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Milestone Assessment 2 – Python – Set 1

Linux 1.2

Question 1:

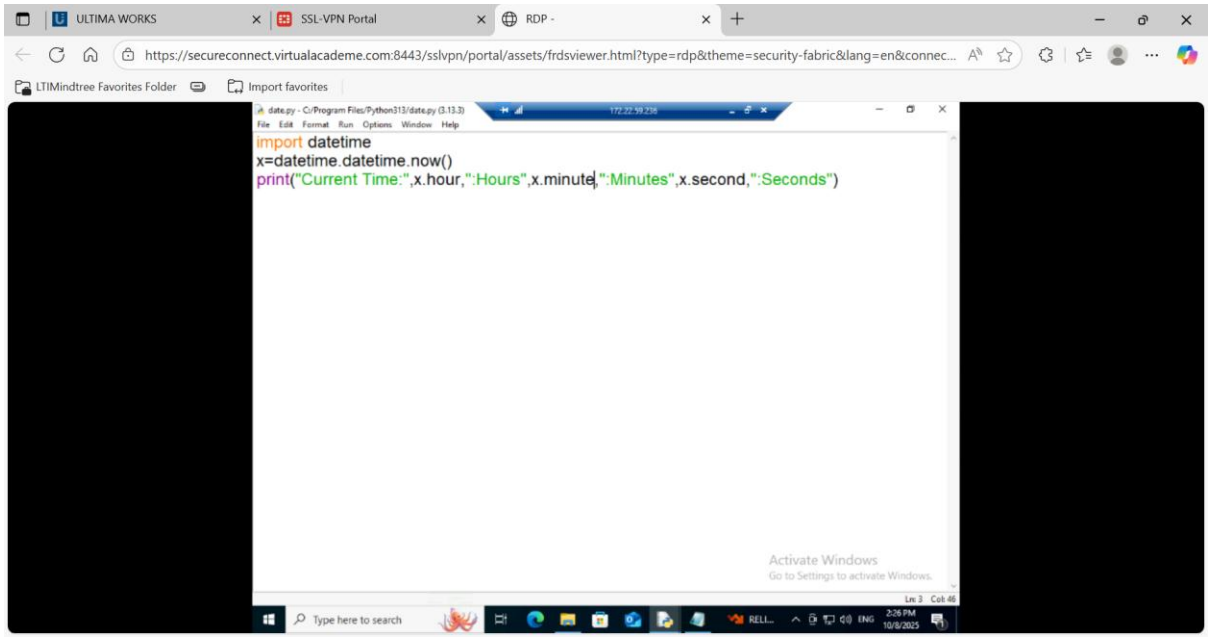
Working with Python Libraries (Different Modules) Task:

1. Use the time module to print the current time in HH:MM:SS format.

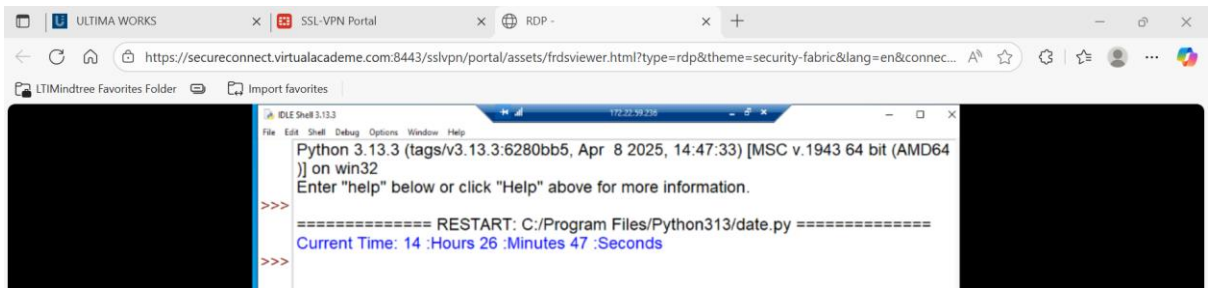
Program:

Datetime module is imported for generating the time

Then using the module the data has been represented as requested



Output:



