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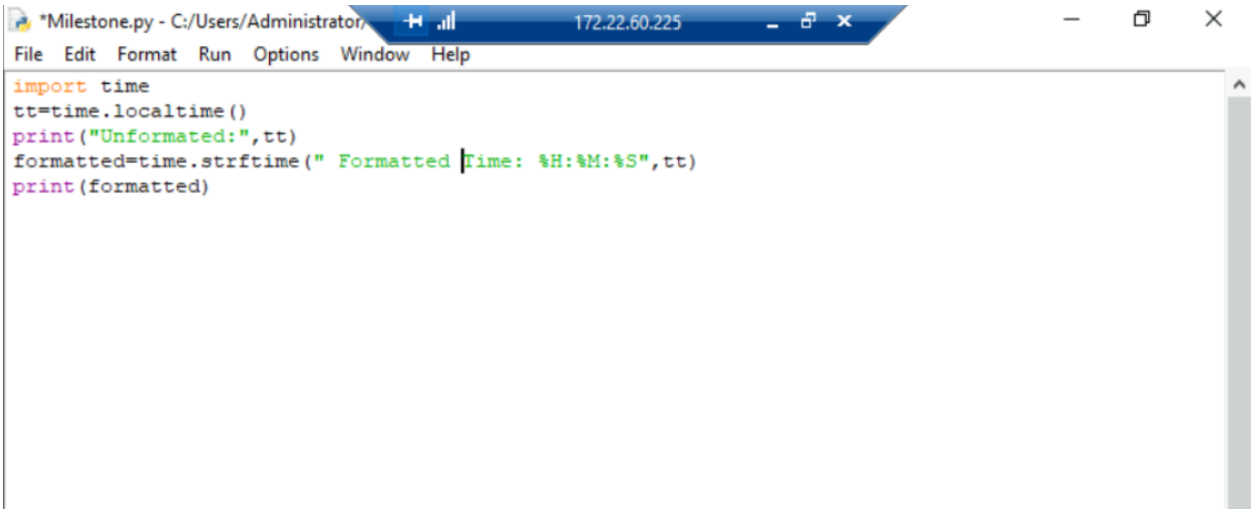
Batch – CIS 1.3

Milestone 2 – Python – Set 1

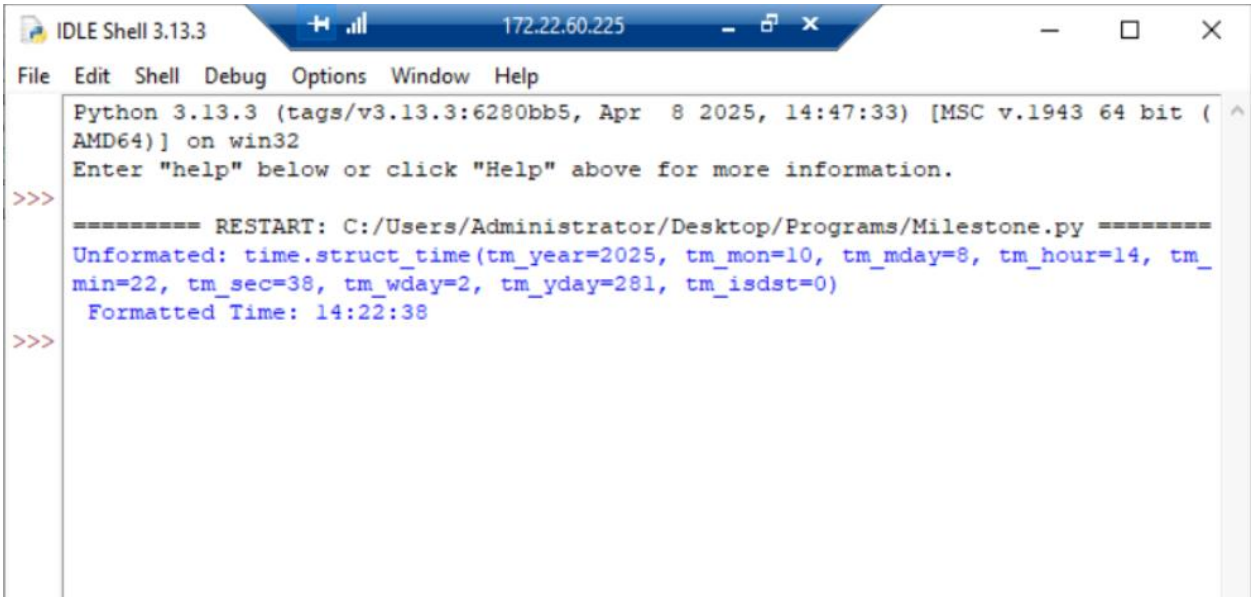
Question 1:

