Datawarehousing - ETL Testing

Duration: 7-8 Weekend (Sat/Sunday Batch)
Prerequisites
- Knowledge of Manual Testing
- Knowledge of DBMS/SQL basics is advantageous.

Course Content

I.   Database/SQL

- **RDBMS Concepts**
  - Data Models
  - Entity Relationship Model
  - Normalization
  - DBMS, RDBMS, ORDBMS
- **SQL Overview**
  - Introduction to SQL
  - Data types
  - SELECT Statement
  - Operators
  - Pseduo Column
- **SQL Statements**
  - Data Definition Language (DDL)
  - Data Manipulation Language (DML)
  - Transaction Control Language (TCL)
  - Data Control language (DCL)
- **Join**
  - Inner/Equi Join
  - Non-Equi/Cross Join
  - Self Join
  - Outer Join
- **Constraints**
  - Primary Key Constraint
  - Foreign Key Constraint
  - Unique Key Constraint
  - Not Null Constraint
  - Check Constraint
- **Set Operator**
  - Union
  - Union All
  - Intersection
  - Minus
- **Sub Query**
  - Sub/Inner Query
  - Correlated Sub Query
- **Object**
  - Index
  - Synonym
  - View
- **Built-in Functions**
  - Aggregate Functions
  - Character Function
  - String Functions
  - Case Manipulation Functions
  - Date Functions
  - Analytical Functions

II.   Datawarehouse/ETL

- **Datawarehouse Fundamental**
  - Datawarehouse Overview
  - DWH Characteristics
  - Types of Datawarehouse
  - Data Mart
  - Database vs Data Warehouse
  - Data Mart vs Data Warehouse
  - Data Warehouse benefits
  - DWH Architecture
- **Datawarehouse Terminologies**
  - Data Cleansing, Partitioning
  - Staging area, Metadata
  - OLTP, OLAP, ROLAP, MOLAP
  - Surrogate Key
  - Snapshot, View and Materialized View
  - Meta Data, Data Mining & Data Cube
- **Dimension Modeling**
  - Facts and Dimensions
  - Hierarchies and Levels
  - Measures & DWH Schema
  - Star, Snow-flake and Galaxy Schema
  - Additive, Semi Additive, Non Additive Fact/Measure
- **ETL Overview**
  - Process Flow of ETL
  - Types of Sources and Target
  - ETL Data Load types
  - Active vs Passive transformation
  - Extraction Methods in ETL
  - Tracing Level
  - Types of Data used for ETL Process
- **Slowly Changing Dimension**
  - What is Slowly Changing Dimension?
  - SCD Types : Type-1, Type-2, Type-3
- **ETL Testing Process**
  - Categories of ETL Testing
  - Types of ETL Testing
  - How to create ETL Test Case
  - ETL Test Scenarios and Test Cases
  - Types of ETL Bugs/Defects
  - Responsibly of ETL Tester
- **OBIEE/BI Overview**
  - Introduction to OBIEE
  - Business Intelligence Basics
  - Overview of Reports
  - Slice and Dice
  - Roll-up and Drill-down & Pivot

III. **Informatica Power Center Tool**

- **Informatica Tool Overview**
  - Introduction to Informatica
  - How developers work on Power Center
  - Different components of Power Center and uses
  - Tasks performed in different Components
  - Mapping, Session, Worklet, Workflow, Mapplet
  - Naming Conventions
- **Designer Component**
  - Working with Sources
  - Working with Flat Files
  - Working with Targets
  - Data Transformation Source and Target
  - Mapping Parameters and Variables
  - Uses of Mapping Wizards
- **Workflow Manager Component**
  - Workflow Manager Overview
  - Workflow Designer
  - Task Developer
  - Worklet Designer
  - Using Workflow Wizard
  - Creating a Task
  - Configuring Task
  - Workflow links
  - Validating Tasks,Workflows
  - Scheduling and Running Workflows
- **Workflow Monitor Component**
  - Workflow Monitor Overview
  - Using Workflow Monitor
  - Working with Tasks and Workflows
  - Workflow and Task Status
  - Using Gantt Chart and Task Views
  - Session and Workflow Logs
- **Transformation**
  - How to use Transformations
  - Aggregator Transformation
  - Expression Transformation
  - Filter Transformation
  - Router Transformation
  - Union Transformation
  - Rank Transformation
  - Sorter Transformation
  - Joiner Transformation

IV. **UNIX/LINUX**

- **Basics of Unix/Linux**
  - Overview of UNIX Operating System
  - Useful Commands
  - Command Manuals
  - Regular Expressions
  - Filter
  - File Attributes
  - Job Scheduling
  - Archive/Compress File
  - Editor : vi, sed
  - Processes
  - File copy/transfer in UNIX Server