ASSIGNMENT-3.4

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BATCH-10

TASK-1:

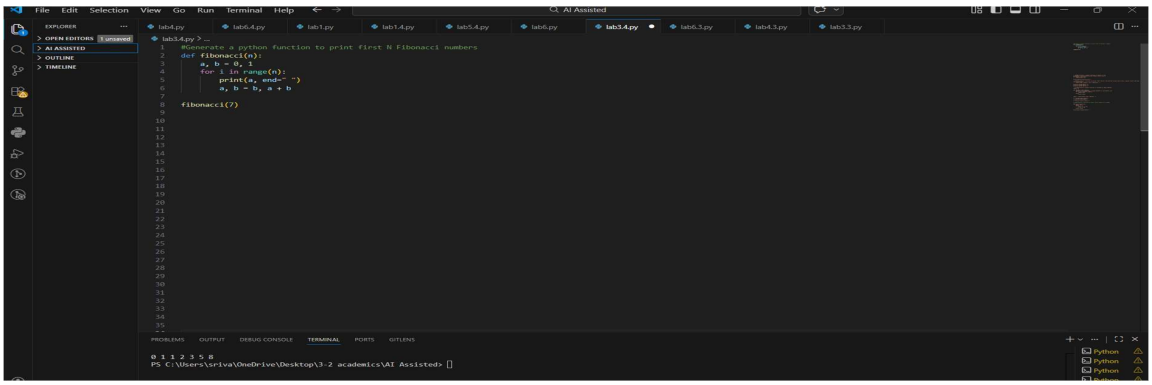
Prompt:

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:



Analysis:

The function generates Fibonacci numbers using two variables.

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

TASK-2:

Prompt:

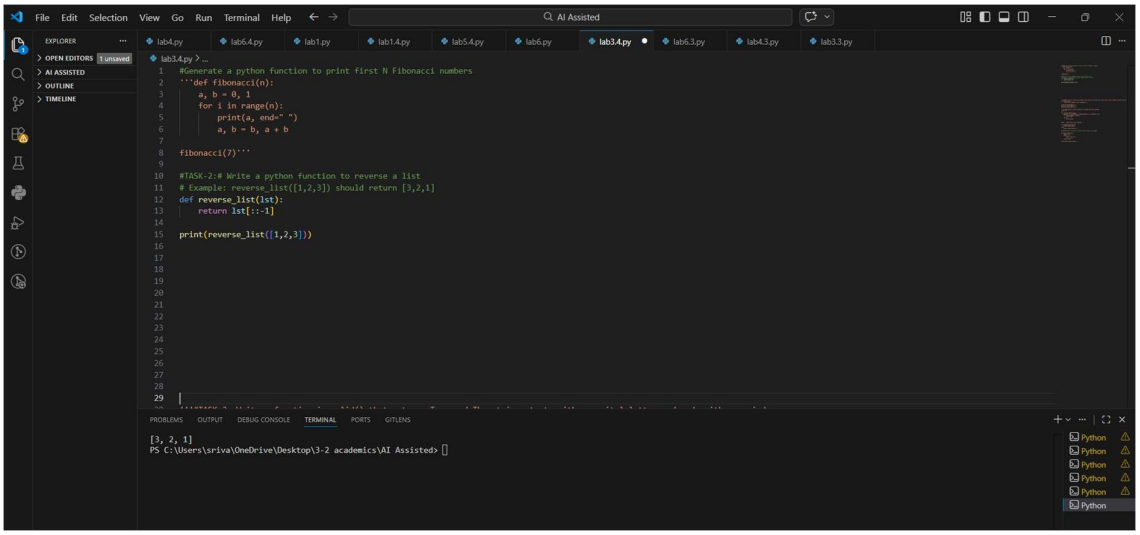
Write a python function to reverse a list.

Code:

```
def reverse_list(lst):
```

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

Output:



Analysis:

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):

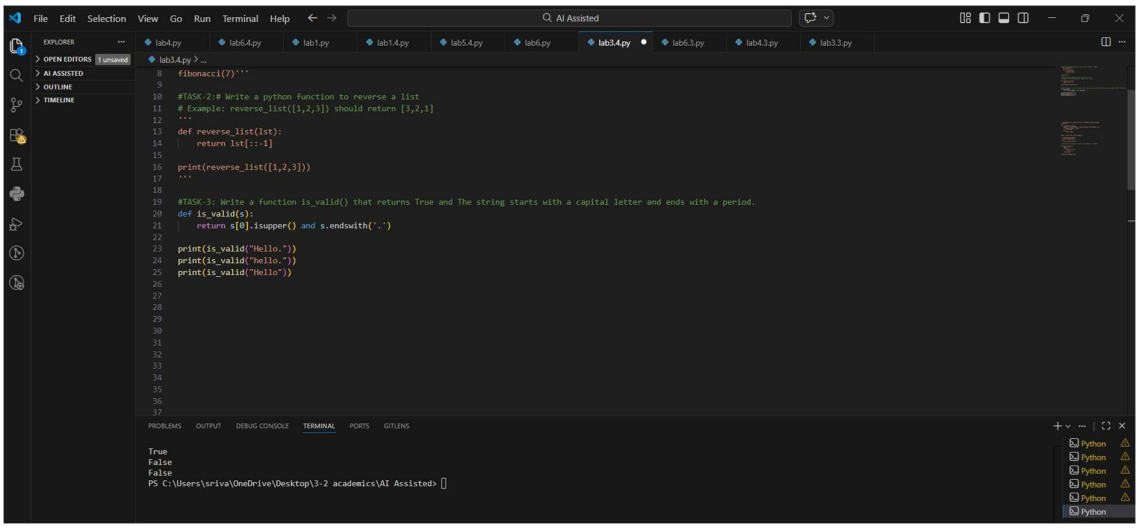
return s[0].isupper() and s.endswith('.')