Working with Python Libraries (Different Modules) Task:

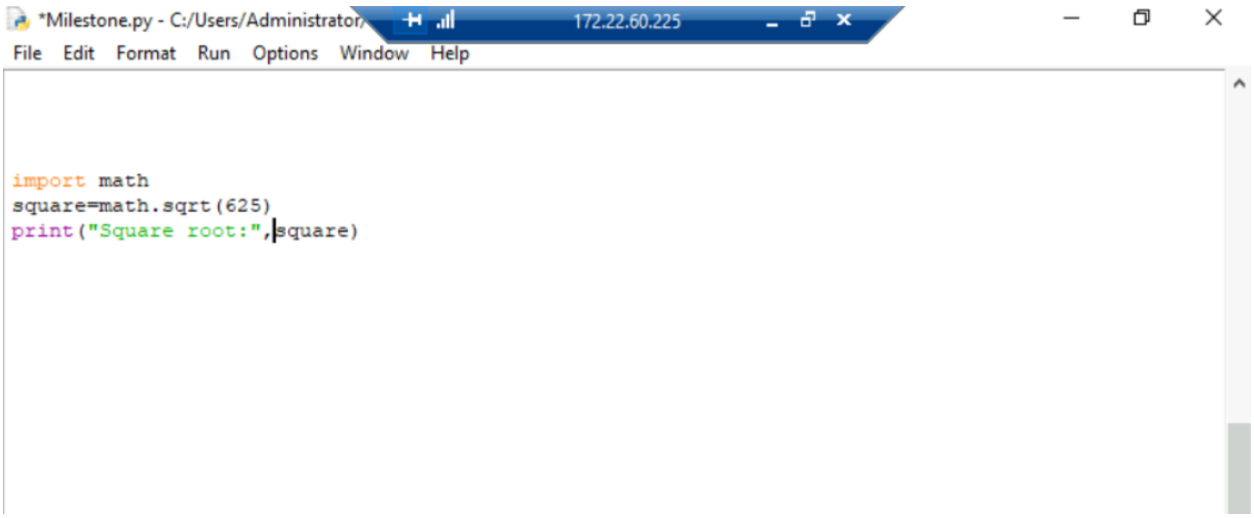
1. Use the time module to print the current time in HH:MM:SS format.
    - Program to print time – by default it will be in unformatted so to make it human readable form we use method ‘strftime’