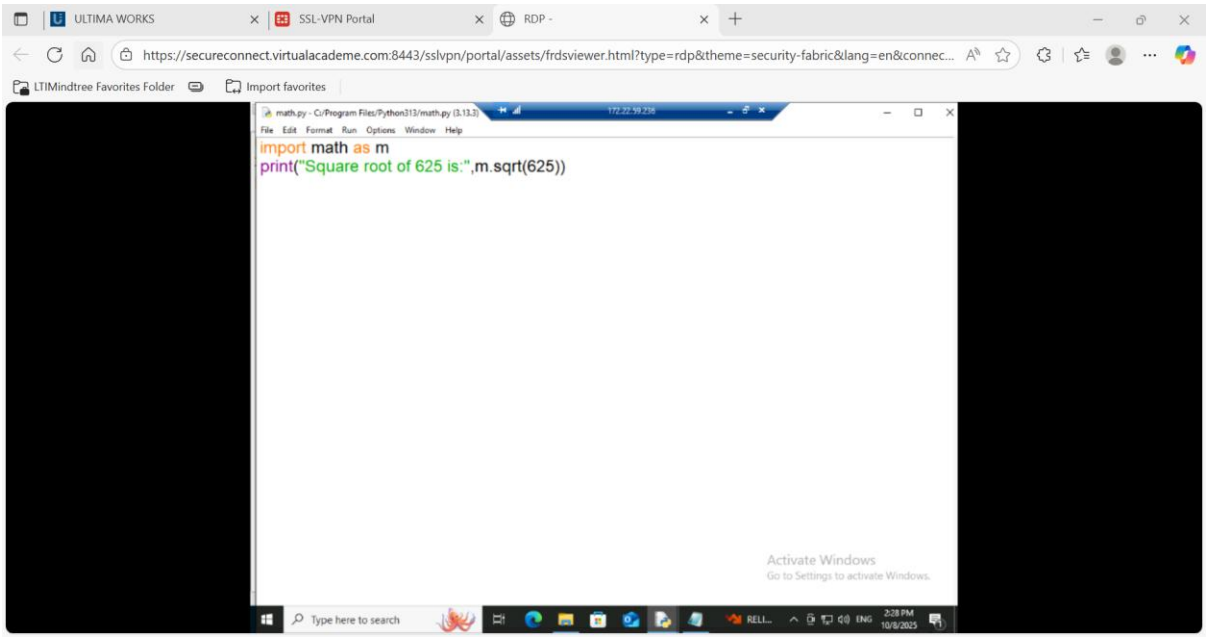
2. Use the math module to calculate and print the square root of 625.

Program:

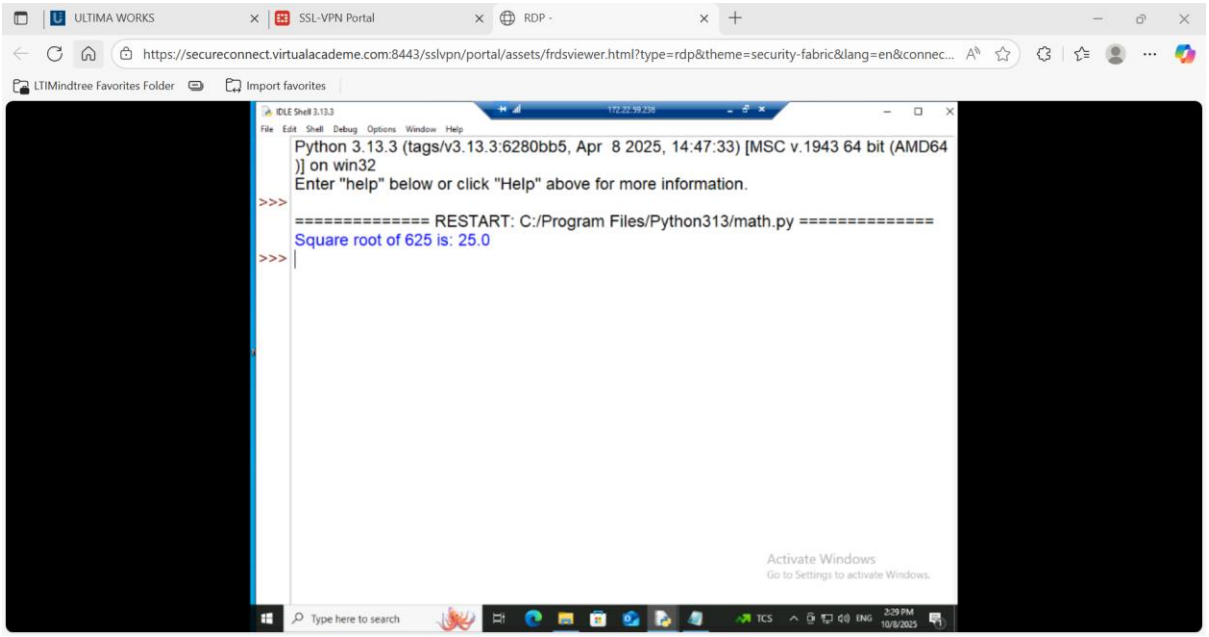
Math module is imported

Then it is renamed as m

Sqrt() function is used to find the square root of the specific number



Output:

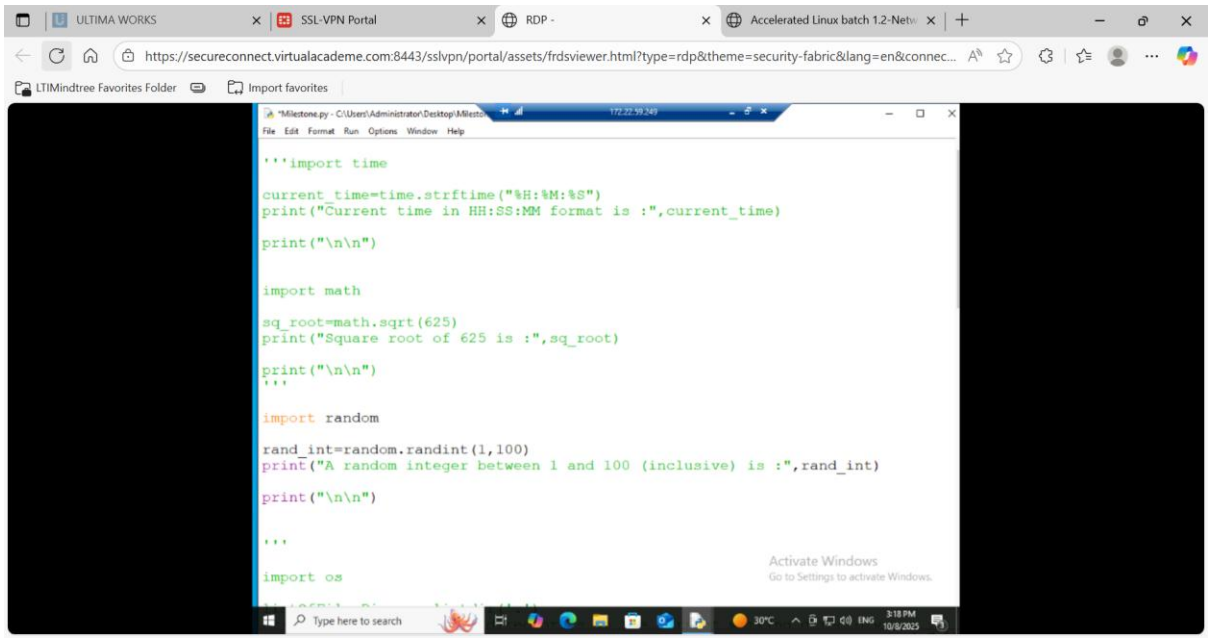


3. Use the random module to generate a random integer between 1 and 100 (inclusive).

Program:

