IS 456

Database Systems Management

course Schedule

Textbook

* Mukesh Negi, (2019). *Fundamental of Database Management System.*
* Carlos Coronel, Steven Morris (2019). *Database Systems; Design, Implementation, & Management*
* Manning, A. (2015). [*Databases for small business: essentials of database management, data analysis, and staff training for entrepreneurs and professionals*](https://login.proxy.cityu.edu/sso/skillport?context=104365). Apress.
* Avi Silberschatz, Henry F. Korth,S. Sudarshan (7th Ed.) *Database System Concepts, McGraw-Hill, ISBN 9780078022159*

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| Modules | **Topics / Readings** | **Assignments** |
| 1  10/04 – 10/10 | **Enterprise Data Base Management Systems**   * Qualitative and Quantitative data * Definition of Database * DBMS * Data consistency   Chapter 1: Fundamentals | 1. Student Introductory Assignment 2. The Muddiest Point 3. Concept Test 4. Discussion Board 5. Knowledge Check 6. Team Project Proposal Announcement |
| 2  10/11 – 10/17 | **Database Architecture and Models/ Relational and Normalization**   * Two-Tier Architecture * Three Tier Architecture * Data Flow * Database Models * Keys   Chapters 2 and 3 | 1. The Muddiest Point 2. Concept Test 3. Discussion Board 4. Hands-On Practice 5. Programming Assignment/Data Camp 6. Knowledge Check |
| 3  10/18 – 10/24 | **Database queries and SQL Operators**   * Database writing and modification with SQL/Writing statements in MySQL * Open Source Technology   Chapters 4, 10 & 11 | 1. The Muddiest Point 2. Concept Test 3. Discussion Board 4. Hands-On Practice 5. Programming Assignment/Data Camp 6. Knowledge Check 7. Team Project Proposal Submission |
| 4  10/25 – 10/31 | **Application Development and Database Joins**   * Create Database * Table: Subjects * SQL Joins   Chapters 5 & 7 | 1. The Muddiest Point 2. Concept Test 3. Discussion Board 4. Hands-On Practice/Data Camp 5. Programming Assignment/Data Camp 6. Knowledge Check 7. Team Project Progress Announcement |
| 5  11/01 – 11/07 | **Analyze data Interchange**   * Logical Operators * Data Analyzing Tools   Chapter 6 | 1. The Muddiest Point 2. Concept Test 3. Discussion Board 4. Hands-On Practice 5. Programming Assignment/Data Camp 6. Knowledge Check |
| 6  11/08 – 11/14 | **Physical and Data Storage Systems**     * Aggregate Functions * Oracle SUM * SQL Sub Queries * Database Users   Chapter 8 | 1. The Muddiest Point 2. Concept Test 3. Discussion Board 4. Hands-On Practice 5. Programming Assignment/Data Camp 6. Knowledge Check |
| 7  11/15 – 11/21 | **Parallel and Distributed Processing (Storage, Query and Transaction)**   * Tablespace and Control Files * SQL Loader * Discard file * Backup & Recovery * Schema and Export * Processing   Chapter 9 (Database Systems Design) | 1. The Muddiest Point 2. Concept Test 3. Discussion Board 4. Hands-On Practice 5. Programming Assignment/Data Camp 6. Knowledge Check 7. Team Project Progress Submission |
| 8  11/22 – 11/28 | **EER Modeling / Business Intelligence**   * Sub Class and Super Class * Generalization * Functional Dependency * Business Intelligence vs Business Analytics   Chapter 13 (Database Systems Design) | 1. The Muddiest Point 2. Concept Test 3. Discussion Board 4. Hands-On Practice 5. Programming Assignment 6. Knowledge Check 7. Team Project Final Announcement |
| 9  11/29 – 12/05 | **Data warehousing and Mobile Relational Databases**   * Types of Datawarehouse * Components * Implementing   Tools  Chapter 13 (Database Systems Design) | 1. The Muddiest Point 2. Concept Test 3. Discussion Board 4. Hands-On Practice 5. Programming Assignment/Data Camp 6. Knowledge Check |
| 10  12/06 – 12/12 | **Client/Server & Internet database / Blockchain Databases**   * Distributed Processing * SQL\*Net Review * Clients, Servers and Nodes * Schema Objects and Naming in a Distributed Database * Network Independence * Replicating Data   Chapter 14 & 15 (Database Systems Design) | 1. The Muddiest Point 2. Concept Test 3. Discussion Board 4. Hands-On Practice 5. Knowledge Check 6. Programming Assignment 7. Team Project Final Report Submission 8. Team Project Final Presentation Submission |