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# **Document History**

Date	Course Version No.	Software Version No.	Developer / SME	Change Record Remark
13-Nov-2008	1.0	9i	Rajita Dhumal	Content Creation
14-Nov-2008	1.1	9i	CLS team	Review
14-Jan-2010	1.2	9i	Anu Mitra	Review
14-Jan-2010	1.2	9i	Rajita Dhumal, CLS Team	Incorporating Review comments
25-Apr-2011	2.0	9i	Anu Mitra	Integration refinements
17-May-2013	2.1	9i	Hareshkumar Chandiramani	Courseware refinements
21-April-2015	2.2	9i	Kavita Arora	Courseware refinements

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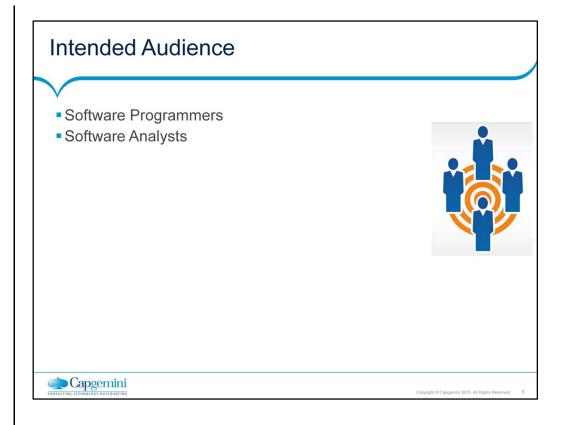
### Course Goals and Non Goals

- Course Goals
- To understand basic DBMS, and use SQL commands.
- Course Non Goals
- Nothing Specific.





# Pre-requisites ■ A proficiency level in familiarity with Windows. © Cappennia Cappe



# Day Wise Schedule

- Day 1
  - Lesson 1: Introduction to Database
  - Lesson 2: Basics of SQL
  - Lesson 3: Data Query Language
- Day 2
  - Lesson 4: Aggregate (Group) Functions
  - Lesson 5: SQL (Single-row) functions
  - Lesson 6: Joins and Sub-queries (Joins to be covered here)



## Day Wise Schedule

- Day 3
  - Lesson 6: Joins and Sub-queries (Sub-queries to be covered here)
  - Lesson 7: Introduction to Data Modeling, ER Modeling and Normalization
  - Lesson 8: Database Objects (Table, Index, Sequence, Synonym to be covered here)
- Day 4
  - Lesson 8: Database Objects (Views to be covered here)
  - Lesson 9: Set Operators
  - Lesson 10: Data Manipulation Language
  - Lesson 11: Transaction Control Language
  - Lesson 12: Data Control Language



- Lesson 1: Getting Started with Database
  - 1.1: Introduction to Database
  - 1.2: Characteristics of DBMS
  - 1.3: Data models
  - 1.4: Relational DBMS
  - 1.5: Database Administrator
- Lesson 2: Basics of SQL
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- 2.1. The SQL Language
- 2.2. Rules for SQL Statements
- 2.3. Standard SQL Statement Groups
- 2.4: Logging to Oracle Server



- Lesson 3: Data Query Language
  - 3.1: The SELECT statement
  - 3.2: The WHERE and AS clauses
  - 3.3: Mathematical, Comparison and Logical operators
  - 3.4: The DISTINCT clause
  - 3.5: The ORDER BY clause
  - 3.6: Tips and Tricks in SELECT Statements
- Lesson 4: Aggregate (Group) functions
  - 4.1: The Group function
  - 4.2: GROUP BY & HAVING clause
  - 4.3: Examples of GROUP BY and HAVING clauses
  - 4.4: Tips and Tricks



- Lesson 5: SQL (Single-row) functions
  - 5.1: SQL functions
  - 5.2: Number functions
  - 5.3: Character functions
  - 5.4: Date functions
  - 5.5: Conversion functions
  - 5.6: Miscellaneous functions
  - 5.7: Tips and Tricks
- Lesson 6: Joins and Sub-queries
  - 6.1: Joins
  - 6.1.1: Oracle Proprietary Joins
  - 6.1.2: SQL: 1999 Compliant Joins



- Lesson 6: Joins and Sub-queries (continued)
  - 6.2: Sub-query
  - 6.3: CONNECT BY and START WITH clauses
  - 6.4: Tips and Tricks
- Lesson 7: Introduction to Data Modeling, E-R model and Normalization
  - 7.1: Data Modeling
  - 7.2: E-R model
  - 7.3: Normalization (1 NF, 2 NF, 3 NF)
  - 7.4: Advantages and Disadvantages of Normalization



- Lesson 8: Database Objects
  - 8.1: Basic Data Types
  - 8.2: Data Integrity
  - 8.3: Examples of CREATE TABLE
  - 8.4: Examples of ALTER TABLE
  - 8.5: Database Objects
  - 8.6: Index
  - 8.7: Synonym
  - 8.8: Sequence
  - 8.9: View
  - 8.10: Deleting Database Objects
  - 8.11 : Tips and Tricks



- Lesson 9: Set Operators
  - 9.1: Set Operation
  - 9.2: The UNION Operator
  - 9.3: The INTERSECT Operator
  - 9.4: The MINUS Operator
- Lesson 10: Data Manipulation Language
  - 10.1: Adding Data
  - 10.2: Removing Data
  - 10.3: Modifying Data
- Lesson 11: Transaction Control Language
  - 11.1: Introduction to Transactions
  - 11.2: Statement Execution and Transaction Control
  - 11.3:Commit Transactions
  - 11.4: Rollback Transactions
  - 11.5: Savepoints



- Lesson 12: Data Control Language
  - 12.1 DataControl
  - 12.2: Object Privileges
  - 12.3: Grant and Revoke Statements



### References

- RDBMS Concepts A Primer
- http://safari.oreilly.com
- Introduction to Database Systems; by C.J.Date
- Relational Database Theory; by Atzeni, De Antonellis





