Code Quality and Resilience Activity

Activity: Evaluate the given piece of code against quality standards and analyse its resilience principles based on technical specifications.

Instructions:

1. **Code Review:**
   - Review the following sample code snippet written in Python:

```
def process_data(data):
    result = []
    for item in data:
        if item > 10:
            result.append(item * 2)
    return result

data = [5, 15, 3, 25, 8]
output = process_data(data)
print("Processed Data:", output)
```

2. **Resilience Analysis:**
   - Use the following technical specifications for a system that the code is intended to support:

     Expected Load: 1000 concurrent users

     Downtime Requirement: The system should have less than 1% downtime per month.

     Security Considerations: Must handle invalid inputs gracefully without crashing.

3. **Reflection:**

- Based on your review of the code and the provided technical specifications, analyse the following:

  a. What aspects of the code meet the quality standards? Provide specific examples.

  b. Identify any quality issues in the code. How could these be improved?

  c. Discuss how the code aligns with the resilience principles outlined in the technical specifications.

  d. Suggest specific modifications to improve both the quality and resilience of the code.

Share your reflection and engage in discussions about code quality and resilience principles on any of these platforms:

a. Stack Overflow

b. GitHub Discussions

c. CodeProject