



# Secure Software Development Practices

## *About STQC*

STQC is the India's leading Certification body and recognized internationally for verification and validation of software products throughout its life. STQC has a team of experts in the area of Software testing, Ethical hacking, Auditing and Consultancy on software engineering. Experienced faculties trained aboard in the core Application Security and Secure SDLC Practices.

## *About this Course*

Inculcating security into software applications is big concern for software companies today. Numerous attacks are being directed towards software applications and understanding these attacks and how to design software to protect against attacks is becoming more of a necessity. This course provide a foundation for those professionals who are responsible for designing, architecting, coding and testing software solutions, through a series of lectures and hands on labs.

## *Objectives*

The course aims :

- To understand fundamentals of Secure SDLC.
- to frame security requirements, secure design/Architecture, secure coding and identify common security vulnerabilities early in the development process
- to eliminate security vulnerabilities.

## *Course Duration*

3 working days

## *Methodology*

Lectures, interactive sessions. Demonstration and Internal assessment during commencement of course



## **Course Contents**

- Module 1: Introduction to STQC IT & Participants
- Module 2: Key Issues of Secure Software Development
- Module 3: Security in SDLC
- Module 4: Threat Modeling
- Module 5: Workshop - Exercise 1
- Module 6: IT Security and requirement analysis
- Module 7: Introduction to Cryptography
- Module 8: Exercise 2 using Crypt tool
- Module 9: Security Mechanism and Protocols
- Module 10: Implementation of Security Mechanism
- Module 11: All input is Evil!! Input Validation
- Module 12: Buffer Overflows
- Module 13: Database Security
- Module 14: Workshop on Typical Attacks
- Module 15: Web Application Flaw
- Module 16: OWASP overview
- Module 17: OWASP workshop
- Module 18: Penetration Testing and Application Security Testing
- Module 19: Open Question and Answers

## **Infrastructure Requirements**

Sufficient PCs/Laptops with dedicated network having internet access. (Preferably P4 machines with 20GB HDD installed with Windows 2000 server)

## **Course material**

### **In-House**

Course presentation slides and Lab Tools

Exercises

(Including Lunch, Snacks, Tea)  
circulated to each participant

### **On-Site**

One copy of the course material in PDF format will be sent to Workshop the organizer

One CD containing Tools will be after registration

## **Benefits:**

This 3 day course deliveries a strong and in-depth view into fundamentals of Secure SDLC. Through a mixture of lectures and hands on exercises, participants will learn how to frame security requirements, secure design/Architecture, secure coding and identify common security vulnerabilities early in the development process and how to eliminate these vulnerabilities.