LAB ASSIGNMENT-3.4

2303A51337

BATCH-10

➢ TASK-1:

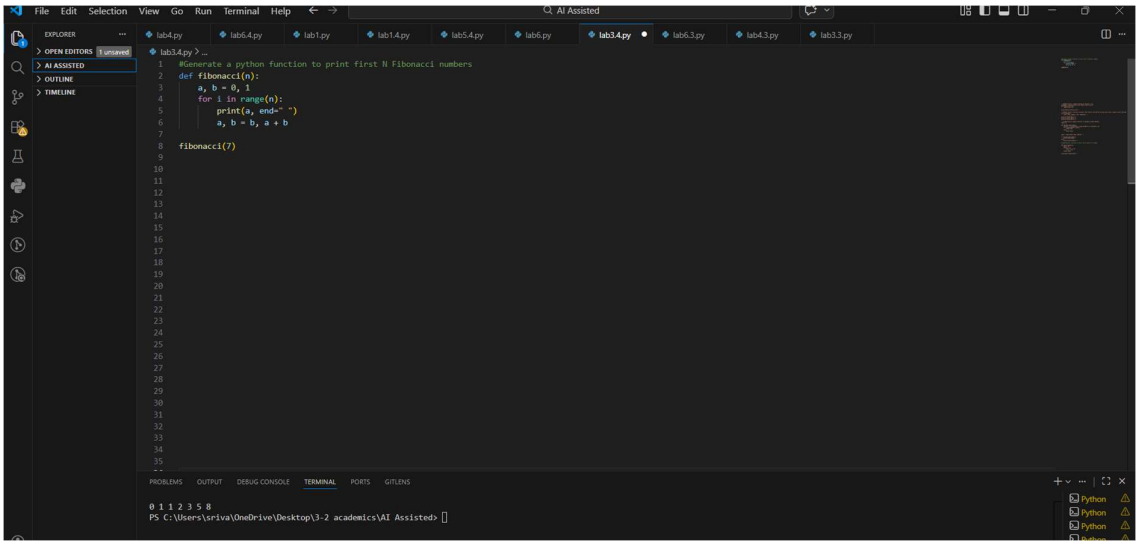
PROMPT:

Generate a python function to print first N Fibonacci numbers.

CODE:

```
def fibonacci(n):
    a, b = 0, 1
    for i in range(n):
        print(a, end=" ")
        a, b = b, a + b
fibonacci(7)
```

OUTPUT:



EXPLANATION:

The function generates Fibonacci numbers using two variables.

A loop runs N times and prints numbers one by one.

❖ TASK-2

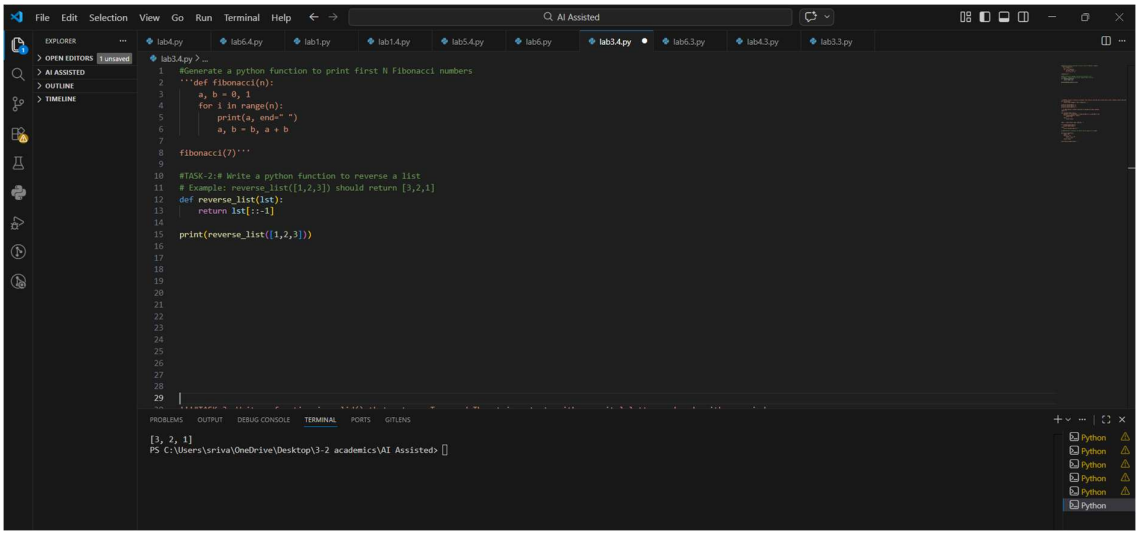
PROMPT:

Write a python function to reverse a list.

CODE:

```
def reverse_list(lst):
    return lst[::-1]
print(reverse_list([1,2,3]))
```

OUTPUT:



EXPLANATION:

The function reverses the given list.

It uses slicing method to change order of elements.

The output list is returned in reverse format.

❖ TASK-3:

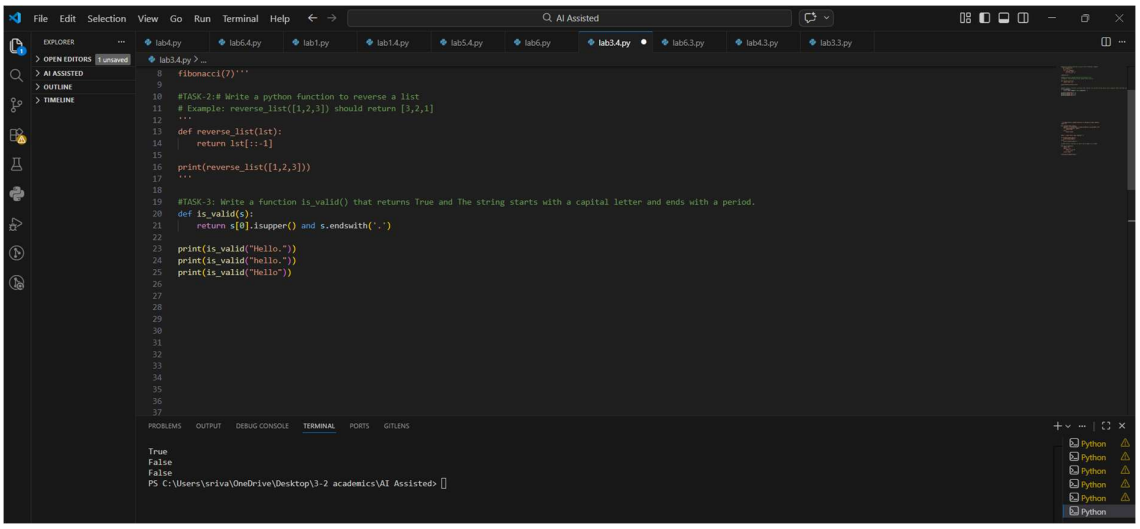
PROMPT:

Write a function is_valid() that returns True and The string starts with a capital letter and ends with a period.

CODE:

```
def is_valid(s):
  return s[0].isupper() and s.endswith('.')
print(is_valid("Hello."))
print(is_valid("hello."))
print(is_valid("Hello"))
```

OUTPUT:



EXPLANATION:

- The function checks whether the first letter is capital.
- It also checks whether the string ends with a period.
- Both conditions must be true to return True.

TASK-4:

PROMPT:

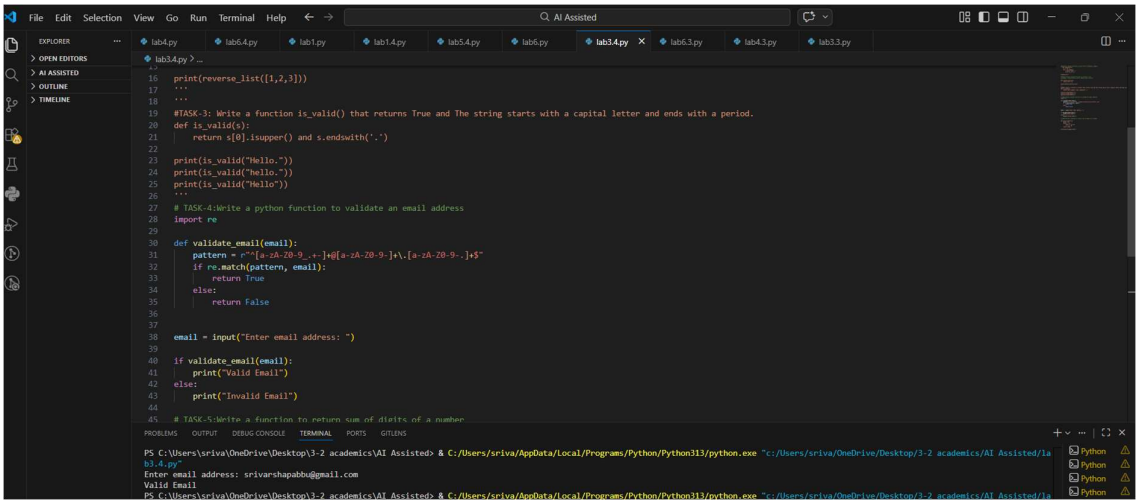
`Write a python function to validate an email address.`

CODE:

```
import re

def validate_email(email):
    pattern = r"^[a-zA-Z0-9_.+-]+@[a-zA-Z0-9-]+\.[a-zA-Z0-9-.]+$"
    if re.match(pattern, email):
        return True
    else:
        return False
email = input("Enter email address: ")
if validate_email(email):
    print("Valid Email")
else:
    print("Invalid Email")
```

OUTPUT:



EXPLANATION:

- The function checks whether the first letter is capital.

- It also checks whether the string ends with a period.
- Both conditions must be true to return True.

❖ Task-5

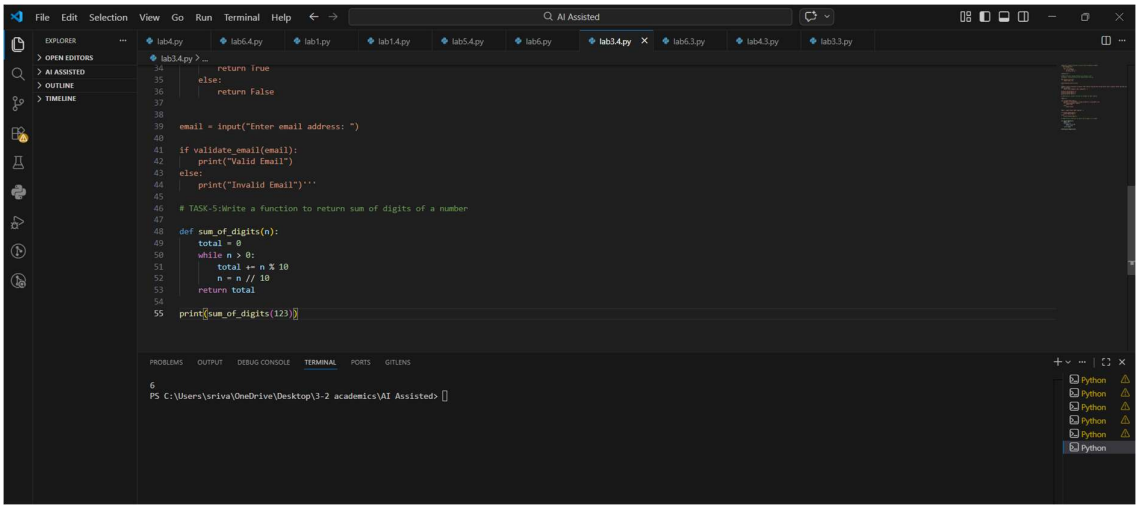
PROMPT:

Write a function to return sum of digits of a number

CODE:

```
def sum_of_digits(n):
    total = 0
    while n > 0:
        total += n % 10
        n = n // 10
    return total
print(sum_of_digits(123))
```

OUTPUT:



EXPLANATION:

- The function extracts digits using loop.
- Each digit is added to total sum.
- Finally the sum of digits is returned.