



# Data Warehousing



## Corporate Trainer's Profile

Corporate Trainers are having the experience of 4 to 12 years in development , working with TOP CMM level 5 companies (Project Leader /Project Manager ) qualified from NIT/IIT/IIM and work exp in USA and UK.

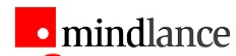


## CMM (Capability Maturity Model) level Project Standard:-

The Capability Maturity Model (CMM) is a method for evaluating the maturity of organizations on a scale of 1 to 5.

Get the Opportunities to work on Client Projects Of US/UK, which follow the all standard of CMM level 5 Company.

## Projects



# Data Warehousing

**SUMMARY:** This data modelling techniques course is designed to answer questions, such as the following:

What is data warehousing?

What is a data mart?

What are the data modelling options?

What is Extract, Transform and Load (ETL)?

What are the terms and concepts specific to data warehousing and OLAP design?

How to plan and implement a data warehouse with high availability, simplified manageability and optimal performance

What are common statistics, analytic and OLAP SQL queries?

**AUDIENCE:** Would-be data warehouse architects, IT developers, database administrators or anyone responsible for a data warehouse or related discipline.

**PREREQUISITES:** At least six (6) months in an IT environment or its equivalent.

**DURATION:** 3 days

**OBJECTIVES:** Upon completion of this course, the participant should be able to design a data warehouse using both star and snowflake schemas. And the delegate should understand the implication of such terms as cubes, dimensions, attributes, joins, hierarchies, measures, etc.

## **COURSE CONTENT: I.DATA WAREHOUSE OVERVIEW**

Overview

Typical uses

## **II.DEFINITION, ARCHITECTURE AND CONCEPTS**

Enterprise Data Model

Operational vs. historical data

Extract Transform Load (ETL)

Metadata

Data warehouse vs. data mart

Data mining

OLAP vs. OLTP

Massive size implementation

Logical design vs. physical design

Normalization vs. denormalization

Referential constraints

## **III.DATA MODELLING OPTIONS**

Entity model

Star schema

Snowflake schema

## **IV.DATA MODELLING DEVELOPMENT LIFE CYCLE**

Requirements analysis

Requirements gathering

Requirements validation

Requirements modelling

Schema design

- Project definition
- Warehouse design
- Implementation
- Follow-up and review

## **V.DIMENSIONAL MODELLING DESIGN**

- Overview
- Metadata properties
- Star schema
- Snowflake schema
- Cubes
- Measures and facts
- Attributes and relationships
- Dimension
- Hierarchies
- Joins
- Summary tables and aggregation
- Exercises

## **VI.IMPLEMENTATION OPTIONS**

- Overview
- Top down
- Bottom up
- Sizing
- Cleaning
- Populating the data warehouse

## **VII.EXTRACT, TRANSFORM & LAOD (ETL) CONSIDERATIONS**

- Definition and scope
- Extract options
- Transform options
- Load options
- Surrogate key concepts
- Slowly Changing Dimensions (SCD)

## **VIII.DATA WAREHOUSE PERFORMANCE DESIGN**

- Automatic Summary Tables (AST)
- Large concurrent reports
- Short running queries
- Long running queries
- Random queries
- Occasional updates
- On-line utilities
- Index options
- Partitioning and parallelism (e.g., LOADs)

## **IX.INTRODUCTION TO STATISTICS, ANALYTIC AND OLAP SQL QUERIES via workshop example**

- AVG
- CORRELATION
- COUNT
- COUNT\_BIG
- CONVARIANCE
- MAX
- MIN
- RAND
- STDDEV
- SUM
- VARIANCE
- Regression function
- GROUPING, ROLLUP & CUBE
- Hands-on exercise

## **X.PHYSICAL DESIGN CONSIDERATIONS**

- Denormalization
- Index choices
- Data placement
- Free space
- Summary tables
- Data compression