package com.company;  
2  
3 public class Main {  
4     public static void main(String[] args) {  
5         int age = 18;  
6         if (age >= 18) {  
7             System.out.println("you are eligible for marriage");  
8         }  
9     }  
10 }  
11  
12  
13
```

Below the code editor, the 'Run' tab shows the execution of the 'Main' class. The command executed is:

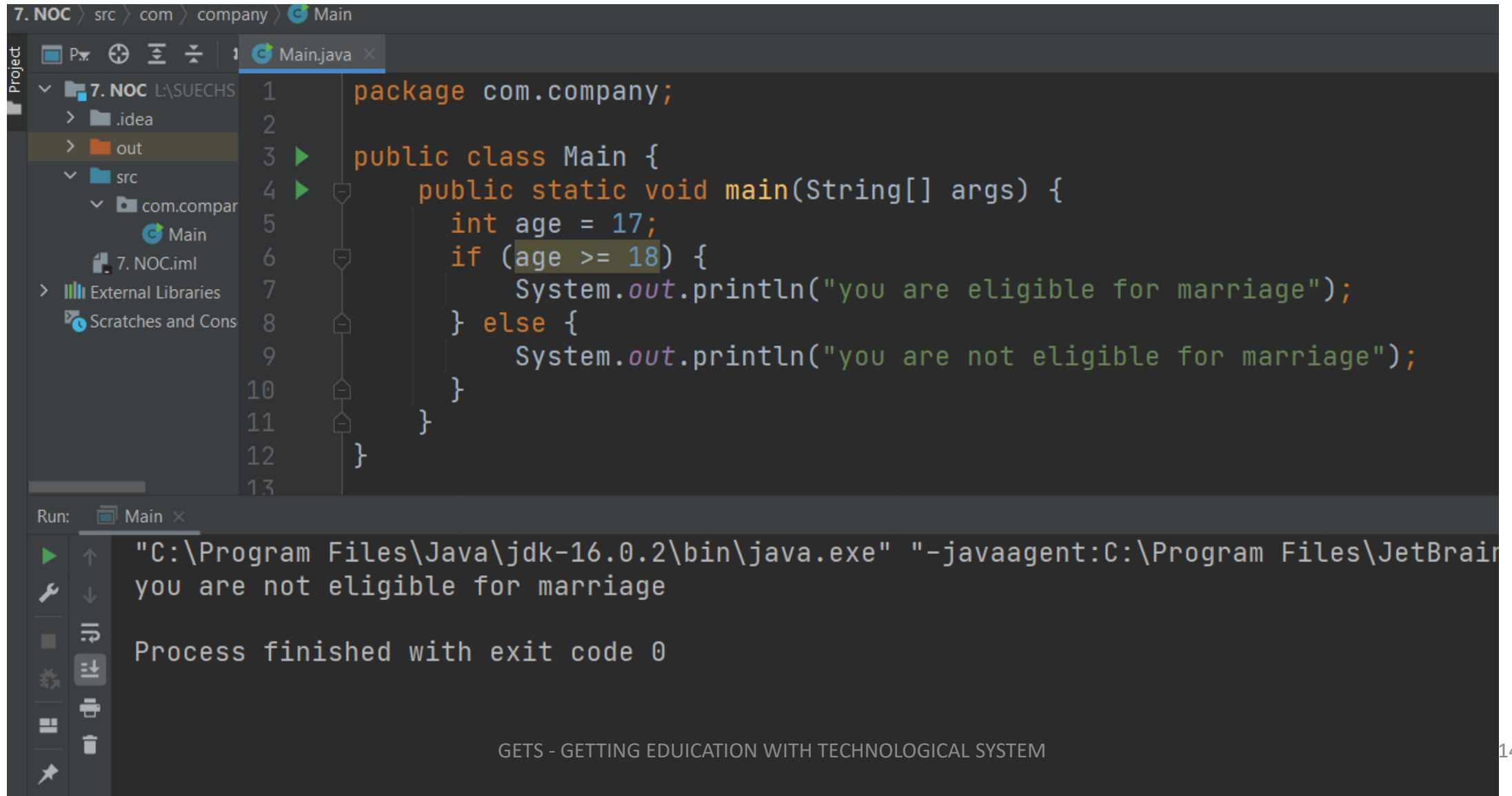
```
"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBr
```

The output of the program is:

