

## Data Warehousing Concepts

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Document History

Date	Course Version No.	Software Version No.	Developer / SME	Change Record Remarks
	0.1D	NA		Content Creation
Jan-2009	0.1	NA	BI CDI team	Review
16-Apr-2009	2.0	NA	Priya Rane	Material Revamp
04-Feb-2010		NA	CLS Team	Review
31-July-2012		NA	Coordinators	Change to Igate Format

### Course Goals and Non Goals

#### ➤ Course Goals

- At the end of this program, participants gain an understanding of basic concepts in Data warehousing.

#### ➤ Course Non Goals

- Implementation of dimensional modeling is not the part of this course.



Pre-requisites

➤ Fair knowledge of Database

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### Intended Audience

➤ Software Engineers and Senior Software Engineers



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### Day Wise Schedule

#### ➤ Day 1

- Lesson 1: Business Intelligence
- Lesson 2: General concept of Data Warehouse
- Lesson 3: Dimensional modeling
- Lesson 4: ETL and Metadata
- Lesson 5: Online Analytical Processing (OLAP)
- Lesson 6: Data Mining
- Lesson 7: Case Studies

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- **Lesson 1: Business Intelligence**
  - 1.1: Business Intelligence
  - 1.2: Need for Business Intelligence
  - 1.3: Terms used in BI
  - 1.4: Components of BI
- **Lesson 2: General concept of Data Warehouse**
  - 2.1: Data Warehouse
  - 2.2: Characteristics of Data Warehouse

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- 2.3: Need for Data Warehouse
- 2.4: Data Warehouse Architecture
- 2.5: Features of Data warehouse
- 2.6: Data Mart
- 2.7: Application Areas

#### ➤ Lesson 3: Dimension modeling basic concepts

- 3.1: Dimension modeling
- 3.2: Fact and Dimension tables
- 3.3: Database schema
- 3.4: Schema Design for Modeling



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#### ➤ Lesson 4: ETL and Metadata

- 4.1: ETL process
- 4.2: Metadata used in ETL
- 4.3: Metadata in Data Warehousing
- 4.4: Simple Data warehouse model

#### ➤ Lesson 5: Online Analytical Processing (OLAP)

- 5.1: Online Analytical Processing (OLAP)
- 5.2: Nature of OLAP analysis
- 5.3: Types of OLAP

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- 5.4: OLAP Tools
- 5.5: OLTP and OLAP
- 5.6: Operational versus Informational System

#### ➤ Lesson 6: Data Mining

- 6.1: Data mining
- 6.2: The Knowledge Discovery process
- 6.3: Need of Data Mining
- 6.4: Use of Data mining
- 6.5: Data mining and Business Intelligence

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- 6.6: Types of data used in Data mining
- 6.7: Data Mining applications
- 6.8: Data Mining products
- 6.9: Data Mining market

### References

➤ **Student material:**

- Class Book (presentation slides with notes)

➤ **Book:**

- The Data Warehousing Toolkit – Ralph Kimball
- Introduction to Database Systems – C.J. Date
- Advanced Data Warehouse – IBM

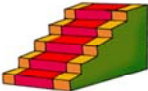
➤ **Web-site:**

- <http://www.datawarehouse.org>
- <http://etl-tools.info/>



### Next Step Courses (if applicable)

➤ BI related tool training



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### Other Parallel Technology Areas

 **NA**

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