

AI ASSISTED CODING

Program :B.tech(CSE)
Name :ANANTHA MANIDEEP
En No. :2403A52078
Batch No. :02

LAB ASSIGNMENT-1

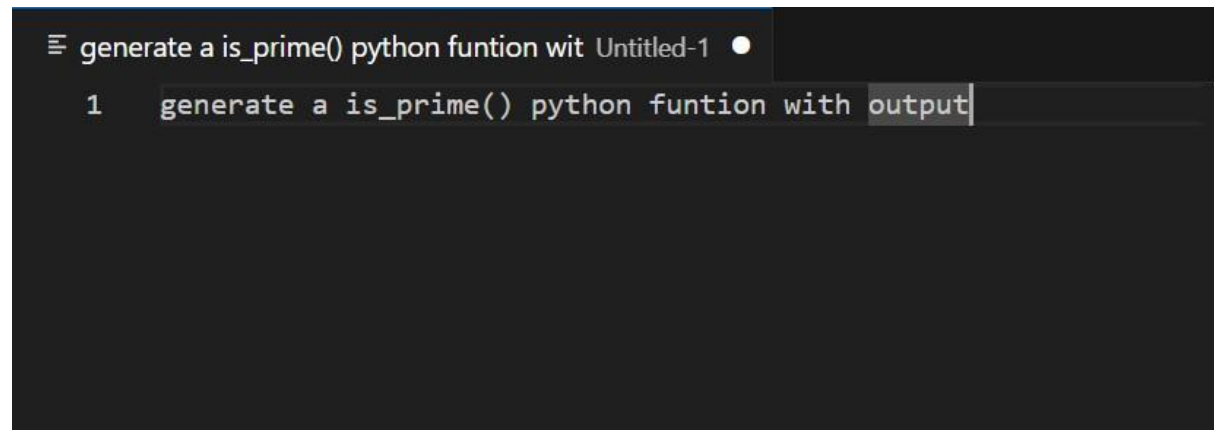
Task Description1

🔗 Use Copilot to generate a `is_prime()` python function.

Expected Output#1

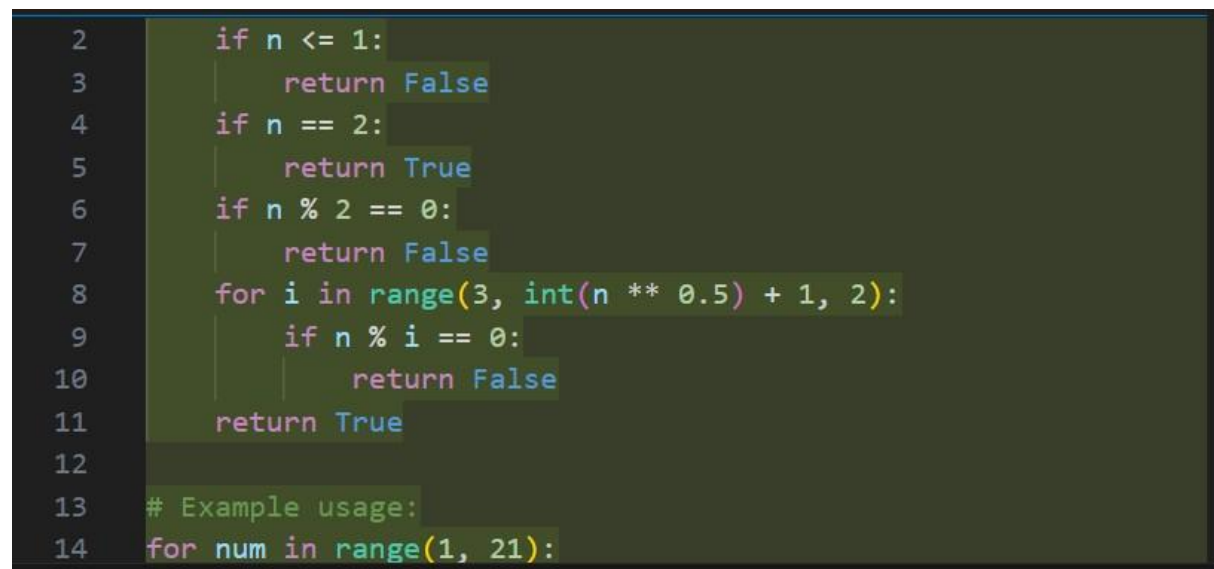
🔗 Correct examples verify it True or False

Question



The screenshot shows a code editor with a dark theme. The top bar has a hamburger menu icon, the text "generate a is_prime() python funtion wit", and a tab labeled "Untitled-1" with a close button. The main editor area contains a single line of text: "1 generate a is_prime() python funtion with output".

