

## Code:2

```
def factorial(n):
```

```
    if n == 0 or n == 1:
```

```
        return 1
```

```
    else:
```

```
        return n * factorial(n-1)
```

```
def compute_factorials(numbers):
```

```
    return [factorial(num) for num in numbers]
```

```
def main():
```

```
    try:
```

```
        # Input: List of numbers for which factorial needs to be computed
```

```
        input_numbers = [int(x) for x in input("Enter comma-separated numbers: ").split(', ')]
```

```
        # Computing factorials
```

```
        factorials = compute_factorials(input_numbers)
```

```
        # Output: Printing the results in a comma-separated sequence
```

```
        print("Factorials:", ', '.join(map(str, factorials)))
```

```
    except ValueError:
```

```
        print("Invalid input. Please enter valid integers separated by commas.")
```

```
if __name__ == "__main__":
```

```
    main()
```

**output:**

The image shows a Visual Studio Code editor window with a Python file named `program2.py` open. The code defines a `main` function that takes user input, splits it by commas, and calculates the factorial of each number. It includes a `try-except` block to handle `ValueError` exceptions. The terminal at the bottom shows the command to run the program, the user input `2,3,4`, and the output `Factorials: 2, 6, 24`.

```
10 def main():
11     try:
12
13         input_numbers = [int(x) for x in input("Enter comma-separated numbers: ").split(',')]
14
15
16         factorials = compute_factorials(input_numbers)
17
18         print("Factorials:", ', '.join(map(str, factorials)))
19
20     except ValueError:
21         print("Invalid input. Please enter valid integers separated by commas.")
22
23 if __name__ == "__main__":
24     main()
```

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PS C:\Users\nimes\OneDrive\Desktop\assignment\_1> & 'C:\Users\nimes\AppData\Local\Programs\Python\Python312\python.exe' 'c:\Users\nimes\.vscode\extensions\ms-python.python-2023.22.1\pythonFiles\lib\python\debugpy\adapter\..\..\debugpy\launcher' '57047' '--' 'C:\Users\nimes\OneDrive\Desktop\assignment\_1\program2.py'

Enter comma-separated numbers: 2,3,4

Factorials: 2, 6, 24

PS C:\Users\nimes\OneDrive\Desktop\assignment\_1>