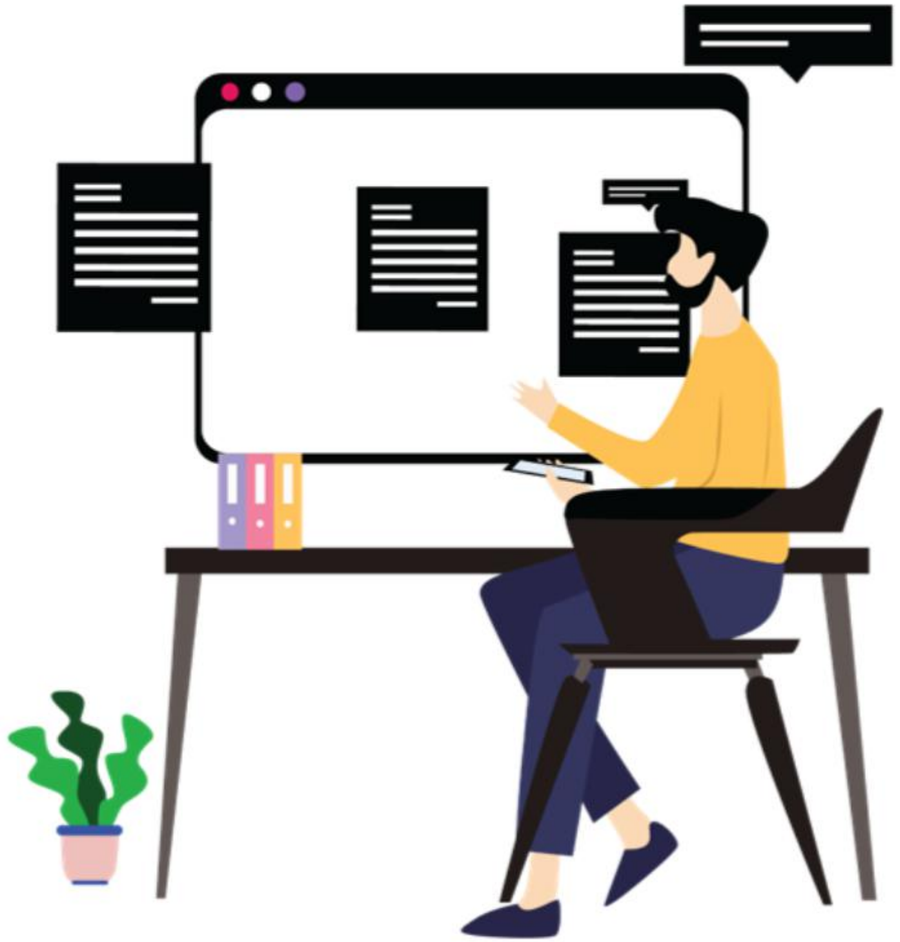
Learning Consolidation Implement Conditional Constructs