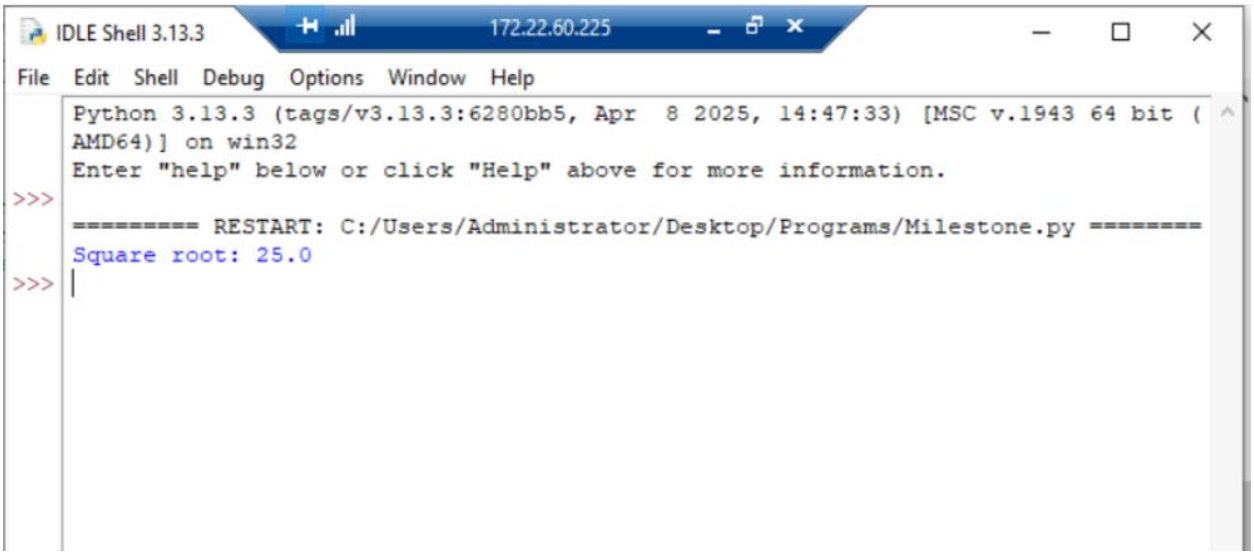
    - Output



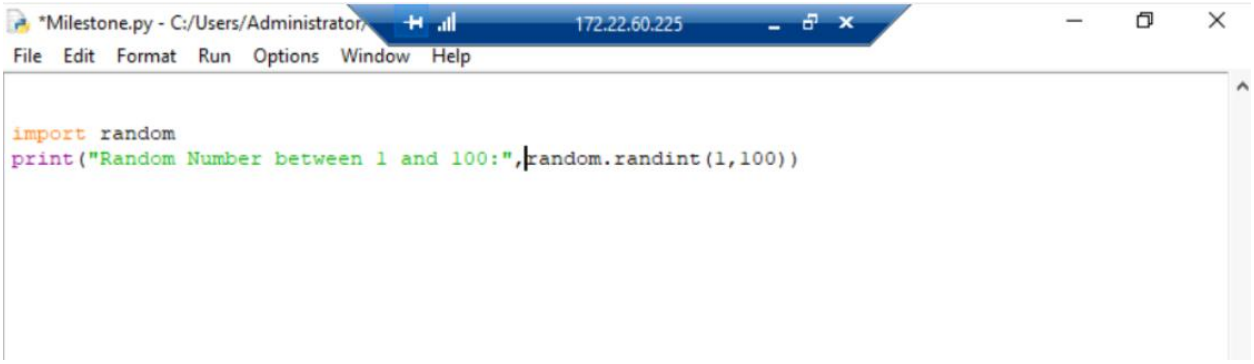
2. Use the math module to calculate and print the square root of 625.
    - Program to print the square root