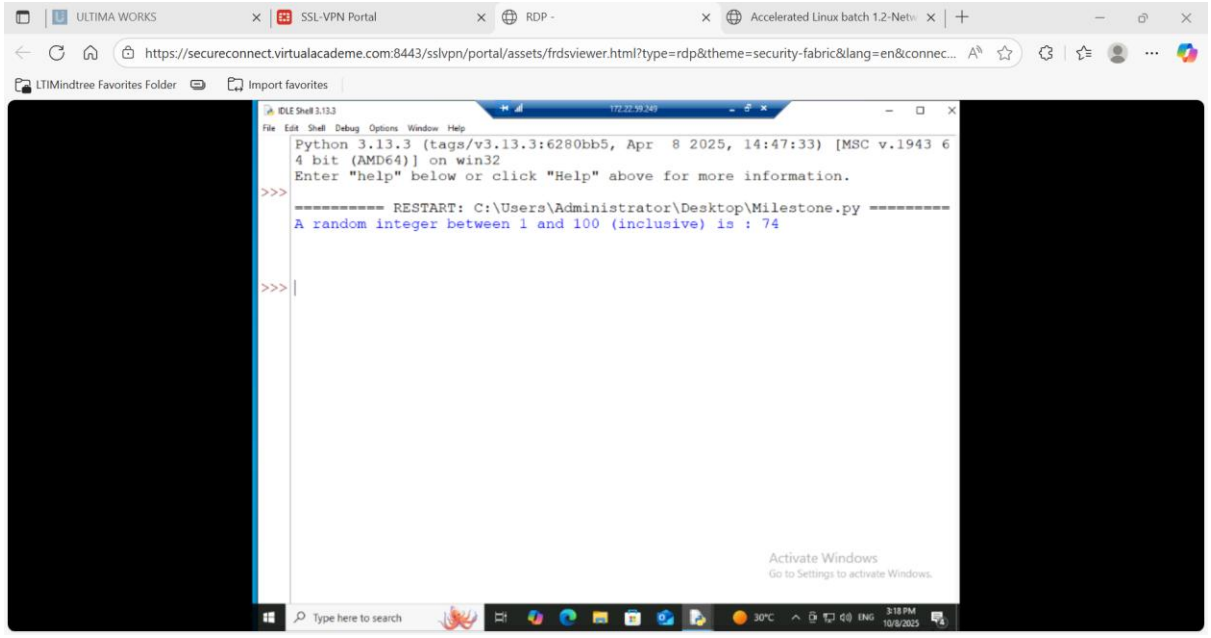
Random module is imported

RandomInt(1,100)



```
'''import time

current_time=time.strftime("%H:%M:%S")
print("Current time in HH:SS:MM format is :",current_time)

print("\n\n")


import math

sq_root=math.sqrt(625)
print("Square root of 625 is :",sq_root)

print("\n\n")
'''

import random

rand_int=random.randint(1,100)
print("A random integer between 1 and 100 (inclusive) is :",rand_int)

print("\n\n")


'''

import os
```

Output:

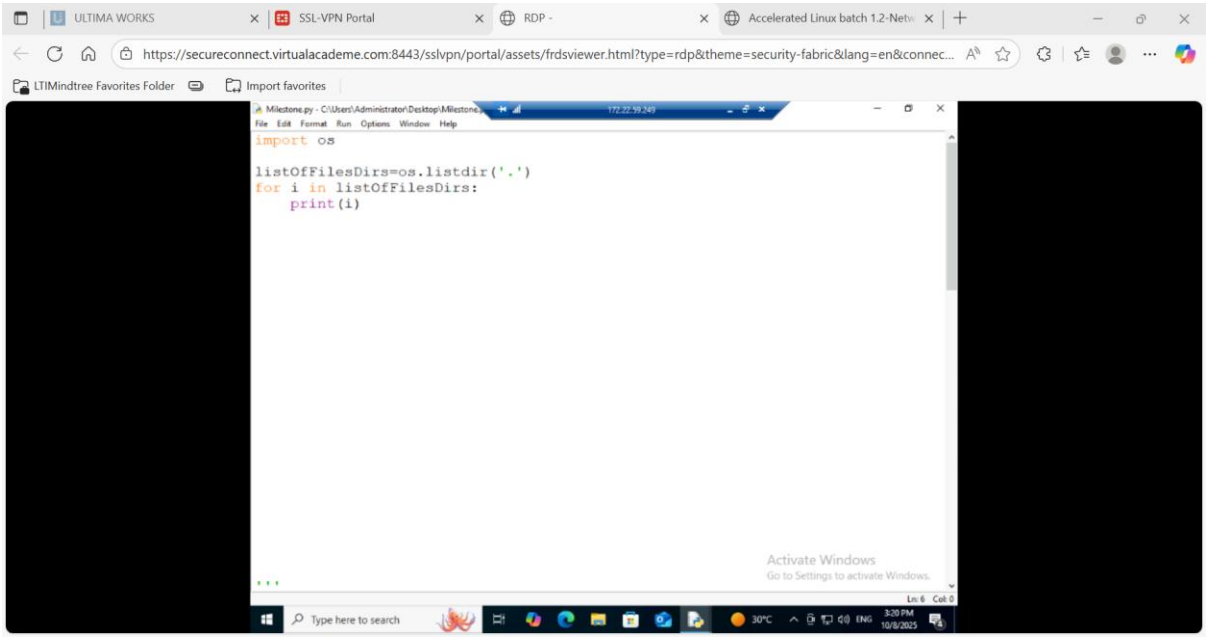


```
Python 3.13.3 (tags/v3.13.3:6280bb5, Apr  8 2025, 14:47:33) [MSC v.1943 6
4 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>>>
========== RESTART: C:\Users\Administrator\Desktop\Milestone.py =========
A random integer between 1 and 100 (inclusive) is : 74


>>>
```

