

AI ASSISTED CODING [06-08-25]

TASK DESCRIPTION:

Use copilot to check if a number is is_prime()

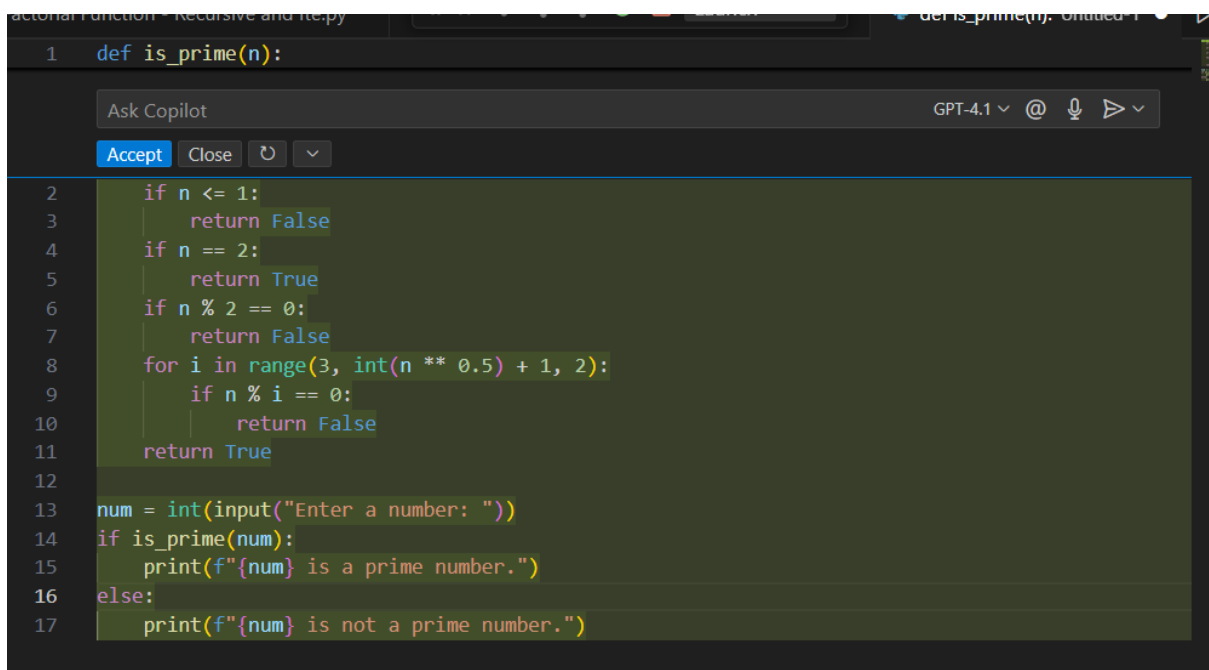
Expected output:

Case1: True if number has only two factors including itself as factor

Case 2: False if number has more than two factors

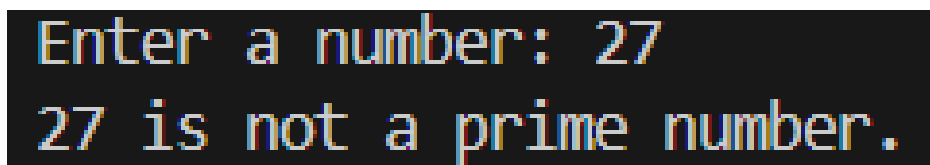
Prompt:

Generate a python code to check if a user defined number is Prime



```
1 def is_prime(n):
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 num = int(input("Enter a number: "))
14 if is_prime(num):
15     print(f"{num} is a prime number.")
16 else:
17     print(f"{num} is not a prime number.")
```

Output:



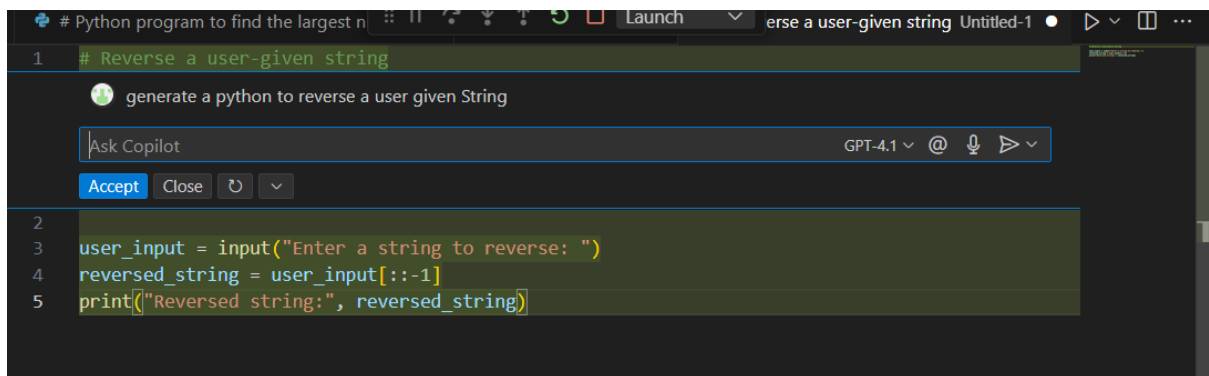
```
Enter a number: 27
27 is not a prime number.
```