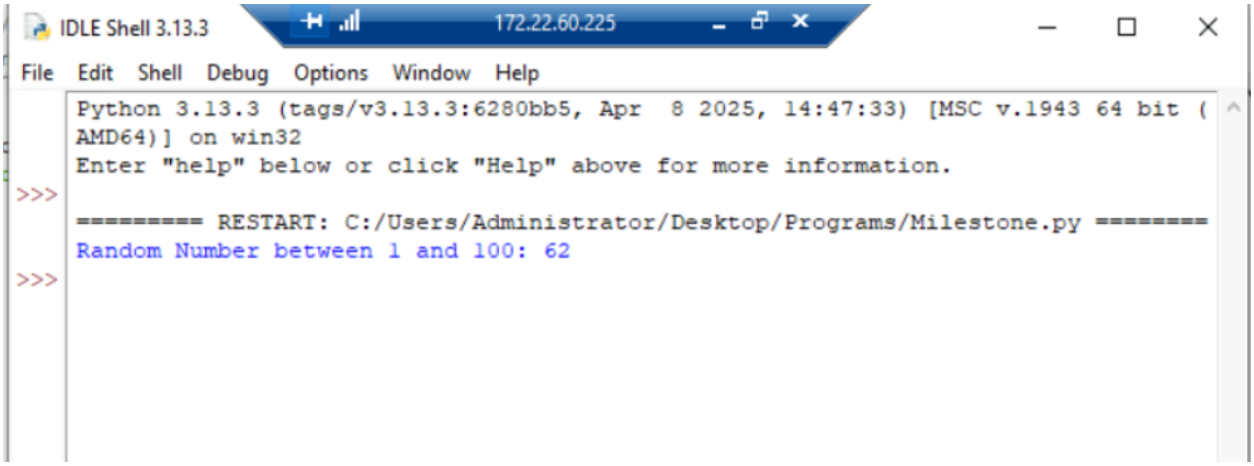
    - Output



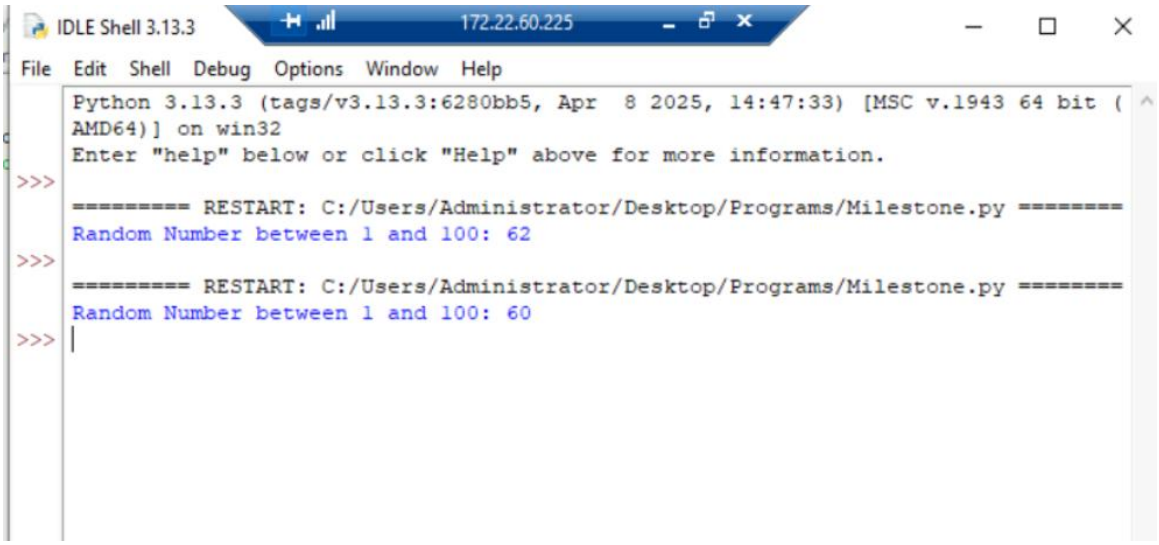
3. Use the random module to generate a random integer between 1 and 100 (inclusive).
    - Program to print random number



    - Output when we run the program first time →

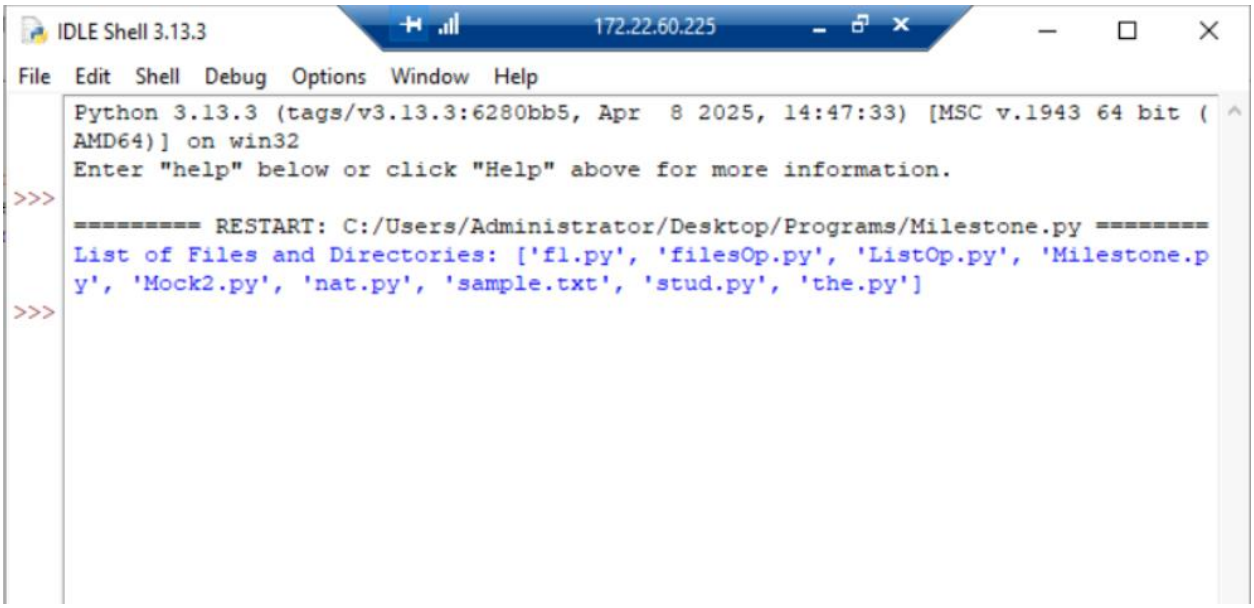


    - Output when we run the program again → (Here we can notive it gives different number)



