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# **Document History**

Date	Course Version No.	Software Version No.	Develo per / SME	Reviewe r(s)	Approver	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	Coordin ators			Change to IGATE Format
June 2016	2.1	NA	Swati Rao	Rajita Dhumal	Mahima Sharma	Material Revamp as per Integrated ToC for I & D LoT

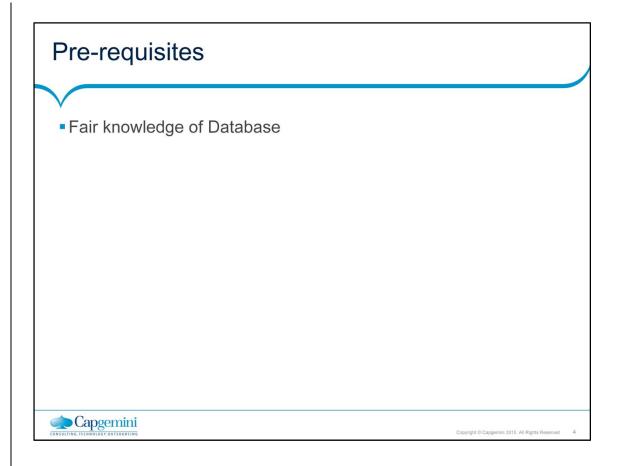
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# Course Goals and Non Goals

- 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.







# **Intended Audience**

Software Engineers and Senior Software Engineers





# 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:Best Practices for Building Data Warehouse
  - Lesson 8: Case Studies



- 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:Evolution of Data Warehouse



- 2.3: Need for Data Warehouse
- 2.4: Data Warehouse Architecture
- 2.5: Data Mining Works with DWH
- 2.6: Features of Data warehouse
- 2.7: Data Mart
- 2.8: 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
    - Star
    - Snow Flake
    - · Fact Constellation schema



- 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



# **Table of Contents**

- 5.4: OLAP Tools
- 5.5: OLTP and OLAP
- 5.6: OLAP Functional requirements
- 5.7: OLAP Fast and Selective
- 5.8: 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



- 6.6: Types of data used in Data mining
- 6.7: Data Mining applications
- 6.8: Data Mining products
- 6.9: Data Mining market
- Lesson 7: Best Practices for Building Data Warehouse
  - 7.1: Recipe for a Successful data warehouse
  - 7.2: Data warehouse pitfalls
  - 7.3: Popular BI DW tools and suits
  - 7.4: Trends in BIDW



# 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 © Cappening Cappening

