



In Python, declaring a variable is straightforward. You simply assign a value to a variable name using the = operator.

```
# Variable assignment  
x = 10  
name = "Alice"  
is_active = True
```

- **x, name, and is_active** are variables.
- **10, "Alice", and True** are the **values assigned** to these variables.

Note: Unlike some other programming languages, Python does not require you to declare the type of a variable explicitly. ●



Variables naming Rules



1. **Case-Sensitive:** Variable names are case-sensitive.
 - a. age, Age, and AGE are three different variables.
2. **Start with a Letter or Underscore:** Variable names must start with a letter (a-z, A-Z) or an underscore _.
 - a. Valid: _value, data1
 - b. Invalid: 1data, #score
3. **Followed by Letters, Digits, or Underscores:** After the first character, you can use letters, digits, or underscores.
 - a. Valid: value_1, data_set
 - b. Invalid: **data-set (hyphens are not allowed)**



1. Use Lowercase Letters

- a. Example: total_score, user_name

2. Avoid Reserved Keywords

- a. Reserved keywords include if, else, while, for, class, def, etc.

3. Meaningful Names

- a. Good: student_count, average_height
- b. Bad: x, y, data (unless used in a specific context)

4. Constants in Uppercase

- a. Mostly used in UPPER CASE
- b. Example: **PI = 3.1416**

