

Secure Programming Practices

Introduction

- ✓ Overview to Web-Client Architecture
- ✓ Importance of Information Security
- ✓ Basic Terminologies in Security
- ✓ OWASP Top 10 Intro
- ✓ Latest Trends and Metrics
- ✓ Most Common Forms of Attack
- ✓ Understanding Filtering and Validation
- ✓ Automated Code Review Technologies
- ✓ AAA Concept (Authentication, Authorization and Accountability)
- ✓ Lab Setup

Principles of Secure Coding

- ✓ Secure SDLC Architecture
- ✓ Software Security and Risk Principles Overview
- ✓ General Coding Practices
- ✓ Test Data Management
- ✓ Method for Robustness
- ✓ Encryption and Hashing
- ✓ Code Scanning(Manual Approach and With Tools)
- ✓ Security Architecture Design and Analysis

Identifying Security Vulnerabilities

- ✓ Server Misconfiguration Highlights
- ✓ Threat Modelling for Identification
- ✓ Sensitive Data Exposure Problems
- ✓ Using Components with Known Vulnerabilities
- ✓ CMS/Frameworks Based Known Vulnerabilities
- ✓ Unplanned Information Disclosure
- ✓ Overview of HTTP and HTTPS (SSL) Protocol based Vulnerabilities

Exploiting and Securing Vulnerabilities

- ✓ Input Validation
- ✓ Output Encoding
- ✓ Authentication and Password Management
- ✓ Session Management
- ✓ Access Control
- ✓ Cryptographic Practices
- ✓ Error Handling and Logging
- ✓ Data Protection
- ✓ Communication Security
- ✓ System Configuration
- ✓ Database Security
- ✓ File Management
- ✓ Memory Management