print(is_valid("Hello."))

print(is_valid("hello."))

print(is_valid("Hello"))

Output:



Analysis:

- 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):

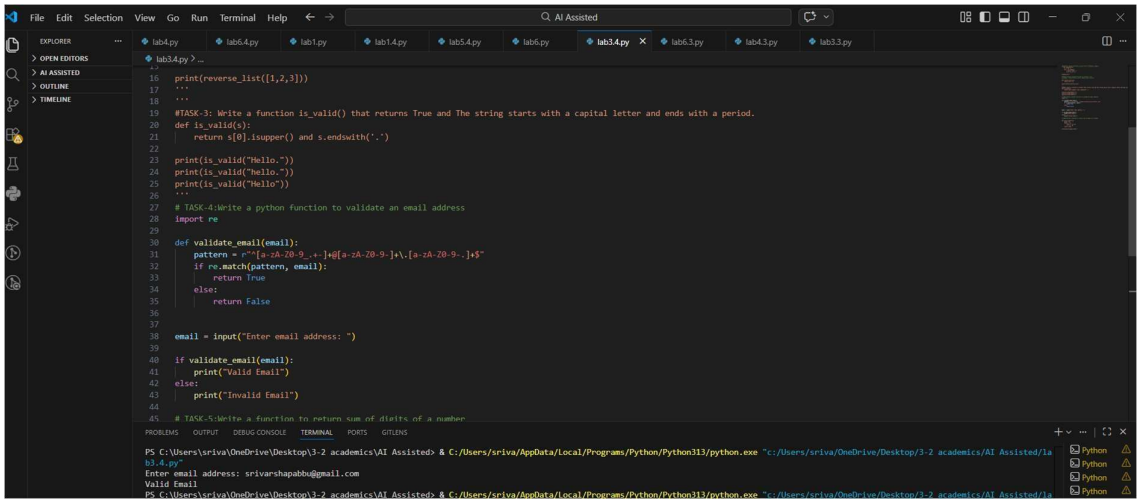
return True

else:

return False email = input("Enter email address: ") if validate_email(email): print("Valid Email") else:

print("Invalid Email")

Output:



Analysis:

- 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):

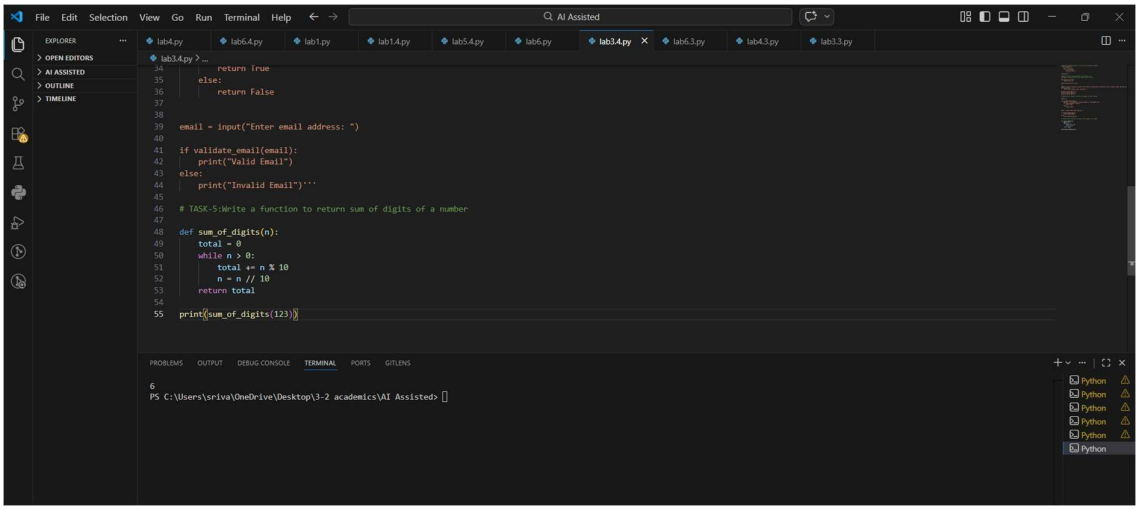
total = 0 while n > 0:

total += n % 10 n = n

// 10 return total

print(sum_of_digits(123))

Output:



Analysis:

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