```
you are eligible for marriage
```

The process finished with exit code 0.

Java if-else Condition



The screenshot displays an IDE window with a project named '7. NOC'. The left sidebar shows the project structure with folders like '.idea', 'out', 'src', and 'com.compar'. The main editor shows the file 'Main.java' with the following code:

```
1 package com.company;  
2  
3 public class Main {  
4     public static void main(String[] args) {  
5         int age = 17;  
6         if (age >= 18) {  
7             System.out.println("you are eligible for marriage");  
8         } else {  
9             System.out.println("you are not eligible for marriage");  
10        }  
11    }  
12 }  
13
```

Below the code editor, the 'Run' tab shows the execution output:

```
Run: Main ×  
"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA\bin\idea-agent.jar" -jar 7. NOC.jar  
you are not eligible for marriage  
  
Process finished with exit code 0
```

The output confirms that the program executed successfully and printed the message "you are not eligible for marriage" because the age (17) is less than 18.

```
Project
└── 7. NOC
    ├── .idea
    ├── out
    └── src
        └── com.compar
            └── Main
                └── 7. NOC.iml
External Libraries
Scratches and Cons

3 public class Main {
4     public static void main(String[] args) {
5         int marks = 105;
6
7         if(marks >=90 && marks<=100){
8             System.out.println("A1 grade");
9         }
10        else if(marks >=80 && marks<=90) {
11            System.out.println("A grade");
12        }
13        else if(marks >=70 && marks <=80){
14            System.out.println("B");
15        }
16        else if(marks >=60 && marks <=70){
17            System.out.println("C");
18        }
19        else if(marks >=50 && marks <=60){
20            System.out.println("D");
21        }
22        else if(marks >=0 && marks <=49){
23            System.out.println("Fail");
24        }
25        else {
26            System.out.println("Invalid");
27        }
28    }
```

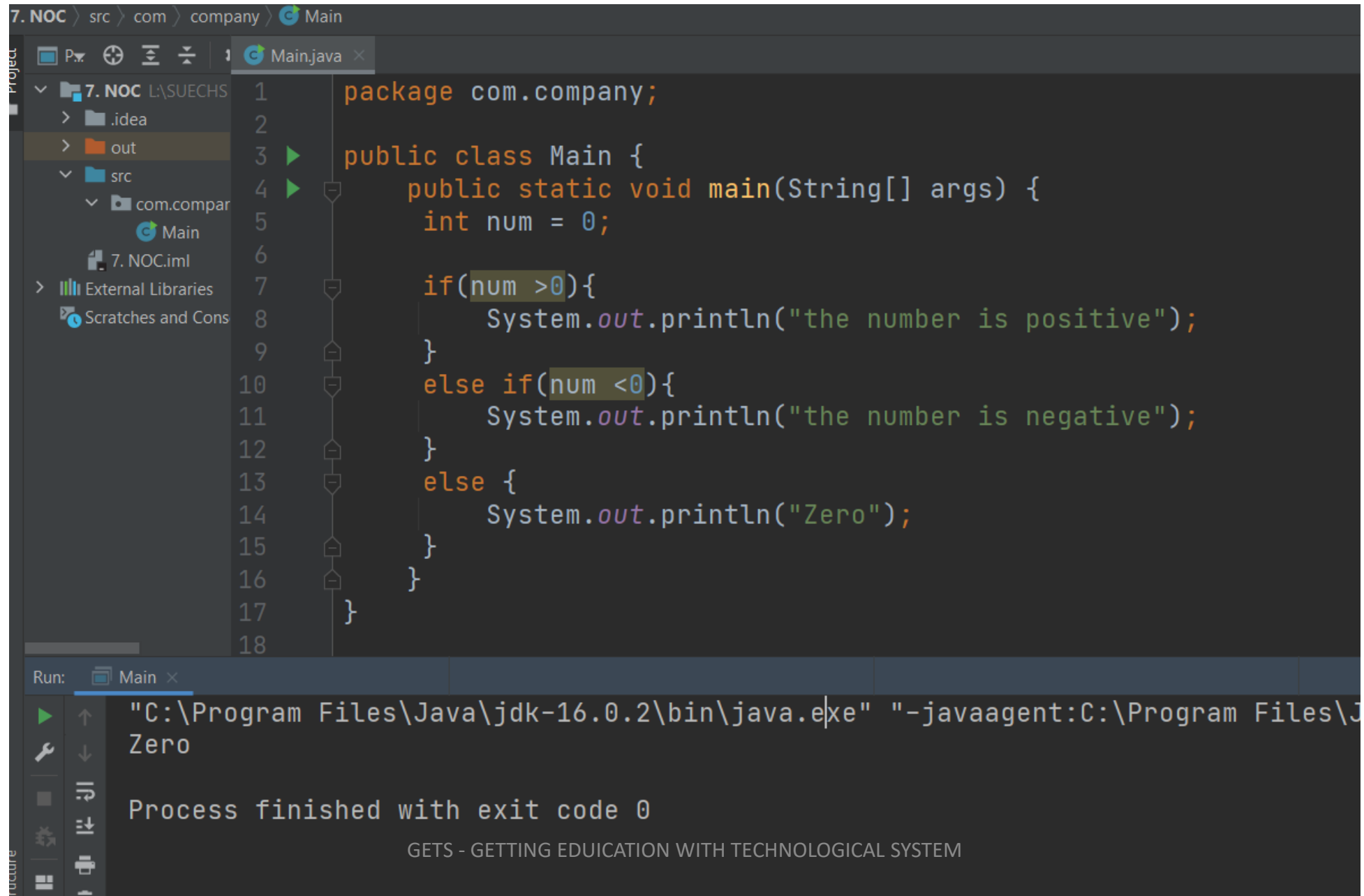
Run: Main