4. Use the os module to list all files and directories in the current working directory.
    - Program

    - Output



Question 2:

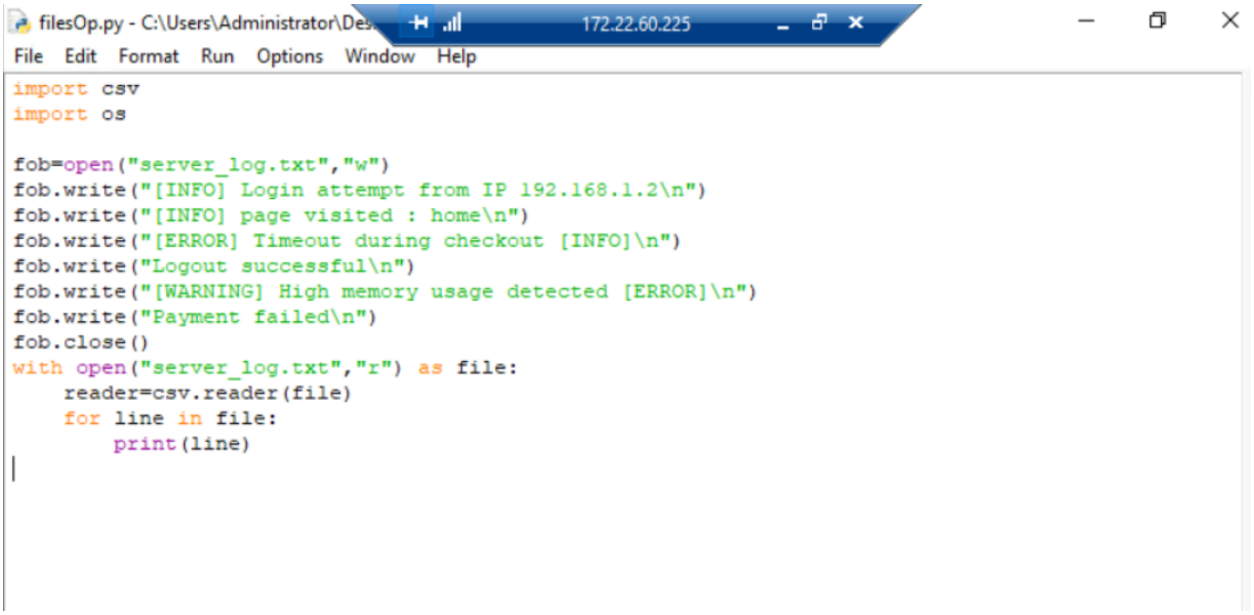
File Handling and Log Analysis (Different File Content)

You have a file named server_log.txt that logs user actions on a website.
Performthefollowing tasks:

