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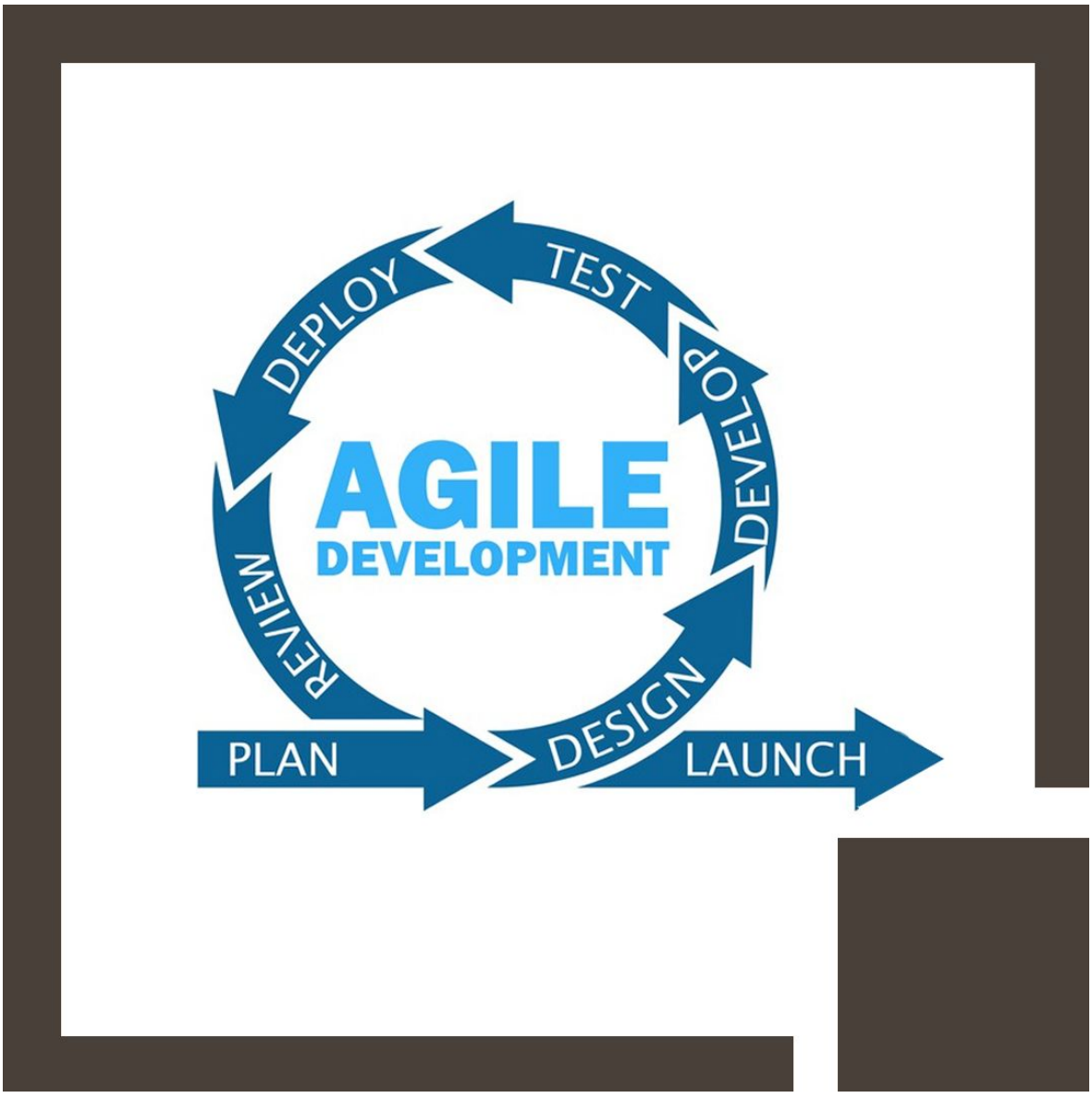
Learning Style: Virtual Classroom

Technology:

Difficulty: Beginner

Course Duration: 2 Days

Implementing Agile Test Driven Development for Non-Developers (TT3530)



This course will allow candidates to develop an in-depth understanding on different aspects related to “Test First” design and Test Driven development, which will help them become adept at handling these development configurations when working with Agile processes and practices.

About this course:

Candidates who come from a Non-development background can benefit highly from this course as it will allow them to know why Test Driven Development and Test First design is important in Agile development processes and the ways in which it can be implemented in workflows without creating any issues.

An Agile Test Developer can expect to earn a salary of **$94,523** per annum.

Course Objective:

- Get an overview of development agility and the Agile Manifesto

Understand the different agile development methods and also explore their unique advantages and disadvantages

Be able to know how exactly a structured organizational approach can accommodate agile processes

Understand exactly the ways in which a development organization can be transferred to agile practices

Develop an understanding of unit tests and the ways in which xUnit frameworks assist in it’s implementation

- Gain an overview of the xUnit family of unit testing tools
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- Develop knowledge related to Test Driven Development and why it’s done
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- Understand how Agile processes can accommodate unit testing, test driven development, and test coverage
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- Know why agile and test driven processes rely on refactoring
- Develop understanding related to Continuous Integration and it’s aspects
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- Understand the reasons why CI is implemented
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- Understand and know about the most appropriate practices in Agile development

Audience:

- This course has been designed for beginners including those who aspire to become test professionals, test managers, project leaders, quality analysts,

and developers.

Prerequisite:

- While there are no mandatory pre-requisites that are to be met for appearing in this course, it will be highly beneficial for the candidate if it possesses knowledge related to existing processes in the development arena.

Course Outline:

Module 1: Agile Development

Lesson: Agile Rationale and Concepts

- Reducing Risk Through Agility
- The Discipline of Timeboxing
- Incremental Delivery and Evaluation
- Agile Method: Scrum
- Agile Method: XP
- Pair Programming

Lesson: The Agile Approach

- Agile Software Development Manifesto
- The Agile Principles
- Identifying Features
- Managing Features
- Communication Dynamics

Lesson: Agile Iterative Development

- Iterative Approaches
- Phased Iterative Development
- Iterating
- Feasibility & Planning
- Development
- Adaptation & Deployment

Lesson: Prioritizing and Planning

- Features and Backlogs
- FDD Process
- Prioritizing Features
- Release Planning
- Assigning Features to Iterations

Lesson: Building

- Typical Continuous Integration Process

- CI Server
- Automate Source Code Management
- Automate Build Process
- Automate Testing
- Automate Deployment

Module 2: Unit Testing

Lesson: Unit Testing Overview

- Purpose of Unit Testing
- Good Unit Tests
- Test Stages
- Unit Testing Vs Integration Testing

Lesson: Unit Testing Tools

- Understanding Unit Testing Frameworks
- JUnit Overview
- Test Case using JUnit
- Failures vs. Errors

Lesson: Unit Testing Best Practices

- "Good" Tests
- Bad Smells
- White-Box Unit Testing
- Black-Box Unit Testing
- Automation and Coverage

Module 3: Agile Testing Best Practices

Lesson: Transitioning to Agility

- Agility: Some Process, Some Mindset
- Characteristics that Enable Agility
- Characteristics that Inhibit Agility
- Risks Associated with Migrating
- Smoothing the Transition

Lesson: The Bottom Line

- Agile Migration Patterns
- Extending the Migration
- Coding Practices
- Source Control
- Pair Programming and Code Reviews
- Continuous Integration

- Legacy Code?