

CL203 - Database Systems Lab

Outline

Waqas Ali

January 8, 2018

Course Code	CL203	
Course title	Database Systems Lab	
Credit hours	15	
Prerequisites	CS201 - Data Structures	
Assessments with weights	Assignments & Lab tasks: 50% Participation: 10% Lab Exam: 40%	
Goals	1. Understand, appreciate and effectively explain the underlying concepts of database technologies. 2. Design and implement a database schema for a given problem-domain. 3. Normalize a database. 4. Populate and query a database using SQL DML/DDL commands. 5. Declare and enforce integrity constraints on a database using a state-of-the-art RDBMS. 6. Programming PL/SQL including stored procedures, stored functions, triggers.	
Topics covered in the lab, with number of lab sessions on each topic	Duration	Topics
	1 (3 hrs)	Introduction to different Database Management Systems
	2 (3 hrs)	MS-Access
	3 (3 hrs)	Data Manipulation Language - INSERT - UPDATE - DELETE
	4 (3 hrs)	SQL Constraints
	5 (3 hrs)	SQL SELECT Statement - SELECT, FROM, WHERE & ORDER BY Clauses
	6 (3 hrs)	SQL SELECT Statement - Aggregation, GROUP BY, Joins
	7 (3 hrs)	SQL Sub Queries
	8 (3 hrs)	PHP & MySQL - Connection to MYSQL database using PHP - Data Operations (INSERT, UPDATE, DELETE)
	9 (3 hrs)	PHP, MySQL & Javascript - Data Retrieval - Form Validation - Events
	10 (3 hrs)	Cascading Style Sheets - Custom CSS - Bootstrap
	11 (3 hrs)	Data Control Language - GRANT - REVOKE

	12 (3 hrs)	SQL Roles SQL Views
	13 (3 hrs)	Stored Procedures & Triggers
	14 (3 hrs)	Indexes
	15 (3 hrs)	SQL Functions