Task 4: Vulnerability Assessment

Objective

Identify, analyze, and document vulnerabilities in a system.

Common Vulnerabilities

```
1. SQL Injection
2. Cross-Site Scripting (XSS)
3. Weak password storage
4. Unvalidated input
5. No error handling
```

Assessment Example

```
Test: Entered ' OR '1'='1 in login field
Result: Login bypassed → Vulnerability confirmed (SQL Injection)
Impact: Unauthorized access
Severity: High
```

Recommendations

```
- Use parameterized queries
- Validate and sanitize inputs
- Hash passwords (SHA-256/bcrypt)
- Output encoding to prevent XSS
- Proper error handling and logging
```

Conclusion

Assessment revealed multiple vulnerabilities; applying secure coding practices makes the system safer and robust.