National College of Ireland

# Cloud Application Development HDWD_SEPOL

**Project Assessment Weighting 100%**

***Examiners: Dr Athanasios Staikopoulos / Mr Sean Heeney / Dr. Jack O' Neil***

Release Date and Time:

**Monday February 21st**

Submission Date and Time:

**Week of 25th of April**



## Academic Honesty Declaration

I declare the following to be true for this submission:

- I have completed the task during the designated time window and declare it to be exclusively my own work.
- I have not received, or attempted to receive assistance in preparing this response from any other person during the assessment window.
- I have not provided, or offered to provide, assistance to any other student by any means during the assessment window.
- I have read and understand the National College of Ireland guidelines of Plagiarism.
- This Front-Page declaration is to be included within your submission

## Additional Guidelines

- IEEE is not expected for this assessment, standard word or PDF format can be used for submission.
- Font Size 11 is recommended with Word Length specified within.
- Any Online material included within this assessment should be cited and referenced using the Harvard referencing style.
- Any illustrations implemented should be captioned and referenced where relevant.

**The Goal of this Project:**

**For this assignment, you are required to design, create and evaluate a web application hosted on a Cloud platform**.

This Project is segmented into 2 parts, a specification document and an implementation document.

The Specification is considered as Part One below.
The Implementation is considered as Part Two below.

**Part One – Specification and Planning**

You are to compose a solution which takes the form of a web application, this can be used for a business / enterprise implementation or a web application which satisfies a particular need. You are free to establish a particular domain or content in which your web application is to provide, e.g Finance & Trading, Retail, Hobbies and interests, Enterprise HR. While this flexibility is provided to you with regards to the content and topic of the website, there must be an element of complexity and functionality.

Once you have decided what your web application will do, you should go through the following process:

- Critically analyse and document the architecture of a web application framework.
- Define requirements: formally describe the functional and non-functional requirements of your web application.
- Create a wireframe prototype based on these requirements.

**Part Two – Implementation and Deployment**

- Implement a web application that addresses these requirements established in Part One.
- This application will be based on a web application framework, using at least one new library that you create in an object-oriented programming language. The new library should provide meaningful functionality to the application.
- Investigate your development strategy to ensure that you are developing your application to take advantage of suitable design patterns running in the cloud.
- The application should be developed using a test-driven development approach.
- Your Deployment strategy should encompass some elements of versioning control and or deployment strategies.
- Deploy your application to a suitable cloud platform.
- Provide a Video Demonstration / Presentation showcasing your deployed application.

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Grading Rubric & Breakdown of Marking Schema

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|---|---|---|
| Design | 15 % | Critique possible architecture and design aspects for the web application and discuss and evaluate the design chosen |
| Library Creation | 20 % | Include in your project multiple external Gems;<br>Design and implement at least one new Gem documenting the usefulness of the Gem |
| Implementation | 35 % | Develop the complex dynamic web application created with the aid of a web application framework. Some Element of Versioning control and implementation of Continuous Deployment mechanisms |
| Testing | 10 % | The application should be developed using a test-driven development approach, evidence of some forms of testing should be reported and demonstrated. |
| Conclusions & Findings | 10 % | The report should incorporate interpretations and conclusions |
| Demonstration | 10 % | Present the web application and demonstrate the dynamic characteristics of it inclusive of functionality |