Command Line Argument & Environment Variable

Command Line Argument

Command-line arguments are information (like words or numbers) that we give to a Python script when we run it from the command line (the terminal or command prompt). For example, we might write a Python script to add two numbers, but we want to give the numbers directly when running the script, rather than hardcoding them inside the script.

In order to use Command Line Argument in python, import the package "sys"

"sys.argv" is a list that contains the command line arguments that we pass to our program.

- sys.argv[0] is the first element and is always the name of the script.
- sys.argv[1], sys.argv[2], sys.argv[3], ….. are subsequent elements of sys.argv, these are the arguments that we pass to the script when executing it.

e.g –

file name - cli.py
 	
import sys
 	
def add(n1, n2):
 	
    sum = n1+n2
 	
    return sum
 	
n1 = int(sys.argv[1])
 	
operation = sys.argv[2]
 	
n2 = int(sys.argv[3])
 	
if operation == 'add':
 	
    output = add(n1, n2)
 	
    print(output)
	elif operation == 'sub':
	
	    output = sub(n1, n2)
	
	    print(output)
	
	elif operation == 'multi': # Fixed indentation issue
	
	    output = multi(n1, n2)
	
	    print(output)
	
	Execute in terminal - python cli.py 5 add 10
	
	Output – 15

Environment Variables

The sensitive information such as passwords, configuration path, API keys, db string, tokens etc that we don't want to put in code are stored in environment variables. This information can be accessed by the program during runtime.

How to use Environment variables in python –

Step 1 – Install the Required Module: os i.e - import os

Step 2 – Set Environment Variables in the Terminal

a) **For Unix-like Shells (Linux/Mac) -** export variable_name="value"

   e.g - to set a variable called password - export password="a1234"

   Check the value of the environment variable - echo $password

b) **For PowerShell (Windows and macOS/Linux) - $env:password="anu"**

   To print the value of environment variable in PowerShell, use - echo $env:password

Step 3 – Access Environment Variables in Python

   Use os.getenv() to retrieve the value of an environment variable.

e.g –

import os

password = os.getenv('password') # 'password' is the variable name we set in terminal

print(password)

Output – a1234

===