Databases

Syllabus Information

CS 2855 - Databases

Associated Term: 2022/23 Academic Session
Learning Objectives:

The aim of this course is to teach students a number of database concepts and techniques. This ranges from the specification and modelling stages to the implementation of relational databases. The course also introduces students to the usage of databases from software applications. The content of the course includes:Data modelling: views, subschema, data dictionary, data independence, entity relationship model. The relational model: relations, attributes, domains, relational algebra. Database design: normalisation, normal forms, entities and attributes SQL: basic SQL, correspondence between the relational model and SQL commands, simple queries, combination and sub-queries Administration and implementation: integrity, recovery from failure, concurrency, deletion and updating, forms, report writing. **Pre-requisites:** CS1811 **Learning Outcomes:** (Describe no more than 6 outcomes that students should be expected to achieve by the end of the course) By the end of the course students should be able to: 1. explain the issues involved in database design and the theory of the relational view of data 2. describe the crucial issues concerning database integrity and recovery from failure 3. write SQL queries 4. design and implement a database, from the user specifications to the final design 5. implement an interface to an SQL database using an API
Required Materials: Click here for the reading list system
Technical Requirements: The total number of notional learning hours associated with the course are 150. **These will normally be broken down as follows:** 22 hour(s) of Lectures across 11 week(s) 11 hour(s) of Laboratory classes across 11 week(s) 117 hour(s) of Guided Independent Learning **Formative Assessment:** Lab sessions - Verbal feedback
Summative Assessment: Examination (70%) 120 minutes Coursework (30%) 1 term