

Variable declaration

- What is variable?

-It is a container for data values that can be manipulated within code without requiring the declaration of a particular type.

Example: **The variable is x the value is 5**

- Fundamentals of Python Programming

-Python is a *high-level interpreted programming language that is easy to read and understand*.

-It is compatible with object-oriented and procedural programming paradigms.

-Python *does not use curly brackets for defining code blocks because indentation is used instead*.

-It has a comprehensive standard library and a large community, making it versatile and widely used.

- Rules in Declaring a Variable in Python

-Variable names must start with a letter (**a-z, A-Z**) or an **underscore** (**_**).

-The remaining characters in the variable name can include **letters, numbers, and underscores**.

-Variable names are case-sensitive (**count and Count are different variables**).

-Python has reserved words that cannot be used as variable names (**keywords like if, else, etc.**).

- Keywords in Python

-Keywords are a group of reserved nouns in Python that *have certain meanings and cannot be used as variable names*. Some examples of Python keywords are **def, class, import, if, else, while, for, True, False, and None, among others**.

- Rules for local and global variables in Python

-Local variables have a local scope and are defined *inside a function*. They are available just for *that particular function*.

-Global variables have a global scope and are defined *outside of functions*. It signifies that a variable is *global and is used to alter it within a function*.

- Operators

-Arithmetic operators include **+, -, *, /, percent, //** (floor division), and ****** (exponentiation).

-Comparison operators: **==, !=, <, >, <=, >=**.

-Logical operators: **and, or, not**.

-Assignment operators include: **=, +=, -=, *=, /=, %=, //=, and **=**.

-Membership Operators: **in** or **not in**.

-Identity operators include **"is"** and **"not."**