```
"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files
Invalid
```

Java
if
else-if...
else
Condition

Assignment: Find the number is positive
or negative or Zero

Assignment in practical



The screenshot shows an IDE window with a project named '7. NOC'. The file explorer on the left shows the project structure: '7. NOC' (L:\SUECHS) containing '.idea', 'out', 'src', 'com.compar', 'Main', '7. NOC.iml', 'External Libraries', and 'Scratches and Cons'. The main editor displays the code for 'Main.java'.

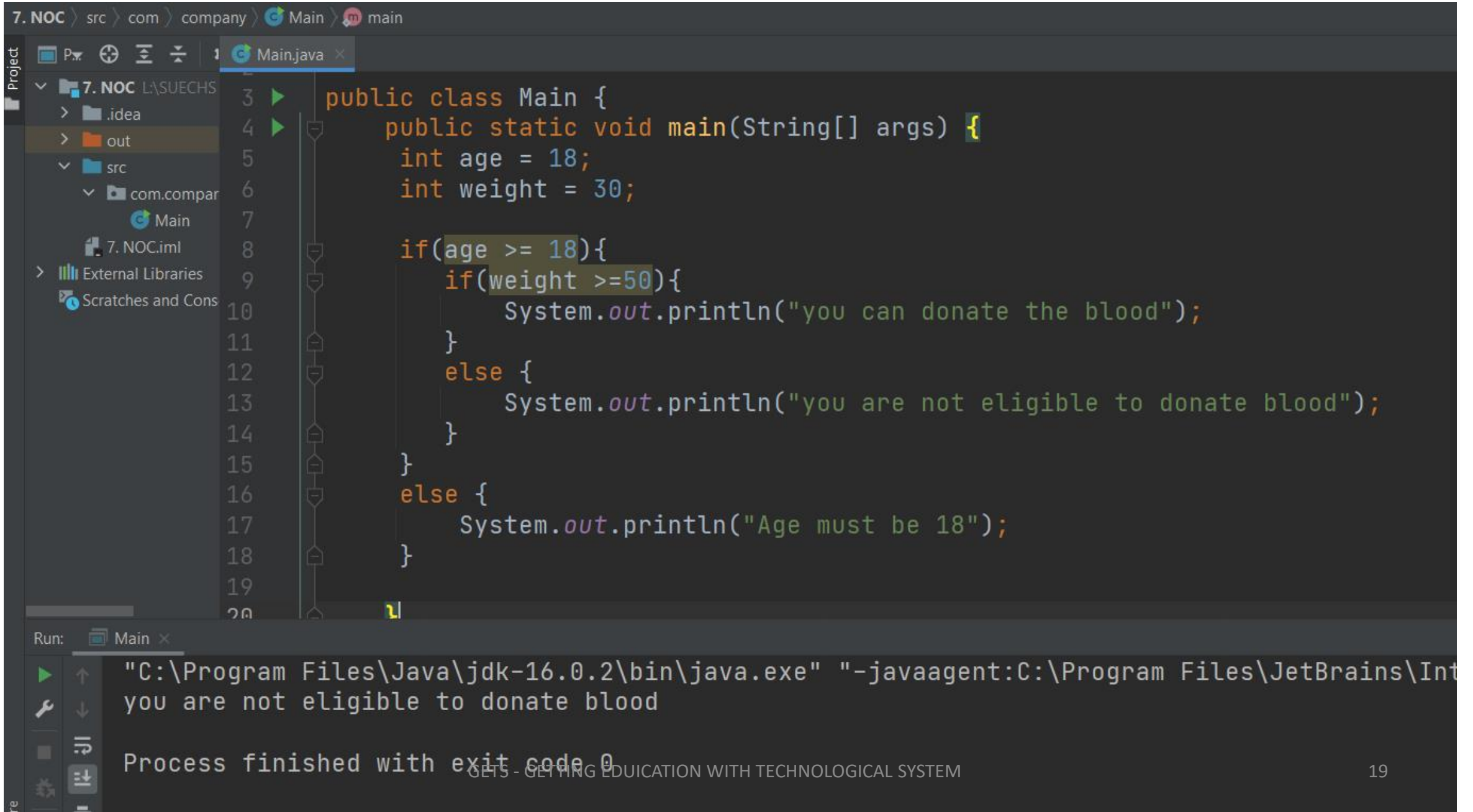
```
1 package com.company;  
2  
3 public class Main {  
4     public static void main(String[] args) {  
5         int num = 0;  
6  
7         if(num > 0){  
8             System.out.println("the number is positive");  
9         }  
10        else if(num < 0){  
11            System.out.println("the number is negative");  
12        }  
13        else {  
14            System.out.println("Zero");  
15        }  
16    }  
17 }  
18
```

The Run tab at the bottom shows the execution of the 'Main' class. The command executed is: `"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files\J`. The output is `Zero`. The process finished with exit code 0.

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Assignment: use nested if condition for blood donate whom age is greater than 18 and weight is above 50

Assignment in practical



The screenshot shows an IDE with a project named "7. NOC" and a file named "Main.java". The code defines a public class "Main" with a static method "main" that takes an array of strings "args". It initializes "age" to 18 and "weight" to 30. It then uses nested if-else statements to check if the user is eligible for blood donation based on age and weight. The output of the program is displayed in the "Run" console at the bottom.

