VectorCAST Online Public Training

Agenda VectorAcademy

Duration: 2 Days (SIX Hours/Day 10AM -1PM and 2PM- 5PM)
Target Group: Developers, Testers, Students, Entrepreners
Prerequisites: Basic C/C++
Goal: VectorCAST helps companies to develop, execute, and automate tests of their software. And also assess the quality of a company's code and the effectiveness of their existing testing via code coverage and code quality measurements. In this training, will cover modules with respect to VectorCAST which meets the testing, coverage and compliance needs of different environments and platforms.

1 | Introduction to VectorCAST training outline — 0.5 h

- Outline of the Training
- Introduction to VectorCAST features

2 | Building Test Case Environments using Manage — 0.5 h

- Building a VectorCAST manage Project
- Understanding manage configuration file
- Building a Unit Test Environment from Manage Project

3 | Creating Tests — 0.5 h

- What is a test case
- Creating a test case
- Types of Input and Expected values in a test case

4 | Test Case Fundamentals — 0.5 h

- Working with
  - Floting point values
  - Special Value tags , Symbolic constants
  - Range and list expressions
- Options that effect test cases

5 | Compound Tests — 0.5 h

- What is
  - Compound Test
  - Init Test
  - Automatic Initialization and Termination
- Understanding Stub by Function (SBF)

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6 | Code Coverage Basics — 0.5 h

- What is code Coverage
- Types of code Coverage
- Understanding coverage Reports

7 | Test Reporting — 0.5 h

- Types of Reports that can be generated for an Environment
- Capturing stdout and stderr
- Controlling Data Item Printing

8 | Regression Testing and Jenkins Integration — 0.5 h

- Why Regression Testing is important
- How does VectorCAST support Regression Testing
- What files need to be Configuation Managed
- Understanding Jenkins Manage workflow

9 | C++ Testing — 0.5 h

- C++ Testing Overview
- Testing with
  - Inheritance
  - Polymorphism
  - std::string
- Testing Inline functions

10 | Abstract Class and Template Testing — 0.5 h

- Abstract class testing concepts
- Auto Generated Concrete Classes
- Testing user-defined templates

11 | Include Paths — 0.5 h

- What are Include Paths
- Types of Include Paths
- Using Relative Include Paths

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12 | Environment Build Errors **0.5 h**

- Preprocess Errors
- Parse Errors
- Harness Compile/Link Errors

13 | Stubbing Fundamentals **0.5 h**

- Understanding Stubs
- Library Stub
- Additional Stub
- Suppressed Stub
- Configure Stubs
- Return Data List Options

14 | Questions , Feedback **1.0 h**

- Questions only on the aforementioned topics
- Client Project Related questions may be dealt as Advanced Training/Consultancy

15 | Additional Test Case Options **0.5 h**

- Find and Filter Bar
- Duplicating a Test Case
- Drag and Drop of Test Case
- Automatic Test cases
- Control flow as expected Result

16 | Code Coverage Options **0.5 h**

- Animation Coverage
- Coverage Report options
- Coverage in Headers

17 | MC/DC Testing **0.5 h**

- What is MC/DC
- Understanding VectorCAST MC/DC pair tables
- VectorCAST options that affect MC/DC

18 | System Testing with VectorCAST QA **0.5 h**

- Advantages of System Testing with VectorCAST/QA
- Understanding VectorCAST/QA with an Existing VectorCAST/QA Example
- Integrating Coverage between System and Unit Test

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19 | Trouble Shooting Build Issues **0.5 h**

- Code Coverage and Range Test options
- Understanding About Log Messages Window
- Understanding About Jobs Window
- Running commands outside VectorCAST

20 | Debugging Test Execution Issues **0.5 h**

- Debugging Test Case Issues by Analysis of
  - Execution Report
  - Code Coverage
- Source Code Debugger

21 | Testing on cross-compiler and simulator **0.5 h**

- What is a VectorCAST/RSP
- Configuring Test Harness I/O
- Configuring Target Test Execution (using armgcc compiler and t32 sim)

22 | Questions , Feedback **1.0 h**

- Questions only on the aforementioned topics
- Client Project Related questions may be dealt as Advanced Training/Consultancy