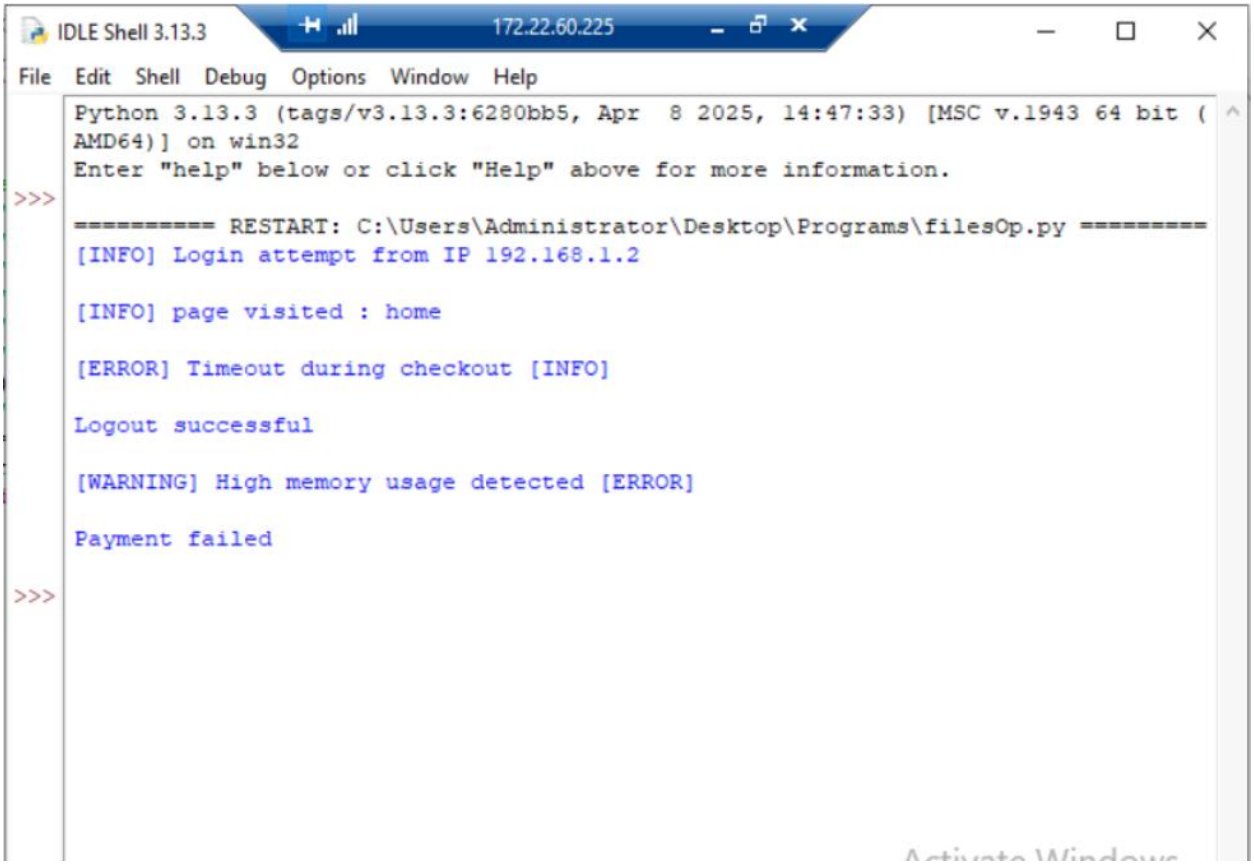
Tasks: 1. Create a file server_log.txt with the following content: [INFO] Login attempt from IP 192.168.1.2 [INFO] Page visited: Home [ERROR] Timeout during checkout [INFO] Logout successful [WARNING] High memory usage detected [ERROR] Payment failed

2. Write a Python script to read and display the content.

- Program to write content in the file 'server_log.txt' and read the content in the given file. We can use both 'open' and 'with open' methods to read,write and append contents in the file. The difference is we don't want to specify close() method when we use 'with' but it is necessary when we use 'open' function.



- Output → Read the content of the file ‘server_log.txt’

