Advanced Rich Internet Applications

Individual Project

Mark:

40% of Final Mark ARIA

Deadline:

Week 14
[After this deadline CA's will only be accepted with a personal circumstances form]

There will be a 20 minute demonstration during Week 14

Submission:

Project documentation should be 40 pages maximum.

Assignment:

"*Imagine you the year is 2020. You have come up with a new web-based innovation and want to build it to demonstrate its use"*

For the purpose of this project, you will need to research the area of rich Internet applications and web applications in order to decide what your innovation will be and to build your application. It should come under one of the following categories:

- The business environment
- The education environment
- The recreation environment

You must carry out **research** on your chosen area. This research should inform both the application created as well as the technologies chosen to implement your project. Remember, this is an advanced **RIA** application – you must focus on this aspect of the development.

Having researched your project thoroughly, you will produce a **an RIA application** using your research of the domain and the most suitable technologies available. This should be an interactive client side application that uses suitable and state of the art programming paradigms, toolkits and frameworks.

The written **report** and **presentation** should highlight relevant theory and industry practice and demonstrate how you can justify an informed choice and the approach taken and technologies used. This includes investigation, construction, analysis and product evaluation.

Deliverables:

25%	A project report (40 page report)
45%	Rich Internet Application
10%	A 20 minute demonstration that will be presented in class (week 13/14)
20%	Healthy Project Marks

A healthy project is one that has a team working on it on a continual basis. You will be asked to provide an update in class each week to demonstrate what work the team has done on the project. There will be 5 weeks of updates, and you'll need to ensure that at least 4 update show work being done on the project.

Submission:

In your online submission, you should submit:

- **Project Report** – MS Word or pdf document consisting of all research and production details. This will be submitted via TurnItIn.
- **Github location** and deployed location

You should also have a **printed copy** of your report, any research documents, for example questionnaires and storyboards and the presentation submitted directly to the lecturer.

Demonstration:

Demonstrations will be in week 14. The order of the demos will be chosen randomly. Each presentation should last about 10 minutes.

Demonstration marks will go for:

- Ability to discuss and answer questions
- Critique your application and how it achieves its goals
- Your evaluation of the future potential of your application

Project Report:

Your project report should outline all the details of state of the art research that you have done, critique the approach you took, architecture, security considerations, implementation, and testing. You should demonstrate how you applied the project lifecycle model. Feel free to include diagrams, charts, storyboards, questionnaires, which you think might better help to justify the process.

Project Report Title (Name and Student ID)

- **Motivation [5%]**
  - **Project Scope:**
    This is a short description of why your innovation is useful and what it might achieve.
  - **Area of contribution:**
    This should describe the general problem area. For example, what is a problem in educational environments and how might they be better developed through the application of a RIA.

- **State of the Art Review [30%]**
  - This section should outline a literature review of the methodologies. Describe investigation into current practice, case studies of other rich Internet applications, and academic/industrial research that is reported in conferences and journal articles. This should include a criticial analysis of your selected approach. You must describe how you made an informed decision about both the innovation undertaken and the technologies selected.

- **User Interface Design [20%]**
  - This section should outline how you arrived at the design of your UI. You should include a detailed analysis of how the controls in your application deliver a successful UI experience.

- **Architecture [25%]**
  - **Application Architecture:**
    Outline the solution architecture for your application. You sould justify the approach you took, and how it supports the project scope. This means mapping back to the state of the art review when describing the features and functionality of your system.
  - **Security:**
    Evaluate industry standard error handling, and outline how you integrated these approaches within your application.
  - **Toolkits and Frameworks:**
  - Discuss the toolkits and frameworks used and the justification for using them.
  - **Data Transfer Strategies:**
  - This section looks at the access and transporting of data to be consumed/created by the RIA.
  - **Evaluation and Testing:**
    You must include a short description of how your application was evaluated for its audience.
    Critically analyse the testing methodology employed, as well as any debugging techniques you used in building the application.

- **Summary [10%]**
  - This is a short section that includes a brief summary of what was achieved so far. Evaluate the approach you took, the tools you

used, and the implementation of your applications. You should describe what changes you would make or future work that would benefit your application.

- **References [10%]**
  - Please refer to the Harvard guidebook. Ensure to correctly reference all resources using the Harvard style of referencing.

Application Marking Scheme:

	70+	60-69	50-59	40-49	0-40
User Interface Design - 20%	Appropriate UI design. Tested for user interaction and non-traditional users.	UI implements good design principles. Nearly suitable for professional deployment.	Adequate User Interface design.	Poor attempt to implement UI design principles.	Sub standard UI design.
Functionality - 30%	Advanced functionality. Integrates state of the art approach.	Strong functionality. Application performs mostly as designed.	Adequate functionality. Application does not achieve scope.	Poor functionality, with little variety.	Application does not perform required functionality.
Complexity - 30%	Excellent use of complex approaches suitable for the project scope	Strong evidence of sophisticated application techniques.	Adequate technical approach.	Some evidence of application of industry standards.	Demo based entirely on class examples.
Security & Testing - 20%	Advanced security and testing methodologies employed.	Solid testing and security techniques employed.	Adequate approach to security/testing.	Obvious holes in security and/or limited testing.	No security or testing.