

Day 02 – Variables and Data Types in Java

1. Variables in Java

A variable in Java is a container that stores data values. Each variable has a specific data type which defines what kind of value it can store.

Rules for Naming Variables:

- Variable name must start with a letter, underscore (_) or dollar sign (\$).
- It cannot start with a number.
- No spaces are allowed.
- Java keywords cannot be used as variable names.
- Variable names are case-sensitive.

Example:

```
int age = 21;  
float percentage = 82.5f;  
char grade = 'A';
```

2. Data Types in Java

Data types specify the size and type of values that can be stored in a variable. Java has two main categories of data types: Primitive and Non-Primitive.

Primitive Data Types

- int – stores whole numbers
- float – stores decimal numbers
- double – stores large decimal numbers
- char – stores a single character
- boolean – stores true or false
- byte – stores very small integers
- short – stores small integers
- long – stores large integers

Non-Primitive Data Types

- String – stores text
- Array – stores multiple values
- Class – user-defined blueprint
- Object – instance of a class

Conclusion

Variables and data types are the foundation of Java programming.

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