



# VARIABLES

A variable is a container for a data value or type of data.

In Java, we must specify a variable's type when we declare it.

We also give variables a unique name, which is the identifier we can use later in our code.

We use the = operator to assign a value to a variable.

We can perform operations on variables & expressions.

ADD / APPEND	+	} Binary operators
SUBTRACT	-	
MULTIPLY	*	
DIVIDE	/	
MODULO	%	
INCREMENT	++	} unary operators
DECREMENT	--	

**VARIABLE DECLARATION**  
int num;

**VARIABLE ASSIGNMENT**  
num = 7;

**VARIABLE INITIALIZATION**  
boolean isTrue = true;

```
int years = age + 2;
String fullName = name + "Smith";
int nextYear = 2021 ++;
```

## A compound assignment operator

consists of:

- ① A binary operator
- ② An assignment operator

Performs the binary operation & assigns the value to the left operand.

We can reassign a variable's value as many times as we need to. This overwrites the current value with the new value.

```
String greeting = "Hello";
greeting = "Hi";
```

```
x = x + 1; → x += 1;
y = y - 1; → y -= 1;
z = z + x; → z += x;
x = x * y; → x *= y;
```