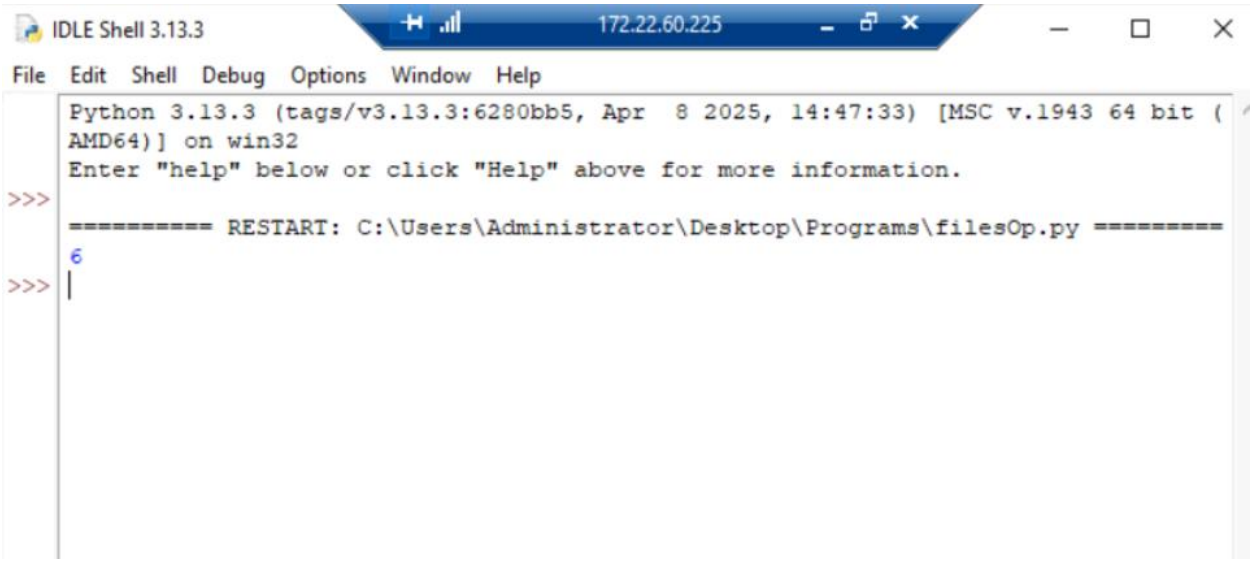


3. Count the total number of lines in the file.

- Program to read number of lines in the file.

```
with open("server_log.txt","r") as file:
    reader=csv.reader(file)
    ct=0
    for line in file:
        ct+=1
    print(ct)
```

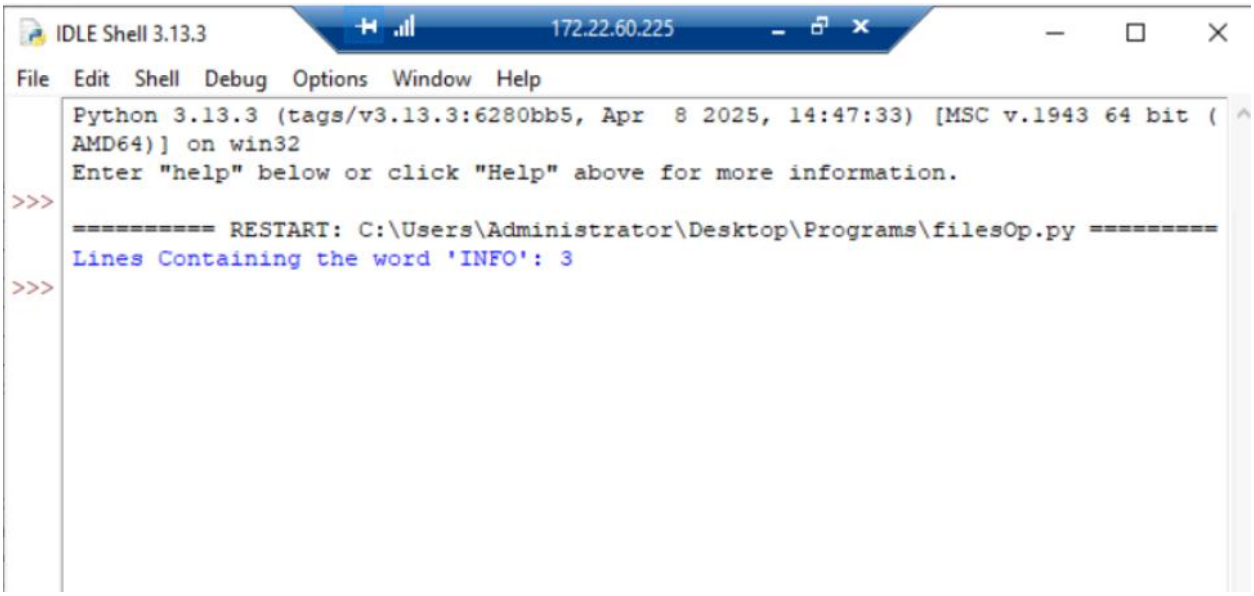
- Output



5. Count how many lines contain the word "INFO".
    - Program to read no.of.lines with specific word i.e 'INFO'

```
with open("server_log.txt","r") as file:
    reader=csv.reader(file)
    ct=0
    for line in file:
        if "INFO" in line:
            ct+=1
    print("Lines Containing the word 'INFO':",ct)
```

- Output


IDLE Shell 3.13.3
172.22.60.225
File Edit Shell Debug Options Window Help
Python 3.13.3 (tags/v3.13.3:6280bb5, Apr 8 2025, 14:47:33) [MSC v.1943 64 bit (
AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>>>
========== RESTART: C:\Users\Administrator\Desktop\Programs\filesOp.py ==========
Lines Containing the word 'INFO': 3
>>>