

1. What is a statically typed and Dynamically typed programming language?

In statically typed language we need to specify the type of variable in languages such as c, c++, Java as the memory of the variable is provided at the time of the compilation

Ex. int age= 20, string name="Chaitanya" etc;

However in Dynamically Typed programming language we do not need to specify the variable type because the memory for the variable is provided at the time of execution.

Some of the common dynamically typed languages are python , javascript

Ex let A="chaitanya" //JavaScript

2. What is the variable in Java?

A variable is the name of a memory-allocated reserved area. It may be thought of as the name of a memory location, in other words. When we declare a variable, we are essentially reserving a specific memory area to store a particular type of data, such as integers, strings, or objects. The variable name serves as a reference to access and modify the stored value.

3. How to assign a value to variable?

Type variable_name = value;

The name of a variable is variable_name. The variable can be initialised by supplying an equal sign and a value(initialization i.e assigning an initial value, is optional. However, a Java uninitialized local variable is never given a default value by the compiler.

4. What are Primitive Data types in Java?

The primitive data types include

- **Boolean**
- **Char**
- **Byte**
- **Short**
- **Int**
- **Float**
- **Double**

5. What are identifiers in Java?

An identifier is a name given to a package, class, interface, method or variable. All identifiers must have different names.

Examples of identifiers are: rank, _rate

6. List the operators in Java?

Operators in Java can be classified into 6 types:

- Arithmetic Operators
- Relational Operators
- Logical Operators
- Assignment Operators
- Unary Operators
- Bitwise Operators

7. Explain the Increment and Decrement operators and give an examples?

Increment operators (++) increment the value of a particular variable by one.

While decrement operators(--) decrement the value of a particular variable by one

Ex

```
int a =6;
```

```
a++;
```

```
a--;
```

The value of a remains the same after the operations of both the operator.

There are also postfix increment/ decrement and prefix increment/decrement operators

The postfix increment operator is written after the variable and increments the value of the variable after its current value is used

```
int a = 6;
```

```
int b = a++; // b is assigned the value of a (6) and then a is incremented to 7
```

```
System.out.println(a); // Output: 7
```

```
System.out.println(b); // Output: 6
```

The prefix increment operator is written before the variable and increments the value of the variable before its current value is used. Here's an example:

```
int a = 6;
```

```
int b = ++a; // a is incremented to 7 and then b is assigned the value of a (7)
```

```
System.out.println(a); // Output: 7
```

```
System.out.println(b); // Output: 7
```