

# Software Artifact Repository

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## Background and Objective

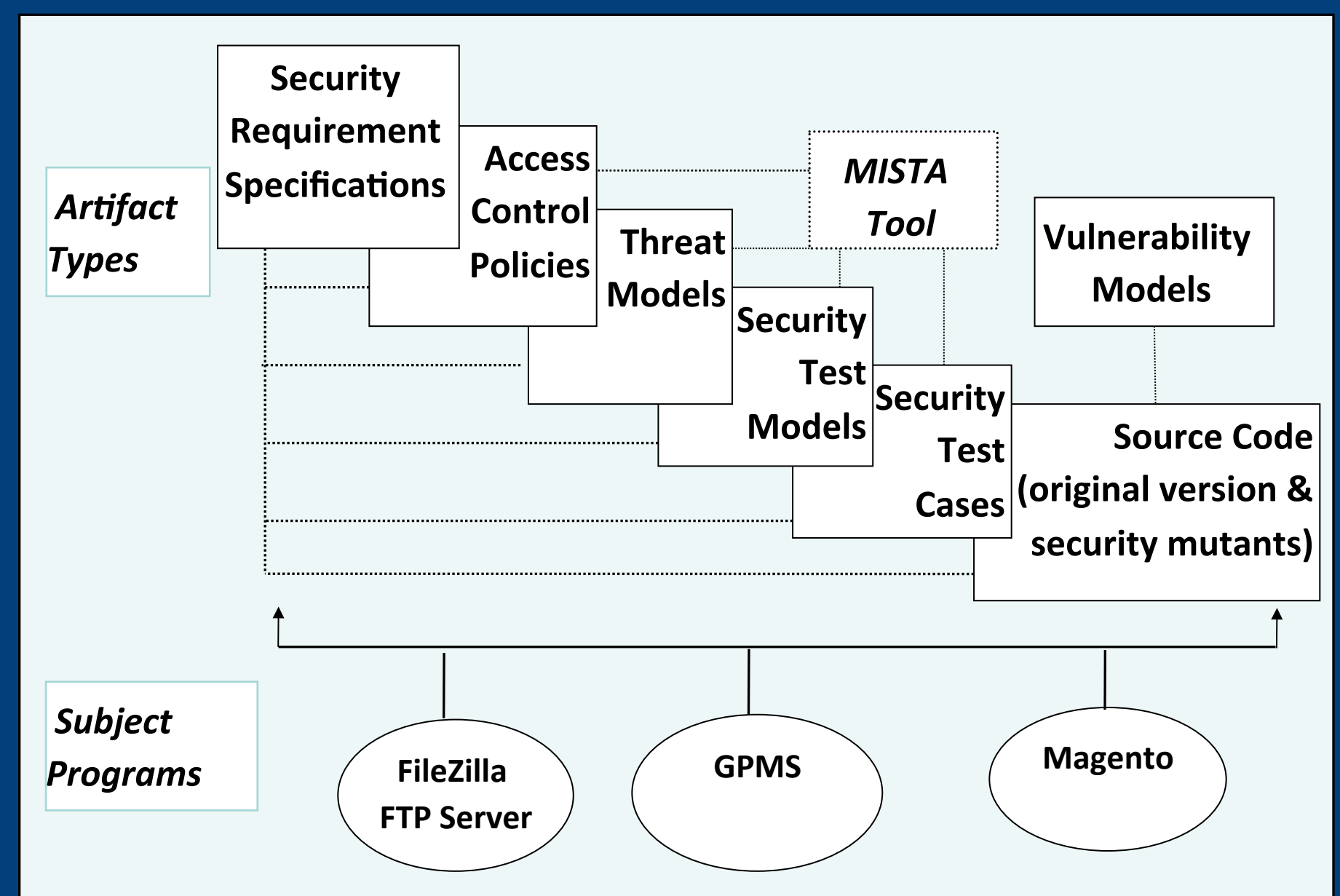
Vulnerabilities get into software for various reasons, such as poor security requirements specification, insecure software design, and inadequate assurance process.

Software assurance has emerged as an multidisciplinary body of knowledge.

However, instructional materials for software assurance education are rare because a systematic coverage of software assurance topics requires extensive expertise across various subfields of software engineering and computer security.

The objective of this project is to develop a repository of software artifacts for software assurance education. The artifacts include representative results from interdependent development and assurance activities for security-critical software.

### Structure of Software Artifact Repository



## Approach

- **Transform Research Results into Educational Materials:** The methods and processes used to create the software artifacts reflect the state-of-the-art research of software assurance.
- **Provide the Adversary's Perspective:** the software artifacts reflect the adversary's perspective of security throughout software development process. Understanding this perspective is essential to developing secure software.

### Progress

- Created use/misuse/mitigation use cases, security test models, security test cases, and 38 security mutants of FileZilla FTP Server, an open source C++ program

### Progress

- Created use/misuse cases, security test models, and security tests for GPMS, an open source web application in Java for grant proposal workflow management using XACML

### Ongoing Work

- Developing a website for management and shared use of the software artifacts
- Creating more artifacts for GPMS

### Ongoing Work

- Developing software artifacts for Magento, an open source web application for online shopping

Interested in meeting the PIs? Attach post-it note below!

