## TDD: Guided Tour ☺

**Introduction:**

Agile and especially scrum has been a buzz word now a days. Most of the big IT brands have either already moved to scrum or in process of. If you are wondering what is test driven development, does it work with waterfall also, does it add any value, can it work with legacy code, etc, then this workshop will help you seek these answers.

**Learning Objectives:** The course will enable participants to ...

- Understand automated unit testing concepts
- Understanding importance of refactoring code
- Explore techniques for working with legacy code
- Experience application of these concepts hands-on with a case study project

**Participants' profile:**

- It would help if participants have worked on s/w development projects
- Basic know-how about Agile and automated unit testing would be nice to have

**Duration: 1** days

**Course Outline:**

**First half of the day:** Concept explanation (theory)

 **Later half of the day:** Hands-on experience with a case study project

**Agile Software Development and TDD**

- Overview of Waterfall and Agile Development Methodologies

- Importance of TDD in Waterfall as well as Agile Development

- Writing good unit tests

- Critical success factors and vulnerabilities of TDD

- Top-10 reasons to avoid TDD

**Unit Testing Concepts**

- Back to Basics

- My First Unit Test with JUnit-4

- Boundary Conditions Testing

- Mock Objects for Rescue

- What makes a Unit Test – Good

## Refactoring Legacy Code

- Reasons to change existing Software

- Refactoring Legacy code with TDD

## TDD Patterns

- Test Driven Development Patterns

- Red Bar Patterns

- Green Bar Patterns

- Refactoring Patterns

## Pre-requisites & Assumptions:

- It is assumed that the demonstration will happen with JUnits
- Client team to provide sample project case. This should be made available at least 1 weak before the training date.
- The required hardware and software set up to be taken care by the client team
- All the team members should have identical software & hardware configuration – to be ensured by the client team

Note: This overall flow of the course is subject to change based on participants' interactions & queries.