Task Description:

Use copilot to find reverse a given String

Expected output:

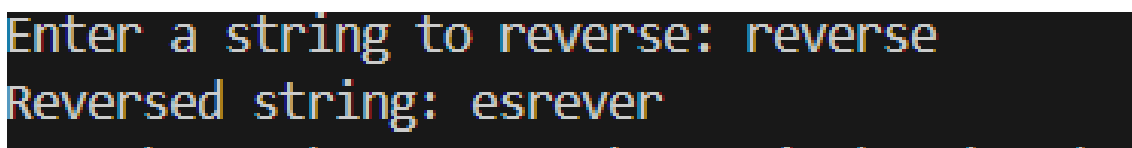
Reverse a String Code given by Copilot



The screenshot shows a code editor with a Python program to reverse a string. The program is generated by Copilot, as indicated by the "Ask Copilot" button and the "GPT-4.1" model name. The code is as follows:

```
1 # Reverse a user-given string
2
3 user_input = input("Enter a string to reverse: ")
4 reversed_string = user_input[::-1]
5 print("Reversed string:", reversed_string)
```

OUTPUT:



The output of the program is shown in a terminal window. It displays the prompt "Enter a string to reverse: reverse" and the resulting output "Reversed string: esrever".

Conclusion:

We used Copilot to get the code to reverse a String which is user defined

It used slicing technique to reverse the String

In the above we have given input as reverse and the output is its reverse

TASK Description:

GENERATE BOTH RECURSIVE AND ITERATIVE VERSIONS OF A FACTORIAL FUNCTION USING COMMENTS.

Expected Output:

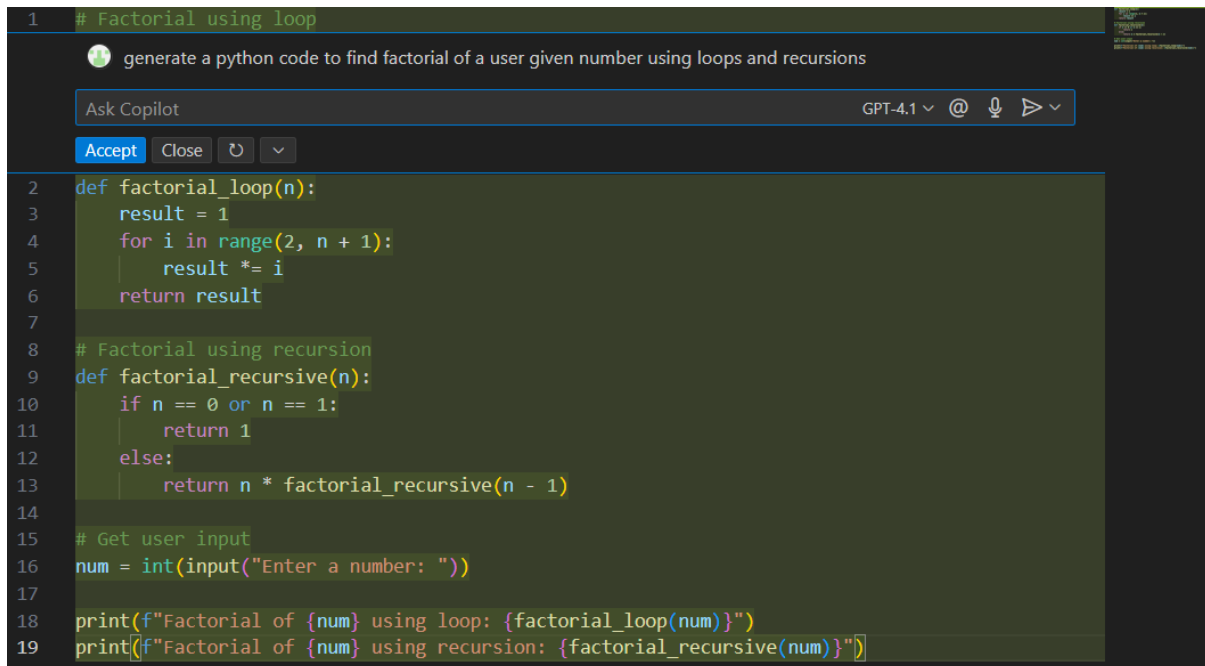
Enter a number:5

Factorial of 5 using loop:120

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Factorial of 5 using Recursion:120

CODE:



```
1 # Factorial using loop
2 generate a python code to find factorial of a user given number using loops and recursions
3 Ask Copilot GPT-4.1
4 Accept Close
5
6 def factorial_loop(n):
7     result = 1
8     for i in range(2, n + 1):
9         result *= i
10    return result
11
12 # Factorial using recursion
13 def factorial_recursive(n):
14     if n == 0 or n == 1:
15         return 1
16     else:
17         return n * factorial_recursive(n - 1)
18
19 # Get user input
20 num = int(input("Enter a number: "))
21
22 print(f"Factorial of {num} using loop: {factorial_loop(num)}")
23 print(f"Factorial of {num} using recursion: {factorial_recursive(num)}")
```

CODE OUPUT:

```
Enter a number: 5
Factorial of 5 using loop: 120
Factorial of 5 using recursion: 120
```

CONCLUSION:

we have used Copilot to get the code to find out the factorial of a number using both loops like while,for,and recursion

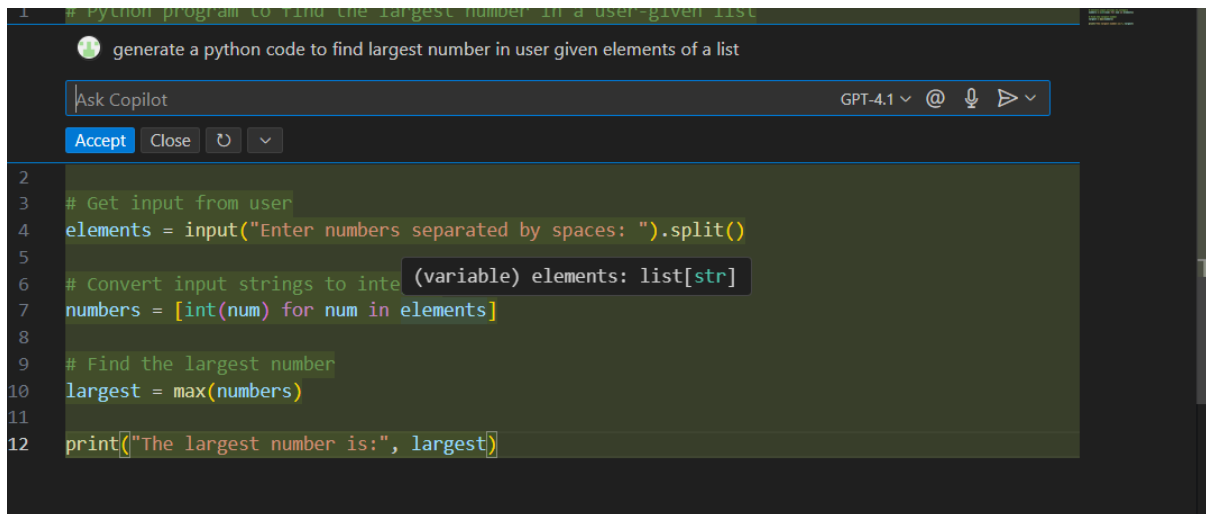
and it has defined two functions one is for using loops and other is for using recursions

TASK Description:

USE COPILOT TO FIND THE LARGEST NUMBER IN A LIST. ASSESS CODE QUALITY AND EFFICIENCYssss

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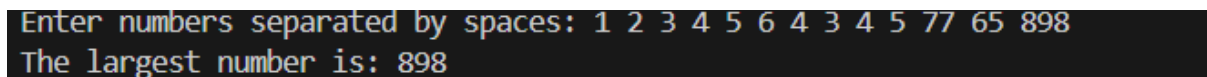
CODE:



The screenshot shows a code editor with a dark theme. At the top, there is a prompt bar with the text "generate a python code to find largest number in user given elements of a list". Below the prompt bar, there are buttons for "Accept", "Close", and a refresh icon. The code editor displays the following Python code:

```
1 # Python program to find the largest number in a user-given list
2
3 # Get input from user
4 elements = input("Enter numbers separated by spaces: ").split()
5
6 # Convert input strings to integers (variable) elements: list[str]
7 numbers = [int(num) for num in elements]
8
9 # Find the largest number
10 largest = max(numbers)
11
12 print("The largest number is:", largest)
```

OUTPUT:



The screenshot shows the output of the program. It displays the prompt "Enter numbers separated by spaces:" followed by the user input "1 2 3 4 5 6 4 3 4 5 77 65 898". Below the input, it displays the output "The largest number is: 898".

CONCLUSION:

We have used COPILOT to get the code in which it created an empty list and appended elements from the user with a space between each element

And finally Displayed the largest among them

We have used a built-in function i.e. `max()`

With the help of it we can find the max of a list