[Challenge] Python Exercise

Your Challenge

- Write a **Python script** to:
  - Display all the **prime numbers between 1 to 250**.
  - Store the results in a **results.txt** file.
- Test the script. Verify that it produced the expected results in the **results.txt** file.
- **Save the script** and **make a note of its location (absolute path)** for future reference.

Note: Both Python 2 and Python 3 are installed on the Linux Host. It is recommended to use Python 3. To run a Python script using version 3, run the following command by replacing *file.py* with your file name.

```
python3 file.py
```

```python
# Check if a number is prime
def is_prime(num):
    if num <= 1:
        return False
# Divisible by numbers between 2 to int(num**0.5)
    for i in range(2, int(num**0.5) + 1):
# Check for divisibility
        if num % i == 0:
            return False
    return True


# Generate prime numbers between 1 to 250
prime_numbers = [num for num in range(1, 251) if is_prime(num)]

# Write prime numbers to results.txt file
with open("results.txt", "w") as file:
    file.write("Prime numbers between 1 to 250:\n")
    for prime in prime_numbers:
# str() : Convert numbers to strings to use them with other strings
        file.write(str(prime) + "\n")

print("Prime numbers between 1 to 250 have been saved to results.txt")
```

```
C:\Users\DELL>ssh -i Downloads/labsuser.pem ec2-user@52.40.27.5
     ,       #_
   ~\_  ####_          Amazon Linux 2
  ~~  \_#####\
  ~~     \###|          AL2 End of Life is 2025-06-30.
  ~~     \#/ ___
   ~~       V~' '->
    ~~~         /        A newer version of Amazon Linux is available!
     ~~._.   _/
      _/ _/          Amazon Linux 2023, GA and supported until 2028-03-15.
     _/m/'              https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-10-1-11-179 ~]$ vi file.py
[ec2-user@ip-10-1-11-179 ~]$ python3 file.py
Prime numbers between 1 to 250 have been saved to results.txt
[ec2-user@ip-10-1-11-179 ~]$ cat results.txt
Prime numbers between 1 to 250:
2
3
5
7
11
13
17
19
23
29
31
37
```

```
97
101
103
107
109
113
127
131
137
139
149
151
157
163
167
173
179
181
191
193
197
199
211
223
227
229
233
239
241
[ec2-user@ip-10-1-11-179 ~]$
```