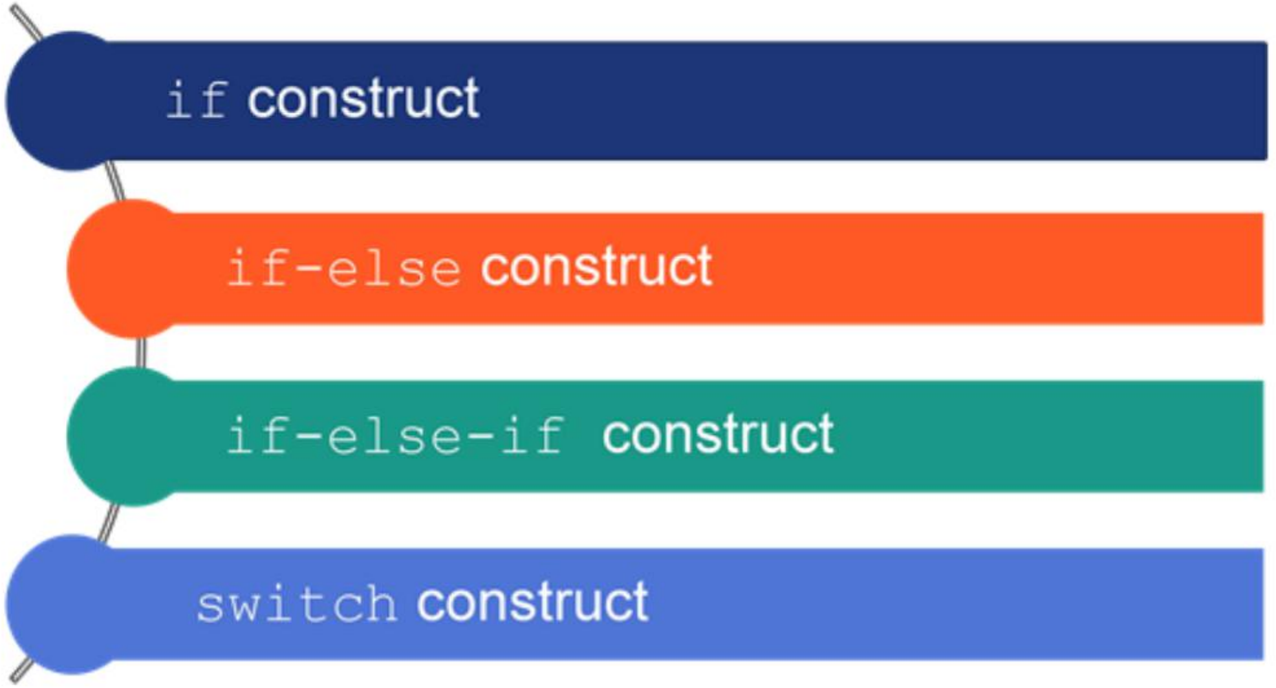


Learning Objectives

- Describe Conditional Constructs
- Explain If construct
- Differentiate If-Else and Switch
- Define Increment and Decrement Operator

Conditional Constructs

- A conditional **Construct** consists **of a condition and a task**. When the condition is true, the application performs the task. The condition part of a conditional statement is also called an expression.
- Below is the Conditional Constructs:



If-construct

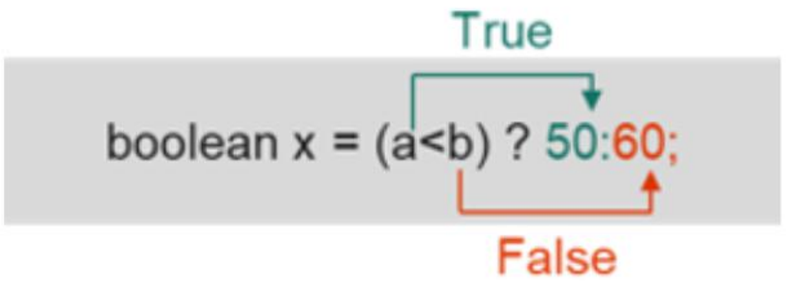
- The **Java if statements** are the simplest decision-making statements.
- They are used to specify a block of code to be executed if a specified condition is true.

```
if(condition)
{
    // Statements to execute if
    // condition is true
}
```

- Here the condition is an expression that will result in either true or false.

Ternary Operator

- The **ternary operator** is a type of Java conditional operator. The **ternary operator (?:)** consists of three operands (**A value involved in an operation** is called an operand).
- It is a one-liner replacement for the if-else statement.
- **The syntax of the ternary operator is:**
  - `Boolean_expression ? expression 1 : expression 2`
- Here Boolean_expression, expression1, and expression 2 are the three operands



```
switch (expression){
 case 1:
   //statement of case 1
 break;
 case 2:
  //statement of case 2
 break;
 case 3:
  //statement of case 3
 break;
 .
 .
 .
case N:
 //statement of case N
break;
default;
 //default statement
}
```

Switch Case

- The switch statement is used to test the equality of a variable against several values specified in the test cases.
- The expression is evaluated once and compared with the values of each case.
- Here the expression can be a conditional expression and it can be any data type.

If-Else vs. Switch

If-Else	Switch
If statement is used to select only two alternatives	The switch statement is used to select multiple alternatives.
It is difficult to edit the if-else statement, if the nested if-else statement is used.	It is easy to edit switch cases as, they are recognized easily.
It contains either logical or equality expression.	It contains a single expression which can be either a character, integer or String variable.

Increment and Decrement Operators

- Java also provides increment and decrement operators:
  - ++ and -- respectively
  - ++ increases the value of the operand by **1**
  - -- decreases it by **1**

```
int num = 5;

// increase num by 1
++num;
```