



# Python

# Problem

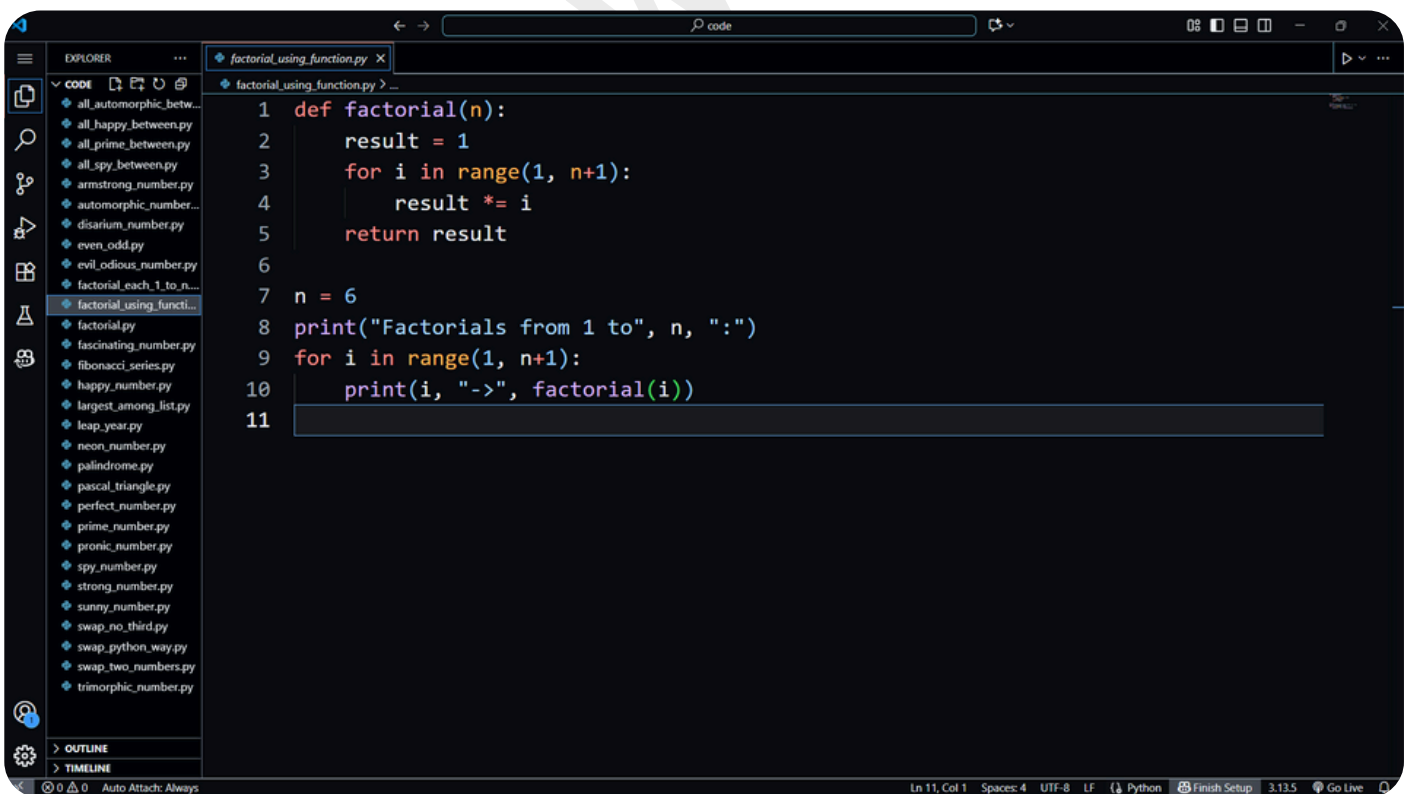
# PYTHON PROGRAM

## Python Problem

### 12. Factorial (using function)

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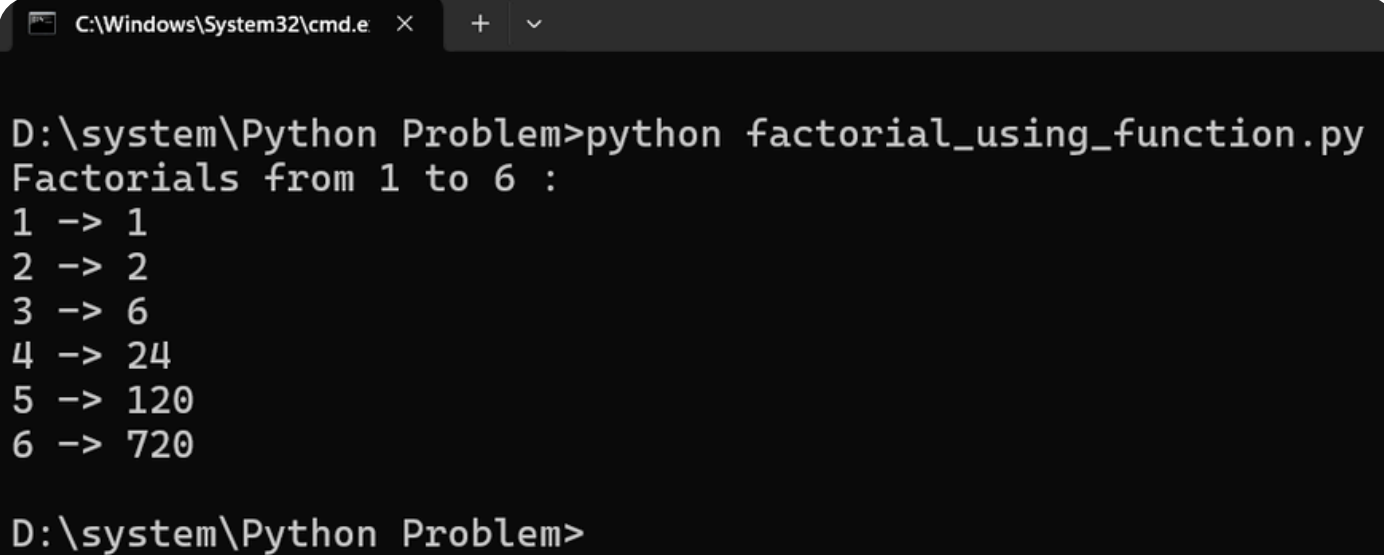
#### Code



```
1 def factorial(n):
2     result = 1
3     for i in range(1, n+1):
4         result *= i
5     return result
6
7 n = 6
8 print("Factorials from 1 to", n, ":")
9 for i in range(1, n+1):
10     print(i, "->", factorial(i))
11
```

The screenshot shows a Python IDE with a file explorer on the left containing various Python files. The main editor displays a Python script named 'factorial\_using\_function.py'. The script defines a 'factorial' function that calculates the factorial of a number 'n' using a loop. It then sets 'n' to 6 and prints the factorials from 1 to 6. The status bar at the bottom indicates the current line and column (Ln 11, Col 1), encoding (UTF-8), and other details.

# Output



A screenshot of a Windows command prompt window. The title bar shows the path 'C:\Windows\System32\cmd.e' and standard window controls. The command prompt shows the following text:

```
D:\system\Python Problem>python factorial_using_function.py
Factorials from 1 to 6 :
1 -> 1
2 -> 2
3 -> 6
4 -> 24
5 -> 120
6 -> 720

D:\system\Python Problem>
```

The output displays the factorials for numbers 1 through 6. A large, light gray watermark 'TechBy' is visible diagonally across the lower half of the image.



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