

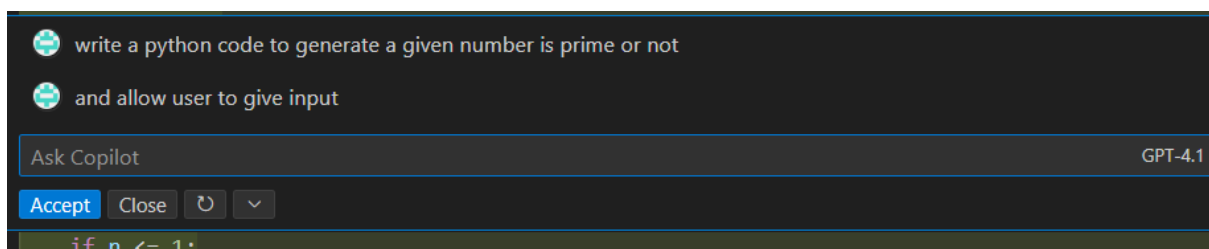
LAB – 03 – AI ASSISTED CODING

BATCH: 01

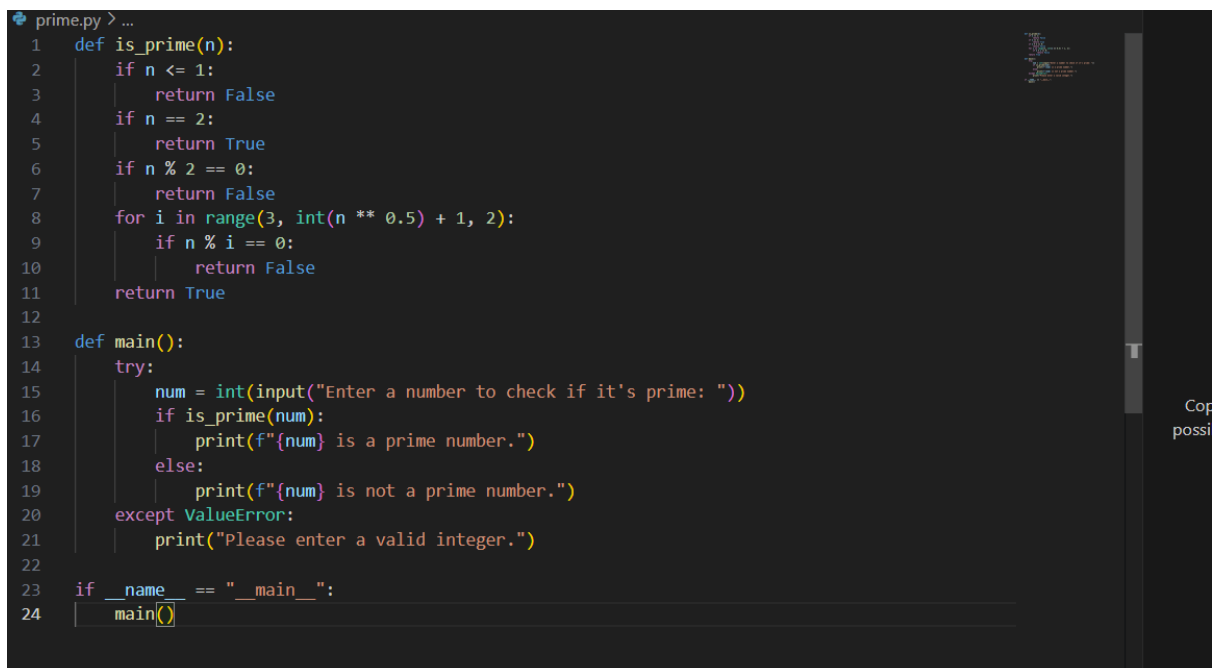
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TASK 2:

PROMPT:



CODE:



OUTPUT:

```
1.exe c:/Users/hansi/OneDrive/Desktop/AI/prime.py
Enter a number to check if it's prime: 4
4 is not a prime number.
```

TASK 3:

PROMPT:

To generate a python code like #function to reverse a string

GPT-4.1

CODE:

```
# Function to reverse a string
def reverse_string(s):
    return s[::-1]

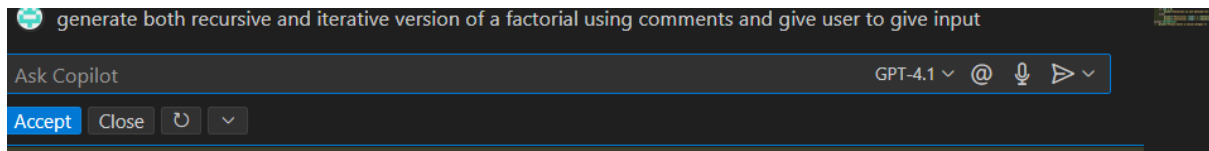
# Example usage
input_str = "public healthcare"
reversed_str = reverse_string(input_str)
print(reversed_str)
```

OUTPUT:

```
Enter a string to reverse: akanksha
ahsknaka
PS C:\Users\hansi\OneDrive\Desktop\Project>
```

TASK 4:

PROMPT:



CODE:

```
# Factorial calculation in Python: Recursive and Iterative versions

def factorial_recursive(n):
    """Calculate factorial recursively."""
    if n == 0 or n == 1:
        return 1
    else:
        return n * factorial_recursive(n - 1)

def factorial_iterative(n):
    """Calculate factorial iteratively."""
    result = 1
    for i in range(2, n + 1):
        result *= i
    return result

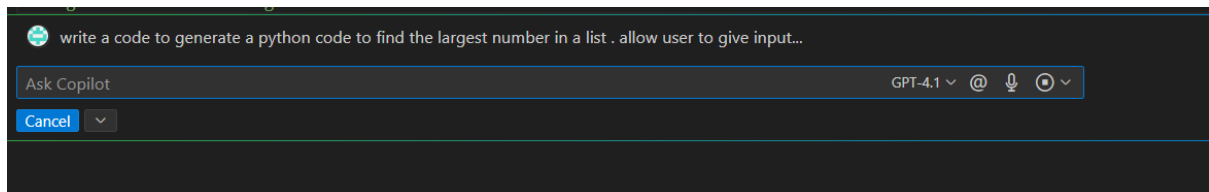
# Get user input
try:
    num = int(input("Enter a non-negative integer: "))
    if num < 0:
        print("Factorial is not defined for negative numbers.")
    else:
        print(f"Recursive: {num}! = {factorial_recursive(num)}")
        print(f"Iterative: {num}! = {factorial_iterative(num)}")
except ValueError:
    print("Please enter a valid integer.")
```

OUTPUT:

```
Enter a non-negative integer: 6
Recursive factorial: 720
Iterative factorial: 720
```

TASK 5:

PROMPT:



CODE:

```
# Program to find the largest number in a list given by the user

# Get input from the user
numbers = input("Enter numbers separated by spaces: ")

(variable) num_list: list[int] list of integers
num_list = [int(num) for num in numbers.split()]

# Find the largest number
if num_list:
    largest = max(num_list)
    print("The largest number is:", largest)
else:
    print("No numbers were entered.")
```

OUTPUT:

```
1.exe "c:/Users/hansi/OneDrive/Desktop/AI/largest number"
Enter numbers separated by spaces: 35 45 22 99
The largest number is: 99.0
PS C:\Users\hansi\OneDrive\Desktop\AI> 
```