1. What is statically typed and Dynamically typed Programming Language?

Ans: - Statically typed programming languages are those in which the type of a variable is checked at compile time, meaning that you must declare the type of a variable before using it. Examples of statically typed languages are Java, C, and C++.

Dynamically typed programming languages, on the other hand, determine the type of a variable at runtime, meaning that you don't have to declare the type of a variable before using it. Examples of dynamically typed languages are Python, Ruby, and JavaScript.

2. What is the variable in Java?

Ans: - A variable in Java is a named storage location for holding data values. A variable has a type (such as int, float, double, char, Boolean, etc.) that determines what kind of values it can hold, and an identifier (its name) that is used to access the stored value. The value of a variable can change during the execution of a program. Variables must be declared before they can be used in Java, and their type cannot change during the program's execution.

3. How to Assign a value to Variable?

Ans: - In Java, you can assign a value to a variable by using the assignment operator (=).

Here's an example:

```
int age;

age = 30;
```

In this example, age is a variable of type int, and it is assigned the value 30. You can also declare and assign a value to a variable in the same line of code,

Here's an example:

```
int age= 30;
```

4. What are Primitive Data types in Java?

Ans: - Primitive data types are used to store simple values, such as numbers, characters, and Boolean values. They are the most basic building blocks of a Java program and provide the foundation for more complex data structures.

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Here's an example:

byte, short, int, long, float, double, char, boolean.

5. What are the Identifiers in Java?

Ans: - In Java, an identifier is a name given to a class, method, variable, constant, or label. Identifiers follow a set of naming conventions in Java.

- Examples of valid Java identifiers include age, _age, $age, age_1, and AGE.
- Examples of invalid Java identifiers include 1age (starts with a digit), for (is a reserved keyword), and public (is a reserved keyword).

6. List the Operators in Java?

Ans: - Java has several types of operators, including:

- Arithmetic operators: used for mathematical operations such as addition (+), subtraction (-), multiplication (*), division (/), and modulus (%).
- Relational operators: used to compare values and determine their relationship, such as equal to (==), not equal to (!=), greater than (>), less than (<), greater than or equal to (>=), and less than or equal to (<=).
- Logical operators: used to evaluate the truthiness of expressions, such as and (&&), or (||), and not (!).
- Bitwise operators: used to perform operations on individual bits of a binary number, such as and (&), or (|), exclusive or (^), and complement (~).
- Assignment operators: used to assign values to variables, such as simple assignment (=), addition assignment (+=), subtraction assignment (-=), and so on.
- Ternary operator: a shorthand for an if-else statement, represented by the ? symbol.

7. Explain about Increment and Decrement operators and give an example.

Ans: - The increment (++) and decrement (--) operators are shorthand operators in Java that are used to increment or decrement the value of a variable by 1.

The increment operator ++ adds 1 to the value of a variable, while the decrement operator -- subtracts 1 from the value of a variable.

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The increment and decrement operators can be used in both prefix and postfix forms. In prefix form, the operator is placed before the variable, such as ++a, whereas in postfix form, the operator is placed after the variable, such as a++. The difference between prefix and postfix forms is the order in which the operation is performed and the value that is returned. The prefix form increments the value of the variable first and then returns the incremented value, whereas the postfix form returns the original value of the variable first and then increments it.

For example:

```
int a = 10;

a++;    // a is now 11

a--;    // a is now 10 again
```

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