**Q-1: what is statically type and Dynamically typed programming language?**

**Ans:**

**Statically Typed Programming Language:** In a statically typed language, variable types are determined at compile time, before the program is actually run. This means that you, as a programmer, need to explicitly declare the type of each variable when you define it. The type of a variable is fixed and cannot change during the execution of the program. The compiler checks whether the types of variables are used correctly and consistently throughout the program before generating the executable code.

**Dynamically Typed Programming Language:** In a dynamically typed language, variable types are determined at runtime, while the program is being executed. This means that you don't need to explicitly declare the type of a variable when you define it; the type is associated with the value it holds. Variables can change their type during the execution of the program, and type checks are done during runtime.

**Q-2: what is the variable in java ?**

**Ans:** a variable is a named storage location that holds a value of a specific data type. Variables are used to store and manipulate data in a program. Each variable has a name, a data type, and a value. The value of a variable can change during the execution of the program, allowing for dynamic manipulation of data.

**Variable Name:** This is the identifier used to refer to the variable in the code. Variable names must follow certain rules:

* They must start with a letter, underscore (\_), or dollar sign ($).
* After the initial character, they can include letters, digits, underscores, and dollar signs.
* Variable names are case-sensitive, meaning myVariable and MyVariable would be considered different variables.

**Q-3: how to assign a value to variable ?**

**Ans:** In Java, you can assign a value to a variable using the assignment operator (=). The general syntax is:

**data\_type variable\_name = value;**

**Code :**

public class AssignmentExample {

public static void main(String[] args) {

// Assigning values to variables

int age = 25;

double height = 1.75;

char gender = 'M';

boolean isStudent = true;

String name = "John Smith"; // String is a class in Java

// Printing variable values

System.out.println("Age: " + age);

System.out.println("Height: " + height);

System.out.println("Gender: " + gender);

System.out.println("Is Student: " + isStudent);

System.out.println("Name: " + name);

}

}

**Q-4: What type of primitive data type in java ?**

**Ans:** Integral Types:

* + byte: Represents a 8-bit signed integer value. Range: -128 to 127.
  + short: Represents a 16-bit signed integer value. Range: -32,768 to 32,767.
  + int: Represents a 32-bit signed integer value. Range: -2^31 to 2^31 - 1.
  + long: Represents a 64-bit signed integer value. Range: -2^63 to 2^63 - 1.
* Floating-Point Types:
  + float: Represents a 32-bit single-precision floating-point value. It can hold decimal numbers with limited precision.
  + double: Represents a 64-bit double-precision floating-point value. It provides higher precision for decimal numbers.
* Character Type:
  + char: Represents a single 16-bit Unicode character. It's used to store letters, digits, symbols, and other characters.
* Boolean Type:
  + boolean: Represents a boolean value, which can be either true or false. Used for logical conditions and decision-making.

Note: non-primitive data type : class type , arrays , strings

**Q-5: what are identifiers in java ?**

**Ans:** Identifiers in Java are symbolic names used for identification. They can be a class name, variable name, method name, package name, constant name, and more. However, In [Java](https://www.javatpoint.com/java-tutorial), There are some reserved words that can not be used as an identifier.

**Q-6: List the operators in java ?**

**ANS:**

**There are many types of operators in Java which are given below:**

* **Unary Operator,**
* **Arithmetic Operator,**
* **Shift Operator,**
* **Relational Operator,**
* **Bitwise Operator,**
* **Logical Operator,**
* **Ternary Operator and**
* **Assignment Operator.**

**Q-7: Explain about increment and decrement operators and give an example ?**

**Soln: increment operator**: The **increment operator ( ++ )** is used to increment the value of a variable in an expression by 1. It can be used on variables of the numeric type such as integer, float, character, pointers, etc.

### **Syntax of Increment Operator**

**// AS PREFIX**

**++m**

**// AS POSTFIX**

**m++**

**Decrement operators :** The decrement operator is used to decrement the value of a variable in an expression. In the Pre-Decrement, the value is first decremented and then used inside the expression. Whereas in the Post-Decrement, the value is first used inside the expression and then decremented

### **Syntax of Increment Operator**

// AS PREFIX

**--m**

// AS POSTFIX

**m--**