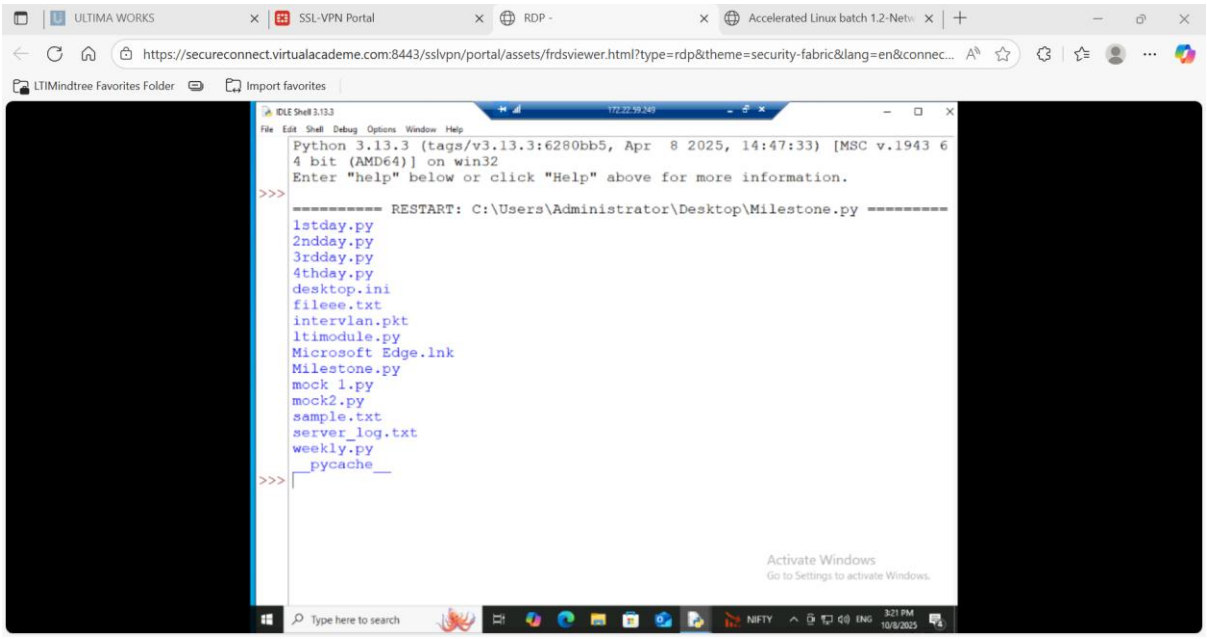
4. Use the os module to list all files and directories in the current working directory.

Program:

OS module is imported



Output:



Question 2:

File Handling and Log Analysis (Different File Content)

1. **You have a file named server_log.txt that logs user actions on a website. Perform the following tasks:**

Tasks:

Create a file server_log.txt with the following content:

