Security Requirements

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The software development life cycle:

1. Requirement analysis
   - Security Requirements
2. Design
   - Misuse Cases / Vulnerability Mapping
3. Construction
   - Secure Coding Practices
4. Testing
   - Penetration Testing
5. Installation
   - Final Security Review
6. Maintenence
   - Periodic Security Review and Update

The earlier security is considered, the more likely it is to be implemented well.

1 Gathering Requirements

Requirement is an outcome for the proposed syste, something that it must perform or a qualiy it must have.

Functional Requirement is something that the system must do.

Nonfunctional Requirement is a quality or constraint for the system; must be upheld.

Security Requirement is an associated protection

2 Functional and Nonfunctional Security

Asking and answering the following questinos will create a well-written requirement:

1. Why should this be part of the system?
2. What are the constraints on this requirement?
3. What are the dependencies on this requirement?
4.

3 Security Recuirement

Fail case: what will happen if the requirement is not fulfilled during operation

Consequnce of failure:

Associated risk:

- What are the exceptions to the normal case for this requirement?
- that sensitive info is included?
- What are the consequences if the conditions are violated?
- What happens if this requirement is intentionally violated?

4 Validation

Validation: is the process of making sure the right system is being built.

Validation Testing: asserting that the needs of the system and stakeholders are being med with the requirements.

Tradeoff-analysis: