

. Net Secure Coding (CS109)

24 Hours

Outline

This course aimed to deliver the knowledge and the best practice in developing secure ASP.NET web applications using different ASP.NET platforms i.e. web forms, MVC and WebAPI. It is included the state of the art coding practice and implementation on the latest NET platform as well as implementing on older NET versions.

The student will exposed to security terms as well as best practice, coding and tools.

Objectives

- To learn the NET platform security
- To learn code best practice in ASP.NET platform and c#
- To implement the coding practice

Target Audience

- Developers with at least 1 year of experience in development
- Developers with security background – advantage

Prerequisites

- Knowledge in ASP.NET development
- Knowledge of full development life cycle
- Knowledge in ASP.NET MVC or WebAPI – advantage

Contents

Day 1 Introduction

- Introduction to Security Management
- Introduction to Cryptography
- Introduction to Access Control
- Introduction to Network Security

- Introduction to Security Standards:
 - PCI compliance
 - SOX

- Introduction to OWSAP – main Threads
- Introduction to secure code – best practice and implementation

Day 2 – Secured Development in .Net – Basics.

NET Security Overview

- .NET Framework Review
- Architecture Overview of .NET Applications

Fundamental .Net Secure Code Practices ASP.NET Web Forms

- Input/Output Validation Mechanism
- TRY – CATCH – FINALLY - Error Handling Mechanism
- Working with SP for creating pre-prepared SQL statements
- Membership and Administration in ASP.NET Web Forms 4.5
- Identity in ASP.NET Web Forms 4.5
- ASP.NET Web Forms Error Handling
- Introduction to OWIN, OAuth

Day 3 – Secured Development in .Net – ASP.NET MVC, WebAPI

ASP.NET MVC 5

- Working with OAuth2
- Deploy secure MVC app with Membership and OpenAuth
- Authentication Filters
- Filters overrides

ASP.NET WebAPI 2

- Exception Handling in WebAPI
- Global Error Handling in WebAPI
- Authentication and Authorization
- Secure WebAPI with individual accounts
- Preventing CSRF attacks in WebAPI
- Authentication Filters
- Basic Authentication
- Form Authentication
- Working with SSL

- Tools:
 - ELMAH – open source error login Configuration
 - Fiddler – proxy

- The Ten Commandments of Secured Programming

- Rules - Delivery from Development to Production