Enterprise Application Development

Individual Project

Develop a **full-stack JavaScript** enterprise web application that interacts with a persistent database (relational or non-relational) and includes authentication with your own application's username and password. The application must implement the Create / Read / Update / Delete operations, asynchronous data consumption from a REST API (internal or external) and responsive mobile-first design, while respecting code quality and security.

An example is a book library application, with a pre-populated database, that allows users to:

- Register: create, read, update and delete a profile with personal information
- Log in and log out
- Search for books in several libraries that match certain criteria (e.g. publication year, title or author containing a word, distance to the library – with the Google Maps Distance Matrix API)
- The book search is done in a public area - any user can search for books and see the results, without creating an account or logging in
- Add read, reviewed, wish listed or purchased books to a personal area (e.g. "My Books") after logging in.

You are free to choose the exact application, but consider the requirements in the marking scheme below.
Email your project idea to diana.ferreira@tudublin.ie **by 10/02/20.**

Set up a private Git repository and add **dianaferreiraDIT** as collaborator.
You can get free private repositories on https://education.github.com/pack
Regular pushes of code are an essential requirement for assessment.

Any external code snippets must be properly acknowledged (for example with comments in the code). Remember the policy on plagiarism – facilitators and perpetrators, both get zero.

Submit your project in a compressed **.zip** folder via Brightspace by **23:59 on 19/04/20.**
Late submissions are not accepted, unless justified and certified with a PC Form.
Include the code, deployment folder, a dump of the database and a readme.txt with configuration and deployment information with your submission.
INSTRUCTIONS MUST BE DETAILED ENOUGH FOR THE LECTURER TO BE ABLE TO LOCALLY DEPLOY THE PROJECT. THIS INCLUDES STUDENTS WITH ELECTIVE CLOUD DEPLOYMENTS.
PRIVATE VIDEO-CONFERENCE CALLS MAY BE REQUIRED TO FACILITATE ASSESSMENT.
IN CASE OF LECTURER INABILITY TO RUN THE PROJECT, IT WILL NOT BE MARKED.
~~**Mandatory demos in class on weeks 11 and 12,** schedule TBD.~~
~~Each student, regardless of the demo date, will **receive their submitted code from the lecturer** to perform the Demo, so students demonstrating later do not get extra time to work.~~
~~**Absent students will not receive marks.**~~

Marking Scheme

This project is worth 30% of module marks.

Each category of the marking scheme below is assessed as:

Not done / poor / sufficient / good.

Details of the expectations within each category will be discussed in the lectures.

Use the labs to seek feedback from the lecturer on the progress of your project.

IT IS MANDATORY TO USE JAVASCRIPT ON THE SERVER SIDE OF THE APPLICATION.

Responsive mobile-first design and user experience – 6 marks

CRUD operations with a persistent database – 6 marks

Authentication with username/password – 6 marks

Asynchronous data consumption from a REST API – 6 marks

Code quality and security – 6 marks

Please contact the lecturer in case any aspect of this assignment is not clear to you. Have fun!