

Operators and Loops Assignment Answer

Q1. What are the Conditional Operators in Java?

Ans:- Conditional operators in Java are used to perform different actions based on different conditions. The primary conditional operators are:

1. **Ternary Operator (?:)**:- It's a shorthand for the if-else statement. It takes three operands: a condition, a result for true, and a result for false.
2. **Logical AND (&&)**:- It returns true if both conditions are true.
3. **Logical OR (||)**:- It returns true if at least one of the conditions is true.

Q2. What are the types of operators based on the number of operands?

Ans:- **Unary Operators**:- These operate on a single operand. Examples include increment (++), decrement (--), and logical NOT (!).

Binary Operators:- These require two operands. Common examples are addition (+), subtraction (-), and logical AND (&&).

Ternary Operator:- This uses three operands. The most notable is the conditional operator (?:), which acts as a shortcut for an if-else statement.

Q3. What is the use of Switch case in Java programming?

Ans:- The switch case in Java is used to simplify complex decision-making in your code. Instead of writing multiple if-else statements, you can use a switch statement to choose from many possible outcomes based on the value of a variable.

Q4. What are the priority levels of arithmetic operation in Java?

Ans:- In Java, arithmetic operations have specific priority levels, also known as operator precedence. This determines the order in which operations are performed in an expression. **(Multiplication *, Division /, and Modulus %)**:- These operations are performed next, from left to right. **(Addition + and Subtraction -)**:- These are performed last, also from left to right.

Q5. What are the conditional Statements and use of conditional statements in Java?

Ans:- Conditional statements in Java allow you to execute certain blocks of code based on specific conditions. The main conditional statements are:

1. **if Statement**: Executes a block of code if a specified condition is true.
2. **if-else Statement**: Executes one block of code if a condition is true, and another block if it is false.

3. **else if Statement:** Checks multiple conditions sequentially, executing the corresponding block of code for the first true condition.
4. **switch Statement:** Selects one of many possible blocks of code to execute, based on the value of a variable.

Q6. What is the syntax of if else statement?

Ans:- if (condition) {

// code if true

} else {

// code if false

}

Q7. What are the 3 types of iterative statements in java?

Ans:- In Java, there are three types of iterative (loop) statements used to execute a block of code.

for loop: Repeats a block of code a specified number of times.

while loop: Continues to execute a block of code as long as a given condition is true.

do-while loop: Similar to the while loop, but it guarantees that the block of code is executed at least once before checking the condition.

Q8. Write the difference between for loop and do-while loop?

Ans:- **for Loop:**

- Syntax: for (initialization; condition; increment/decrement) { // code block }
- Executes a block of code a specified number of times.
- Checks the condition before entering the loop.

do-while Loop:

- Syntax: do { // code block } while (condition);
- Always executes the code block at least once before checking the condition.
- Checks the condition after the code block has executed.

Q9. Write a program to print numbers from 1 to 10.

Ans:- public class Main{

```
public static void main(String[] args){  
    int i;  
    for(i=1; i<=10; i++){  
        if(i<=10){  
            System.out.println(i);  
        }  
    }  
}
```