[INFO] Login attempt from IP 192.168.1.2

[INFO] Page visited: Home

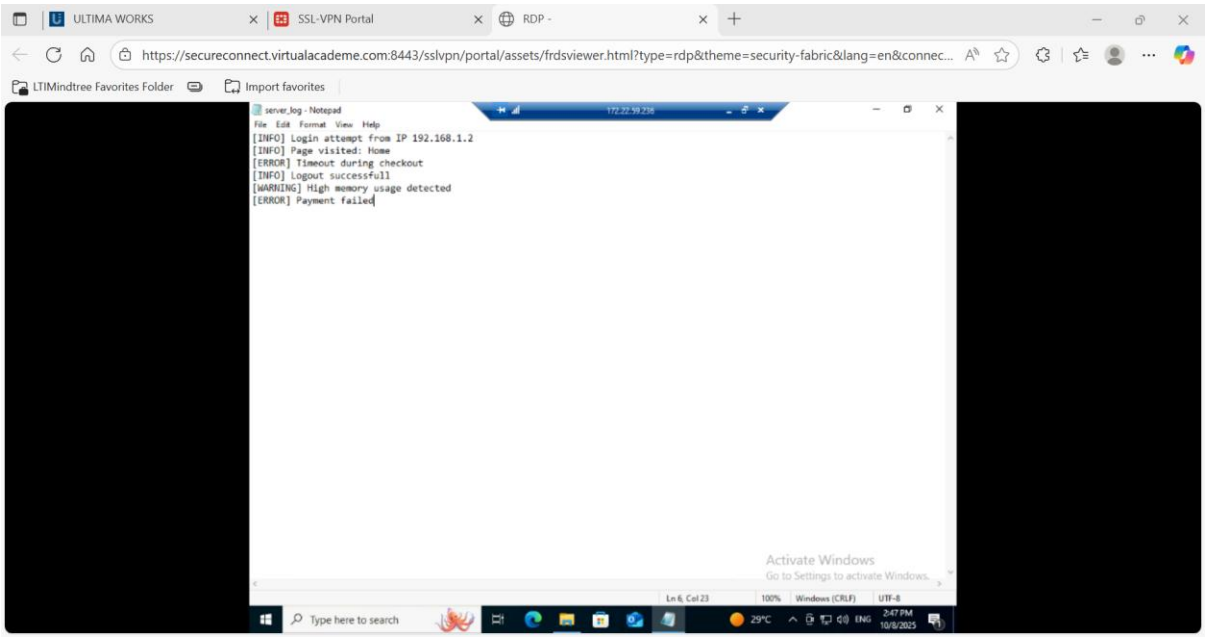
[ERROR] Timeout during checkout

[INFO] Logout successful

[WARNING] High memory usage detected

[ERROR] Payment failed

The file with the name of server_log.txt has been created



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

To open the file use open() function

To read the content use read() or readline() methods

Program:

```
print("CONTENT OF THE server_log.txt FILE :")
with open("server_log.txt","r") as file:
    content=file.read()
    print(content)
```

Output:

```
CONTENT OF THE server_log.txt FILE :
[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
```

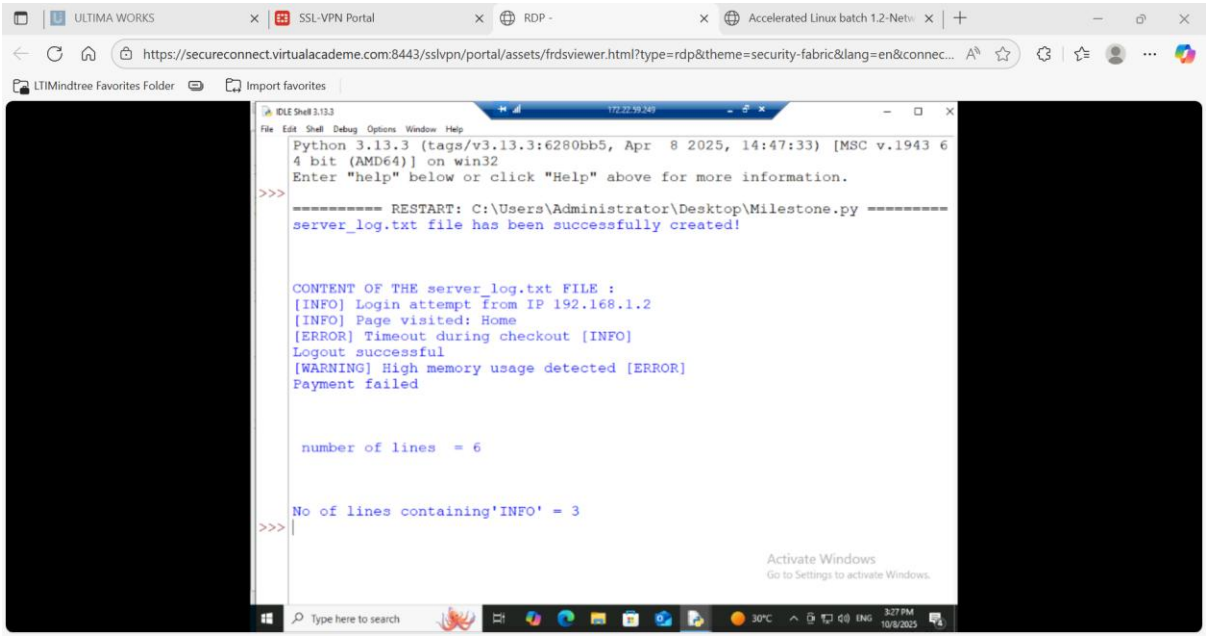
3. **Count the total number of lines in the file.**

To count the number of lines I have used a counter

Program:

```
no=0
with open("server_log.txt","r") as file:
    for line in file:
        no+=1
print(" number of lines  =",no)

print("\n\n")
```

Output:



4. **Count how many lines contain the word "INFO".**

   To count how many lines contain the word “INFO” I have used in in each line.

   Program:

```
infono=0
with open("server_log.txt","r") as file:
    for line in file:
        if "[INFO]" in line:
            infono+=1
print("No of lines containing'INFO' =",infono)
```

   Output: