

Identifier and Keyword

Identifiers are user-defined names given to program elements like variables, functions, and classes, while keywords are reserved words predefined by Python to dictate the language's syntax and structure.

Python Identifiers

An identifier is a name you create to identify a variable, function, class, module, or other objects.

Rules for Naming Identifiers

To keep the Python interpreter from getting confused, your identifiers must follow these specific syntax rules:

- **Allowed Characters:** Use only alphanumeric characters (A-Z, a-z, 0-9) and underscores (_).
- **First Character:** Must start with a letter or an underscore. It **cannot** start with a number.
- **Case-Sensitivity:** Python treats case variations differently. For example, myVar, MyVar, and MYVAR are three unique identifiers.
- **No Keywords:** You cannot name an identifier the exact same name as a reserved keyword.
- **No Special Characters:** Symbols like @, \$, !, #, or whitespace are strictly forbidden.

Python Keywords

Keywords are the foundation of Python's structure. They have a fixed, predefined meaning, and you cannot change them or use them as variable names.

Essential Facts

- **Case Sensitivity:** Almost all keywords are entirely lowercase (e.g., if, for, while).
- **The Capitalized Exceptions:** Only three keywords start with a capital letter: True, False, and None.
- **Dynamic List:** Python has roughly 35 to 39 keywords depending on your specific version.

Common Categories & Examples

- **Value Keywords:** True, False, None

- **Logical & Structural Operators:** and, or, not, is, in, as
- **Control Flow:** if, elif, else, for, while, break, continue, pass
- **Structure Definitions:** def, class, return, lambda, yield
- **Error & Exception Handling:** try, except, finally, raise, assert
- **Module Importation:** import, from

Checking Keywords Automatically

If you are ever unsure whether a word is a reserved keyword, you can verify it directly in your script using the built-in keyword module:

```
python
```

```
# Print the complete list of keywords
```

```
import keyword
```

```
print(keyword.kwlist)
```

```
# Check if a specific word is a keyword
```

```
print(keyword.iskeyword("total_sum")) # Returns False
```

```
print(keyword.iskeyword("class"))    # Returns True
```