



Variable in java

In Java, a **variable** is a container that holds data that can be modified during the execution of a program. Variables have types that determine the kind of data they can store, such as integers, floating-point numbers, or strings. There are several types of variables in Java:

1. **Local variables**: Defined within a method or block.
2. **Instance variables**: Defined inside a class but outside any method.
3. **Static variables**: Defined with the `static` keyword inside a class but outside any method.

Syntax:

```
```java
dataType variableName = value;
```
```

Example:

```
```java
int age = 25;
```
```

10 Examples of Variables in Java:

1. **Integer variable (int)**:

```
```java
int age = 30;
```
```

Stores a whole number.

2. ****Floating-point variable (double)****:

```
```java
double temperature = 36.6;
```
```

Stores a decimal number with more precision.

3. ****Character variable (char)****:

```
```java
char grade = 'A';
```
```

Stores a single character.

4. ****String variable****:

```
```java
String name = "Alice";
```
```

Stores a sequence of characters.

5. ****Boolean variable****:

```
```java
boolean isJavaFun = true;
```
```

Stores a value that can be `true` or `false`.

6. ****Static variable****:

```
```java
static int counter = 0;
```
```

...

Shared across all instances of the class.

7. ****Long variable (long)**:**

```
```java
long distance = 1234567890L;
```
```

Stores large whole numbers.

8. ****Byte variable (byte)**:**

```
```java
byte level = 100;
```
```

Stores small integers from -128 to 127.

9. ****Short variable (short)**:**

```
```java
short year = 2024;
```
```

Stores integers within a smaller range than `int`.

10. ****Instance variable**:**

```
```java
class Car {
 String model;
 int speed;
}

Car myCar = new Car();
myCar.model = "Toyota";
```
```

```
myCar.speed = 120;
```

```
'''
```

These variables show the flexibility of Java in handling different types of data.