Python Basics

07 September 2023 12:33

Ways to Execute Python Code

1. Interpreter mode: line by line, code is not saved
2. Batch/file mode: entire batch/file is executed at once, code can be saved (Script mode)
3. IDE: Integrated Development Environment

Command Line Commands

- cls - clear terminal
- python / python3 - accesses Python and turns Command Prompt into interpreter mode Python window
- start [text editor] [file name] - opens text editor file w/ specified name
- python [filename] - runs program inside specified file
- rename [current_name] [new_name]

Syntax Rules

- You can start from any line, but the first line should not be indented
- Start of block - leader
  Content of block - suite
- Python uses hybrid compiler - interpreter → if there is an error in the compiler stage itself, you only get error in execution
- Using functions that interpreter does not recognise ≠ syntax error
  → semantic error
- Comment a line by putting # at its beginning.
- Comment a block by enclosing it in ''' ... ''' (multi-line string)

Basic Python Behaviour

- >>> print("...") → no output

>>> print \ → considers next line
("...",
"...")
→ Prints everything inside the brackets

→ gets printed since compiler is searching for closing bracket

gets printed since compiler is searching for closing bracket

- All keyword parameters of a function are specified at the end.

  Eg: print ("...", "...", sep = "*", end = " ")

- Print → can evaluate arguments

  ⇒ print ("Hello" "How are you")

  »» Hellothow are you

VARIABLES

- Data already exists: variable acts as a reference to it
- Memory is not allocated during variable creation
- When you redefine a variable as follows:

  »» a = 5

  »» a = 6

  The value of "a" does not change; rather, the reference "a" shifts from 5 to 6.

- DOUBT: What about strings/other datatypes?

SIGNIFICANCE OF DATA TYPES

- Allowed operations
- Specific memory allocation
- Allowed values associated w/ that datatype
- Easier to store

UTILITY FUNCTIONS

- id ([data]): Returns unique address associated w/ specific data
- sys.getrefcount ([data]): Returns number of references on specific data
- \a [not a function]: Use in statements to get an audio alert
- sys.getsizeof ([data]): Returns size of object in bytes