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### **Variable declaration**

- What is variable?
  - A named storage location with a value is called a variable. It enables data manipulation and storing within your software. Different kinds of data, including texts, numbers, and boolean values, can be stored in variables.
- Fundamentals of Python Programming
  - Python is a popular high-level interpreted programming language that is easy to learn and understand. It is compatible with several programming paradigms, such as functional, object-oriented, and procedural programming. Python may be used for a wide range of tasks because of its extensive standard library and vibrant third-party package ecosystem.
- Rules in Declaring a Variable in Python
  - The name must start with a letter (a-z, A-Z) or an underscore (\_).
  - The name can contain letters, numbers, and underscores.
  - The name is case-sensitive, so "myVariable" and "myvariable" are considered different variables.
  - The name should not be a reserved keyword (e.g., "if", "for", "while"), as they have special meanings in Python.
- Keywords in Python
  - In Python, reserved words serve specific functions and have unique meanings. These words are known as keywords. It is not possible to use these terms as variable names. "If", "else", "for", "while", "def", "class", "import", and "return" are a few frequently used keywords in Python.
- Rules for local and global variables in Python
  - Local variables are only accessible inside the scope of the function or code block in which they are declared.
  - Global variables are accessible from anywhere in the program and are declared outside of all functions and code blocks.
  - Within its scope, a local variable takes priority over a global variable if they share the same name.
- Operators
  - Arithmetic operators (+, -, \*, /, %, //, \*\*)
  - Comparison operators (==, !=, >, <, >=, <=)
  - Assignment operators (=, +=, -=, \*=, /=, %=, //=, \*\*=)
  - Logical operators (and, or, not)