

### 1. What is statically typed and dynamically typed Programming Language?

**Statically typed language:** A language is statically typed if the type of a variable is known at the compile time. This means that the programmer must specify what type of variable he is going to use. The main advantage here is that all kinds of checking can be done by the compiler and therefore a lot of trivial bugs are caught at very early stage.

**Dynamically typed language:** A language is dynamically typed if the type is associated with run time values and not named variables/fields/etc. This means that you as a programmer can write a little faster because you don't have to specify types every time.

### 2. What is Variable in Java?

A variable is a container which holds the value while the Java program is executed. A variable is assigned with the data type. Variable is basically the name of the memory location. There are three types of Java variables in java: local, instance and static.

**Local variable:** A variable declared inside the body of the method is called local variable. You can use this variable only within that method and the other methods in the class aren't even aware that the variable exists.

**Instance variable:** A variable declared inside the class but outside the body of the method is called the instance variable. It is called instance variable because its value is instance specific and it is not shared among instances.

**Static variable:** A variable that is declared as a static variable is called a static variable. It cannot be local. You can create a single copy of the static variable and share it among all the instances of the class.

### 3. How to assign value to a variable in java?

Type variableName = value;

Where type is one of Java's types (such as int or string) and variableName is the name of the variable. The equal sign is used to assign values to the variable.

### 4. What are the primitive data types in Java?

A primitive data type specifies the size and type of variable values and it has no additional methods.

**byte:** It's size is 1 byte and it stores whole numbers from -128 to 127

**short:** It's size is 2 bytes and it stores whole numbers from -32768 to 32767

**int:** It's size is 4 bytes and it stores whole numbers from -2147483648 to 2147483647

**long:** It's size is 8 bytes and it stores whole numbers from -9223372036854775808 to 9223372036854775807

**float:** It's size is 4 bytes and it stores fractional numbers. Sufficient for storing 6 to 7 decimal digits

**double:** Its size is 8 bytes and it stores fractional numbers. Sufficient for storing 15 decimal digits

**boolean:** Its size is 1 byte and stores true or false values.

**char:** Its size is 2 bytes and it stores a single character

### 5. What are the identifiers in java?

All Java variables must be identified with unique names and these unique names are called identifiers. Identifiers can be short names or more descriptive names. It is advised to use the descriptive names in order to create understandable and maintainable code.

**6. List the operators in java?**

Arithmetic Operators

Assignment Operators

Logical Operators

Ternary Operators

Unary Operators

Bitwise Operators

Relational Operators

**7. Explain about increment and decrement operators ?**

Increment Operator: It is also known as increment unary operator and is used to increase the value of a variable by 1. Since it is a type of a unary operator it can be used with a single operand.

Syntax: ++x, x++

Decrement Operator: As the name implies it is used to reduce the value of a variable by 1. It is also one of the unary operator so it can be used with a single operand.

Syntax: --x, x--