

Ques 1. What is statically typed and Dynamically typed programming Language?

Ans:- **Statically Typed Programming Language (Java):-**

Java is a statically typed programming language. In a statically typed language like Java, variables are explicitly declared with their types, and type checking is performed at compile-time. This means that the types of variables and expressions are known and checked during the compilation phase before the program is run.

Dynamically Typed Programming Language:-

In contrast, dynamically typed languages do not require explicit type declarations for variables. The type of a variable is determined at runtime, and type checking is performed during program execution. Examples of dynamically typed languages include Python, JavaScript, and Ruby.

Ques 2. What is the variable in Java?

Ans:- A variable is a container which holds the value while the [Java program](#) is executed. A variable is assigned with a data type.

Variable is a name of memory location. There are three types of variables in java: local, instance and static.

There are two types of [data types in Java](#): -
primitive and non-primitive.

Ques 3. How do Assign a value to Variable?

Ans:- To assign a value to a variable in Java, you follow a specific syntax:

Code:- `data_type variable_name = value;`

Here's a breakdown of the components involved:

Data type: Specify the data type of the variable. For example, int for integers, double for floating-point numbers, String for text, etc. This determines the type of data the variable can hold.

Variable name: Choose a name for the variable. It should be unique within the scope of your program and follow Java's naming conventions (e.g., start with a letter, no spaces, use camel case).

Assignment operator: Use the = operator to assign a value to the variable. It assigns the value on the right-hand side to the variable on the left-hand side.

Value: Provide the value you want to assign to the variable. The value should match the data type of the variable.

Ques 4. What are the Primitive Data types in java?

Ans:- **Byte:** This data type is a 1-byte signed integer. It can store values from -128 to 127.

Short: This data type is a 2-byte signed integer. It can store values from -32,768 to 32,767.

int: This data type is a 4-byte signed integer. It can store values from -2,147,483,648 to 2,147,483,647.

long: This data type is an 8-byte signed integer. It can store values from -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807.

float: This data type is a 4-byte floating-point number. It can store decimal values with a range of approximately $\pm 3.40282347E+38F$.

double: This data type is an 8-byte floating-point number. It can store decimal values with a range of approximately $\pm 1.7976931348623157E+308$.

boolean: This data type represents a boolean value, which can be either true or false. It is typically used for logical comparisons.

char: This data type represents a single character. It is a 2-byte Unicode character that can store values from '\u0000' to '\uffff'.

These primitive data types are used to store simple values directly without any reference to an object.

Ques 5. What are the 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 etc. However in java , There are some reserved word that can not be used as an identifier.