LEARNING ACTIVITY SHEET
SPECIAL PROGRAM IN ICT
BASIC PROGRAMMING 8
Third Quarter, Week 2
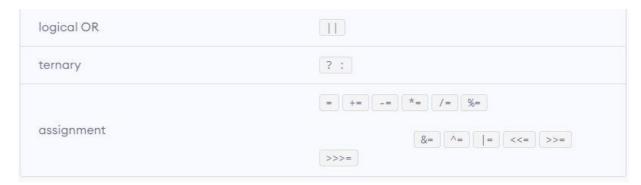
JAVA OPERATOR PRECEDENCE

Background Information for Learners

Operator precedence determines the order in which the operators in an expression are evaluated.

Operator Precedence Table

The table below lists the precedence of operators in Java; higher it appears in the table, the higher its precedence.

Java Operator Precedence	
Operators	Precedence
postfix increment and decrement	`++` `--`
prefix increment and decrement, and unary	`++` `--` `+` `-` `~` `!`
multiplicative	`*` `/` `%`
additive	`+` `-`
shift	`<<` `>>` `>>>`
relational	`<` `>` `<=` `>=` `instanceof`
equality	`==` `!=`
bitwise AND	`&`
bitwise exclusive OR	`^`
bitwise inclusive OR	`|`
logical AND	`&&`

logical OR	`||`
ternary	`? :`
assignment	`=` `+=` `-=` `*=` `/=` `%=` `&=` `^=` `|=` `<<=` `>>=` `>>>=`

Example: Operator Precedencce

```java
class Precedence {    public static void
main(String[] args) {

    int a = 10, b = 5, c = 1, result;
result = a-++c-++b;

    System.out.println(result);
    }
}
```

Output:

```
2
```

The operator precedence of prefix increment (++) is higher than that of subtraction operator (-). Hence,

```java
result = a-++c-++b;
```

is equivalent to

```java
result = a-(++c)-(++b);
```

or

```java
result = 10-(2)-(6);
```

When dealing with multiple operators and operands in a single expression, you can use parentheses like in the above example for clarity. The expression inside the parentheses is evaluated first.

Learning Competency with Code

Use operator precedence to assess a Java expression.

Exercises/Activities

ACTIVITY 1

Direction: Type your answer in the Private Comment section of our Goggle Classroom

1. **Logical AND**
2. **Postfix increment and decrement**
3. **Equality**
4. **Relational**
5. **Multiplicative**

ACTIVITY 2

Direction: Analyze the code below and type your answer in the Private Comment section of our Goggle Classroom

```java
class Precedence {      public static void
main(String[] args) {

    int a = 35, b = 10, c = 7, result;
result = a-++c-++b;

    System.out.println(result);
    }
}
```

Reflection: Type your answer in the Private Comment Section of out Google Classroom

➢ Why is it important to know and understand operator precedence in java programming?

References for Learners

https://www.programiz.com/java-programming/operator-precedence

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