

■ Programming Variables Cheat Sheet

What is a Variable?

A variable is a named storage location used to store data in a program.

General Rules for Variables

- Must start with a letter or underscore
- Cannot start with a number
- Can include letters, digits, and underscores
- Case-sensitive (age, Age, AGE are different)

Common Data Types

- Integer: Whole numbers (e.g., 10, -3)
- Float: Decimal numbers (e.g., 3.14, -0.01)
- String: Text (e.g., "Hello")
- Boolean: True/False values

Python Variable Examples

```
name = "Alice"  
age = 25  
price = 19.99  
is_active = True
```

JavaScript Variable Examples

```
let name = "Alice";  
const age = 25;  
var price = 19.99;
```

Good Variable Naming Practices

- ✓ Meaningful names (total_price instead of tp)
- ✓ Use snake_case in Python
- ✓ Use camelCase in JavaScript

Assignment Operators

= Assign value
+= Add and assign
-= Subtract and assign
*= Multiply and assign
/= Divide and assign

Variable Scope Types

- Local: Declared inside a function
- Global: Accessible throughout the program

Tips

- Always initialize variables
- Keep naming consistent
- Avoid unnecessary or unused variables