

Java Variables and Data types

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

Answer: Statically typed- If the memory of the variable is given during the compilation time itself then such type of programming language is called as “statically typed”.

Ex. C, C++, Java

Dynamically typed: If the memory of the variable is given during the execution time itself then such types of programming languages are called as “dynamically typed”.

Ex. Python, PHP, JavaScript.

2. What is the variable in java?

Answer:

- 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.
- It is a combination of "vary + able" which means its value can be changed.

3. How to assign a value to Variable?

Answer: Variable can be declared and assigned separately.

Ex. `int age;`

`age = 40; // assigning value to the variable age`

4. What are primitive data types in java?

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

There are 8 types of primitive data types:

- boolean data type
- byte data type
- char data type
- short data type
- int data type
- long data type
- float data type
- double data type

5. What are the Identifiers in java?

Answer: 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.

6. List the Operators in Java?

Answer: Operator in Java is a symbol that is used to perform operations. For example: +, -, *, / etc.

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.

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

Answer: Increment (++):

It is used to increment the value of an integer. It can be used in two separate ways:

➤ Post-increment operator:

When placed after the variable name, the value of the operand is incremented but the previous value is retained temporarily until the execution of this statement and it gets updated before the execution of the next statement.

Syntax:

num++

Illustration:

num = 5

num++ = 6

➤ Pre-increment operator:

When placed before the variable name, the operand's value is incremented instantly.

Syntax:

`++num`

Illustration:

`num = 5`

`++num = 6`

Decrement (-):

It is used to decrement the value of an integer. It can be used in two separate ways:

➤ **Post-decrement operator:**

When placed after the variable name, the value of the operand is decremented but the previous value is retained temporarily until the execution of this statement and it gets updated before the execution of the next statement.

Syntax:

`num--`

Ex.

`num = 5`

`num-- = 5` // Value will be decremented before execution of next statement.

➤ **Pre-decrement operator:**

When placed before the variable name, the operand's value is decremented instantly.

Syntax:

`--num`

Example: `num = 5`

`--num = 5` // output is 5, value is decremented before execution of next statement

Example:

```
public class IncreDecrement {
    public static void main(String[] args) {
        int a = 5;
        int b = 6;
        int c = a++; // post Increment
        int d = ++a; // pre increment
        int e = b--; // post decrement
        int f = --b; // pre decrement

        System.out.println(c); // 5
        System.out.println(d); // 7
        System.out.println(e); // 6
        System.out.println(f); // 4
    }
}
```

}

}