```
7. NOC > src > com > company > Main > main
Main.java x
Project
7. NOC
  .idea
  out
  src
    com.compar
      Main
  7. NOC.iml
  External Libraries
  Scratches and Cons

3 public class Main {
4     public static void main(String[] args) {
5         int age = 18;
6         int weight = 30;
7
8         if(age >= 18){
9             if(weight >= 50){
10                System.out.println("you can donate the blood");
11            }
12            else {
13                System.out.println("you are not eligible to donate blood");
14            }
15        }
16        else {
17            System.out.println("Age must be 18");
18        }
19
20 }
```

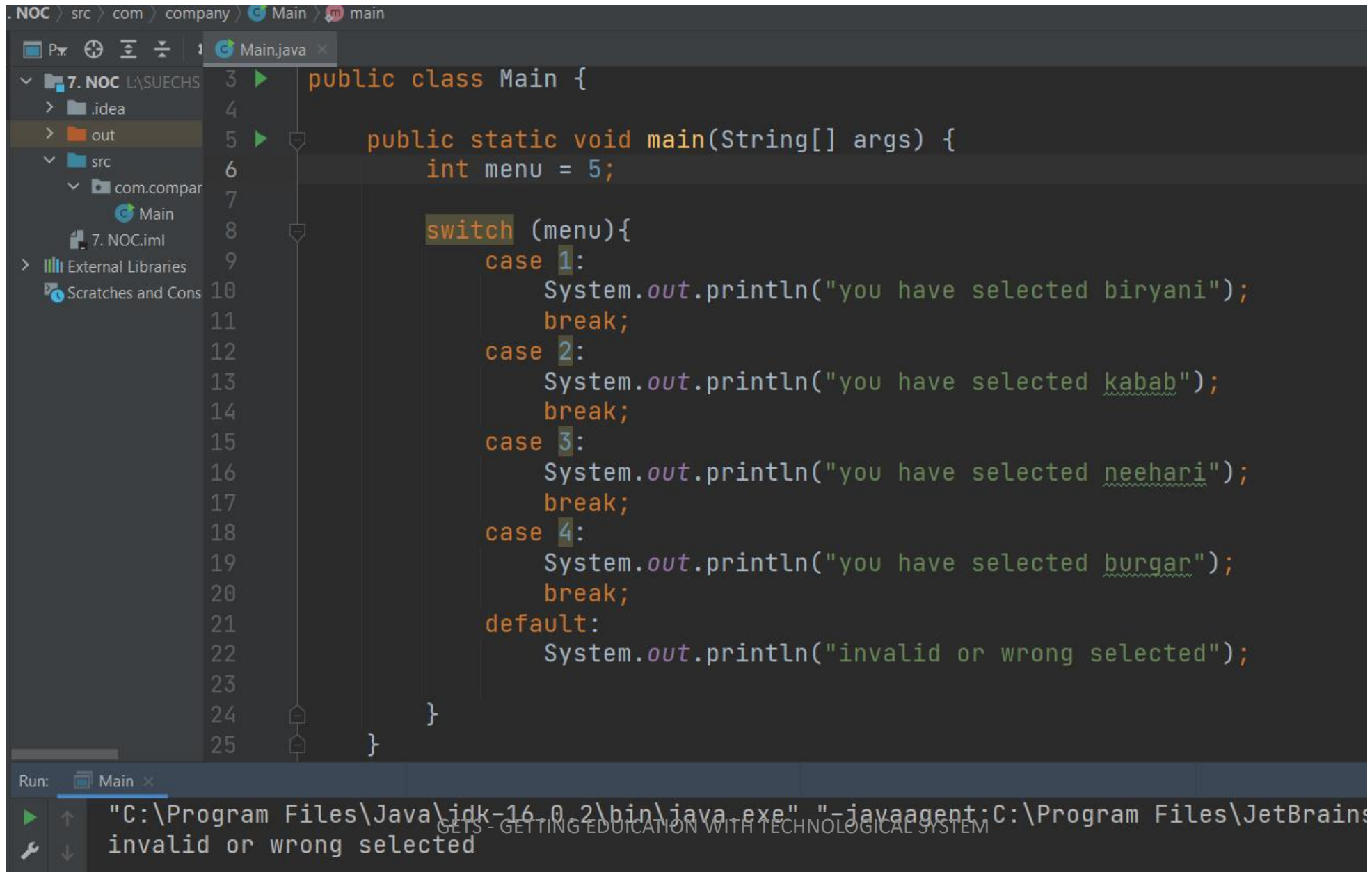
Run: Main x

```
"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\Int
you are not eligible to donate blood

