

Database Fundamentals and Mobile Computing

Assignment Technicalities

Introduction

The Database Fundamentals and Mobile Computing assignment is a group assignment in which you have to create a database driven android application. Each group is assigned a different assignment from the set of assignments in the topics PDF. All projects will need some authentication system which allows a user to login using a password or register as a new user if they are not in the system, but other than that they are quite different. Note that where projects require different types of users, you can allow people to select their user type at signup (Even if that would not really make sense in the real world). We are deliberately keeping the project descriptions short as we would like to see what innovative interfaces, designs and workflows you come up with. For instance, we have not made it clear where user profile pages are required, etc. You should make these decisions to produce a good experience for your users. Mostly, you're way better at this than we are.

Note that you cannot select your project. A project will be assigned to you unless we have agreed to let you work on your own suggested project. Please contact us to suggest a project idea that you'd like to work on instead of one of the existing ones.

Submission

You will submit the following items:

- Your code - you must upload your Java code, XML layouts and PHP files
- Demo video - you must create a short video (max 5 minutes) of your app in action. Consider using Open Broadcast Studio for this. Show the functionality and describe what is happening.
- Project document - You must produce a document detailing some parts of your design (Details appear below)
- Compiled app - The app must be uploaded as an apk for android

All of these must be uploaded on moodle by 30th May. Please feel free to contact me or Hima for any clarification or to suggest your own topic.

For DBF, the following characteristics will be important.

- A clear description of procedures/processes involved in the project/topic.
- Formulation of business rules (should be bidirectional).
- Development of initial ERD.
- Recognition of issues such as M: N relationships, NULL values, multivalued attributes, etc.
- Solutions provided and updated ERDs (Final ERDs should contain all the relevant information).

- Implementation of tables/functions/procedures/views/triggers need for the project.
- Demo video of the project/database.

For MC, the following characteristics will be important.

- The app must work!
- It must be able to send and receive data from the webservice
- Users must be able to register and login. Errors must be handled well.
- It must validate user input
- There must be multiple screens in the app and it should switch screens as necessary
- The correct data must be displayed and recorded according to the functional requirements
- The app must be visually appealing
- It must be bug free