

# Revision Lecture

Databases and Interface  
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# Overview

- Today we will cover:
  - Examination Format
  - Overview of Course Content
- Tips on how to Revise

# Exam Format

- Answer all THREE questions
  - Q1 - Web Programming [15 Marks]
  - Q2 - Relational DB Design Theory and DBMS [15 marks]
  - Q3 - SQL and ER design [20 marks]
- Worth 50% of the final Module Mark
- Time: 2 hours

# Exam Content

- Anything covered in the course may come up in the exam
- There will be questions only on material we have covered in lectures
  - However, in the lecture notes there may be just a few bullet points/diagram
  - If you have not been taking notes it may be necessary to consult the suggested further reading in order to understand the topic better and be able to provide full answers

# Course Content

- **Databases**

- SQL
- Normalization
- Relational Algebra
- ER Diagrams

- **Interfaces**

- HTML
- CSS
- Client-Side Scripting (JavaScript)

**Web Application Framework – The “glue” that joins the two (Flask)**

# Databases:: Main Topics

- What is a Database?
- What is a DBMS?
- Relational model
  - Relations, attributes, domains, relationship, cardinality ratio
  - Candidate keys, primary keys, foreign keys, referential integrity
  - Entity-Relationship Modelling
- Relational algebra
- SQL (the kind of questions you did in labs and in coursework)
- Normalization (1NF, 2NF, 3NF)

# Interfaces:: Main Topics

- Languages
  - HTML
  - CSS
  - JavaScript (High-Level understanding, only)

# Web:: HTML

- HTML
  - Syntax
  - Basic text markup
  - Images
  - Hypertext links
  - Lists
  - Tables
  - Forms



# Web:: CSS

- CSS
  - Levels of style sheets
  - Selector forms
  - Property value forms
  - Examples of properties
  - Including in document

# Web::Client Side Scripting

- Client-Side Scripting
- JavaScript – High-level understanding of syntax
- Event Oriented Programming
  - Understand the concept

# Web Applications

- What are the advantages of Web-Application Frameworks?
- Why do we need Web Apps?
- What does Flask allow us to do?
  - Dynamic Content!
- Reflect on CW2

# How to Revise

- Databases
  - The book is an excellent resource
  - Do the practice exercise for the relevant chapters
    - Do **NOT** revise the entire book - there is a significant amount of material that this course has not covered
    - Refer to the lecture slides for references to the relevant chapters
- Web Technologies
  - CW2 is perfect practice
  - The rest is bookwork
- Past Papers
  - Last year's paper is on Moodle. Answers will not be provided.
  - Similar exam format