

## Data Warehousing Concepts Ed 1

**Duration:** 1 Day

### What you will learn

This course describes the evolution of information management systems. You are introduced to data warehousing and business intelligence, and their role in data analytics. You also get a brief introduction to modern data analytic technologies like machine learning, artificial intelligence (AI) and big data. The students learn to define the Data Warehouse concepts and terminology with focus on Analytic Views. They gain knowledge about the basics of data modelling and the different techniques used for data modelling. Towards the end of the course, they get introduced to the ETL and EL-T processes for extracting, transforming, and loading data in a Data Warehouse. **Learn To:** Describe the evolution of information management systems. Identify the need for Data Warehousing and information management in real time business scenarios. Define Data Warehousing and BI, related concepts and terminology. Understand the limitations of Data Warehousing for prescriptive analysis and the evolution of Big Data. Define different techniques of data modeling used with Data Warehousing. Describe the process of extraction, transformation, and loading with reference to ETL and EL-T methodologies. Explain multi-dimensional model and analytic views.

### Audience

Administrator  
Architect  
Data Scientist  
Developer

### Related Training

#### *Required Prerequisites*

There are no required pre-requisites for this course

#### *Suggested Prerequisites*

Good working knowledge of the SQL language  
  
Knowledge of client-server and relational server technology  
  
Oracle Database 12c: Analytic SQL for Data Warehousing

### Course Objectives

Explain the different data modelling techniques for data warehousing

Describe methods and tools for extracting

transforming

and loading data

Discuss the different Oracle tools to implement data warehousing on-premise

Discuss Autonomous Data Warehouse Cloud (ADWC) and Data Integration Platform Cloud (DIPC)

Define the terminology and explain the basic concepts of data warehousing

Describe the analytic views and multi-dimensional model

Introduce machine learning

artificial intelligence

and big data

## Course Topics

### Course Overview

#### Evolution of Information Management and Data Warehousing

Evolution of Information Management

Data Warehousing and Business Intelligence (DW & BI)

Machine Learning and Artificial Intelligence

Big Data

#### Overview of Data Warehouse and Multi-Dimensional Model Concepts

Data Warehouse Definition and Characteristics

Data Warehouse Architectures

Data Warehouse Development Approaches

Data Warehousing Process Components

Analytic Views and Multi-Dimensional Model

#### About Business, Logical, Dimensional, and Physical Models

Data Warehouse Modeling Issues

Data Warehouse Design Phases

Defining the Business Model

Designing the Logical Model

Defining the Dimensional Model

Defining the Physical Model

## **Introduction to Extracting, Transforming, Loading Data**

Extraction, Transformation, and Loading (ETL) Process

Extraction, Loading, and Transformation (E-LT) Process

ETL: Tasks, Importance, and Cost

Examining Data Sources

Extraction Methods and Techniques

Transforming Data

Transformation Techniques

Loading Data into the Warehouse

## **Introduction to Data Warehousing Platforms and Tools**

Data Warehousing Platforms

Data Warehousing On-Premise

Data Warehousing in Cloud