

1. What are conditional statements in Java?

Conditional statements in Java are used to execute a block of code only if a certain condition is met. There are two main types of conditional statements in Java: if statements and switch statements.

2. What is the difference between if and switch statements in Java?

If statements allow you to check a single condition and execute code based on whether that condition is true or false. Switch statements allow you to check multiple conditions and execute different blocks of code based on the value of a single variable.

3. What is the syntax of the if statement in Java?

The basic syntax of an if statement in Java is as follows:

```
if (condition) {  
    // code to be executed if condition is true  
}
```

4. How many conditions can be checked in a single if statement?

In Java, you can only check a single condition in an if statement.

5. What is the ternary operator in Java and how is it used?

The ternary operator in Java is a shorthand way of writing an if-else statement. It is used to assign a value to a variable based on a condition. The syntax of the ternary operator is as follows:

```
variable = (condition) ? value1 : value2;
```

If the condition is true, the variable is assigned value1, otherwise it is assigned value2.

6. Can an else block be used without an if statement?

No, an else block cannot be used without an if statement. The else block is used to execute code if the condition in the corresponding if statement is false.

7. Can multiple conditions be checked using the switch statement?

No, the switch statement can only check a single variable against multiple values.

8.What is the default case in a switch statement and when is it executed?

The default case in a switch statement is executed when none of the other cases match the value of the variable being checked. It is not required, but it is good practice to include a default case in a switch statement.

9.Can a break statement be used within a switch case block?

Yes, a break statement can be used within a switch case block to exit the block and continue with the code after the switch statement.

10.What is the purpose of the switch statement and in which situations is it commonly used?

The switch statement is used to select one of several blocks of code to be executed, based on the value of a single variable. It is commonly used when you have a large number of conditions to check against a single variable.

11.What is the difference between the equals() method and == operator in Java?

The equals() method checks whether the values of two objects are equal, while the == operator checks whether two object references refer to the same object in memory.

12. Can a boolean variable be used in a switch statement?

No, a boolean variable cannot be used in a switch statement. The switch statement can only be used with variables of type byte, short, char, int, or String.

13.What is the purpose of the else-if statement in Java?

The else-if statement allows you to check multiple conditions in a single if-else statement.

14.What is a nested if statement in Java?

A nested if statement is an if statement that is contained within another if statement.

15.What is the purpose of the switch statement break keyword?

The break keyword is used to exit a switch statement once a case has been matched.

16. What is the difference between the continue and break keywords in Java?

The continue keyword is used to skip a single iteration of a loop and continue with the next iteration. The break keyword is used to exit a loop or switch statement entirely.

17.What is a labeled break statement in Java?

A labeled break statement allows you to exit from a nested loop or switch statement