Decision Making

Conditional statements are used to perform different actions based on different conditions.
The **if statement** is one of the most frequently used conditional statements.
If the **if** statement's condition expression evaluates to true, the block of code inside the **if** statement is executed. If the expression is found to be false, the first set of code after the end of the **if** statement (after the closing curly brace) is executed.
Syntax:

```
if (condition) {
  //Executes when the condition is true
}
```

Any of the following comparison operators may be used to form the condition:
< less than
> greater than
!= not equal to
== equal to
<= less than or equal to
>= greater than or equal to

For example:

```
int x = 7;
if(x < 42) {
  System.out.println("Hi");
}
```

Try It Yourself

Remember that you need to use two equal signs (==) to test for equality, since a single equal sign is the assignment operator.

if...else Statements

An **if** statement can be followed by an optional **else** statement, which executes when the condition evaluates to false.
For example:

```
int age = 30;

if (age < 16) {
  System.out.println("Too Young");
} else {
  System.out.println("Welcome!");
}
//Outputs "Welcome"
```

Try It Yourself

As age equals 30, the condition in the **if** statement evaluates to false and the **else** statement is executed.

Nested if Statements

You can use one **if-else** statement inside another **if** or **else** statement.
For example:

```
int age = 25;
if(age > 0) {
  if(age > 16) {
    System.out.println("Welcome!");
  } else {
    System.out.println("Too Young");
  }
} else {
  System.out.println("Error");
}
//Outputs "Welcome!"
```

Try It Yourself

You can nest as many **if-else** statements as you want.

else if Statements

Instead of using nested **if-else** statements, you can use the **else if** statement to check multiple conditions.
For example:

```
int age = 25;

if(age <= 0) {
  System.out.println("Error");
} else if(age <= 16) {
  System.out.println("Too Young");
} else if(age < 100) {
  System.out.println("Welcome!");
} else {
  System.out.println("Really?");
}
//Outputs "Welcome!"
```

Try It Yourself

The code will check the condition to evaluate to true and execute the statements inside that block.

> You can include as many **else if** statements as you need.