Process finished with exit code 0
```

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Switch Statement



The screenshot shows an IDE with a project named '7. NOC'. The file 'Main.java' is open, displaying a Java class 'Main' with a 'main' method. The 'main' method initializes a variable 'menu' to 5 and uses a 'switch' statement to print messages based on the value of 'menu'. The cases are: 1 (biryani), 2 (kabab), 3 (neehari), 4 (burger), and default (invalid or wrong selected). The 'Run' button is clicked, and the output console shows the message 'invalid or wrong selected'.

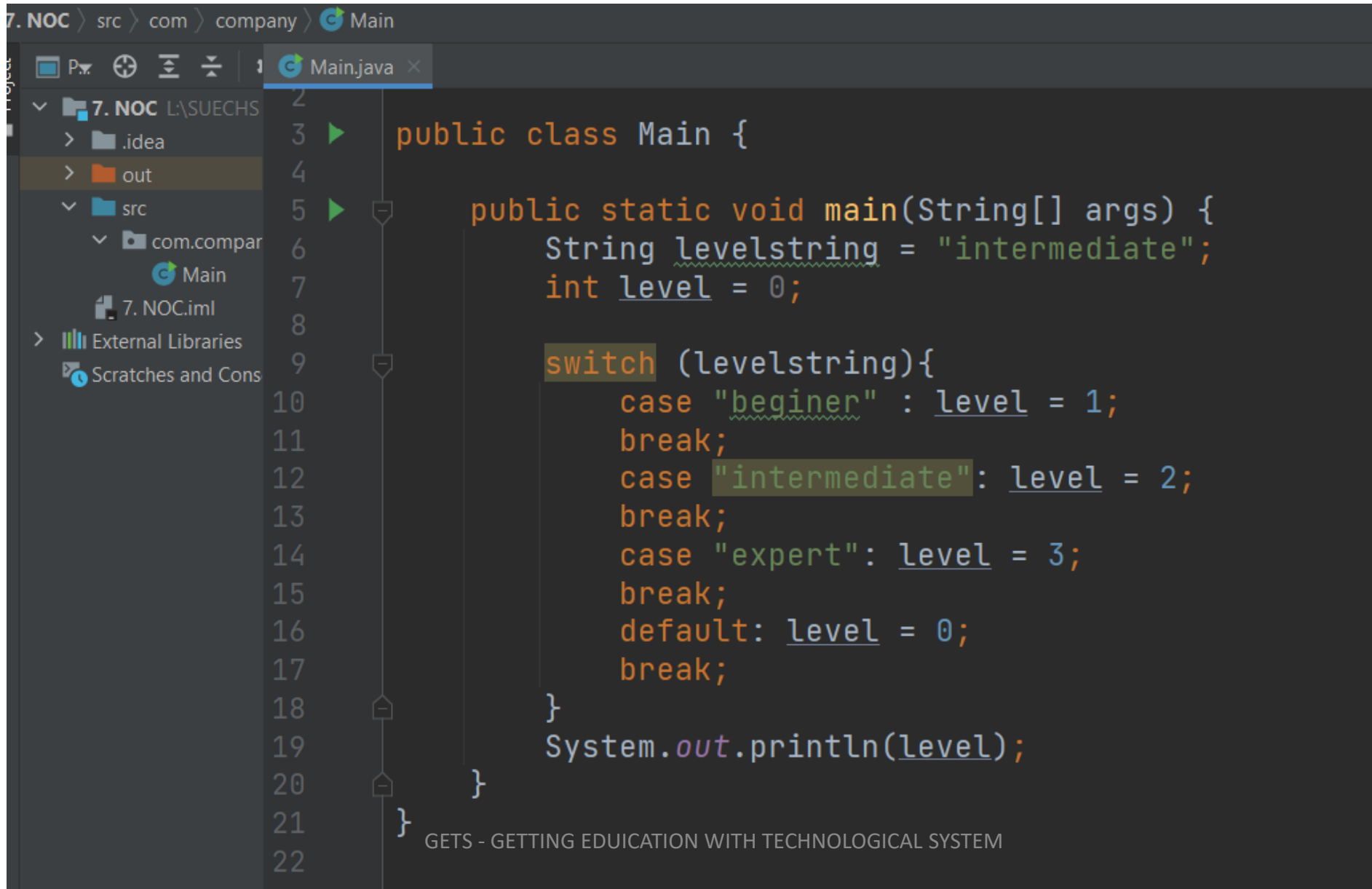
```
public class Main {  
    public static void main(String[] args) {  
        int menu = 5;  
  
        switch (menu){  
            case 1:  
                System.out.println("you have selected biryani");  
                break;  
            case 2:  
                System.out.println("you have selected kabab");  
                break;  
            case 3:  
                System.out.println("you have selected neehari");  
                break;  
            case 4:  
                System.out.println("you have selected burger");  
                break;  
            default:  
                System.out.println("invalid or wrong selected");  
        }  
    }  
}
```

Run: Main ×

"C:\Program Files\Java\jdk-16_0_2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\GETS - GETTING EDUCATION WITH TECHNOLOGICAL SYSTEM

invalid or wrong selected

Switch Statement with string



```
7. NOC > src > com > company > Main
Main.java x
2
3 public class Main {
4
5     public static void main(String[] args) {
6         String levelstring = "intermediate";
7         int level = 0;
8
9         switch (levelstring){
10             case "beginner" : level = 1;
11                 break;
12             case "intermediate": level = 2;
13                 break;
14             case "expert": level = 3;
15                 break;
16             default: level = 0;
17                 break;
18         }
19         System.out.println(level);
20     }
21 }
22
```

7. NOC - GETTING EDUCATION WITH TECHNOLOGICAL SYSTEM

Assignment:

Match the condition is that you are studying in university **part 3** and doing **2nd semester** using **Nested Switch Statement**