Code



The screenshot shows a code editor with a dark theme. The code is as follows:

```
2     if n <= 1:
3         return False
4     if n == 2:
5         return True
6     if n % 2 == 0:
7         return False
8     for i in range(3, int(n ** 0.5) + 1, 2):
9         if n % i == 0:
10            return False
11    return True
12
13    # Example usage:
14    for num in range(1, 21):
```

Output

```
11 is prime: True
12 is prime: False
13 is prime: True
14 is prime: False
15 is prime: False
16 is prime: False
17 is prime: True
18 is prime: False
19 is prime: True
20 is prime: False
PS C:\Users\NEW\AppData\Local\Programs\Microsoft VS Code>
withswaron\
```

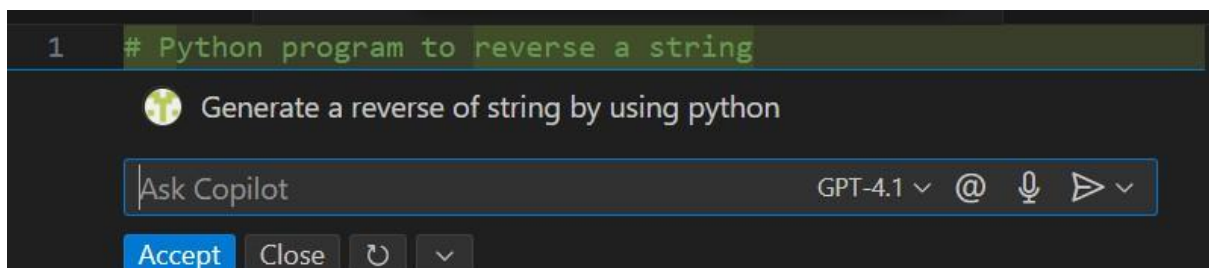
Task Description#2

🔗 Generate a python program for Reverse of a string by using copilot.

Expected Output#2

🔗 Verify the correct output by giving the reverse string as input

Question



Code

```
1 # Python program to reverse a string
2
3 input_str = input("Enter a string: ")
4 reversed_str = input_str[::-1]
5 print("Reversed string:", reversed_str)
```

Output

```
e "c:/Users/NEW/Desktop/AI assisted coading/reverse.py"
Enter a string: mom
Reversed string: mom
PS C:\Users\NEW\AppData\Local\Programs\Microsoft VS Code>
```

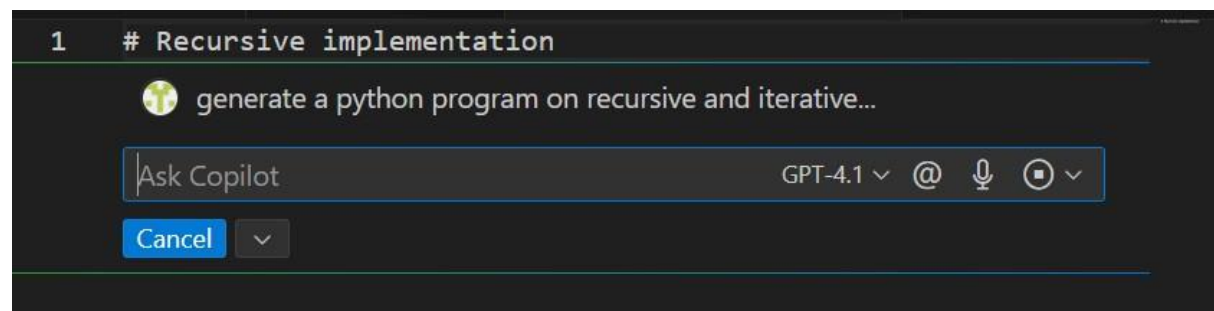
Task Discription#3

🔗 Generate a python program for Recursive and Iterate using with python function.

Expected Output#3

🔗 Verify the expected output of the program.

Question



Code

```
1  # Recursive implementation of factorial
2  def factorial_recursive(n):
3      if n == 0 or n == 1:
4          return 1
5      else:
6          return n * factorial_recursive(n - 1)
7
8  # Iterative implementation of factorial
9  def factorial_iterative(n):
10     result = 1
11     for i in range(2, n + 1):
12         result *= i
13     return result
14
15 # Example usage
16 num = 5
17 print(f"Recursive factorial of {num}: {factorial_recursive(num)}")
18 print(f"Iterative factorial of {num}: {factorial_iterative(num)}")
```

Output

```
: \Users\NEW\AppData\Local\Microsoft\WindowsApps\python3.13.exe
e "c:/Users/NEW/Desktop/AI assisted coading/Recursive.py"
Recursive factorial of 5: 120
Iterative factorial of 5: 120
PS C:\Users\NEW\AppData\Local\Programs\Microsoft VS Code>
```

Task Discription#4

Generate the python program for finding the Largest number and assiss by the copilot.

Expected Output#4

Verify the expected output and review of the code.

Question

```
1 generate a python program to find the largest number in a list
generate a python program to find the largest
number in a list Assess code quality and
efficuecy
```

Generated Code

```
1 def find_largest(numbers):
generate a python program to find the largest number in a list Assess code quality and efficuecy
```

Code

```
1 def find_largest(numbers):
2     if not numbers:
3         raise ValueError("The list is empty.")
4     largest = numbers[0]
5     for num in numbers[1:]:
6         if num > largest:
7             largest = num
8     return largest
9
10 # Example usage:
11 nums = [3, 7, 2, 9, 4]
12 print("Largest number:", find_largest(nums))
```

Output

```
> & C:\Users\NEW\AppData\Local\Microsoft  
\WindowsApps\python3.13.exe "c:/Users/NEW/Desktop/AI assisted coading/Largest no.py"  
Largest number: 9  
PS C:\Users\NEW\AppData\Local\Programs\Microsoft VS Code> █
```

---END---