

Assignment [40 Marks]

The outcome of this assignment is the creation of a fully-functional web application which will help improve a particular business you have identified.

1. Scenario

You need to identify a business (in preference real-life) which you want to set-up/improve or any other service you want to offer where transactions need to be carried over the web.

For example an E-Commerce site.

2. Deliverables

The assignment consists of three parts:

- i. Initial scenario evaluation document to be submitted in **week 3** during lecture (unless specified otherwise by MSS),
- ii. A written report to be submitted in **week 13** during lecture (semester 1) and
- iii. A web application (software) developed based on the report to be submitted in **week 27** during lecture (unless specified otherwise by MSS)

3. The Initial scenario evaluation document

This document gives a brief overview of the business, the services it provides and the current IT infrastructure available (if any).

This document shall be no more than 100 words (*excluding* student details such as ID and name).

4. The report [20 Marks]

The report shall consist of several sections including the following:

- i. An introduction to the business/service identified in your scenario.
- ii. Justification for proposing a web platform for the business/service you described. I.e., how will a web-based solution improve the business/service?
- iii. The hardware and software requirements of the proposed web platform, including the possible constraints, security issues and performance.
- iv. The different technologies (both hardware and software) to be used to develop the system, with proper justification.
- v. Architectural diagram of the hardware implementation (network plan). I.e., the different components of the network.

[3+4+3+5+5 Marks]

5. The web application [20 Marks]

The web application will take the form of a website implemented in HTML5 and other web technologies which fulfills the requirements identified in your report.

The system must also implement a web service.

You will be assessed on (but not limited to) the following:

- Use of HTML5, CSS3, PHP, etc.
- Use of AJAX/websockets to enhance interaction

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- Use of web workers to enhance performance of the web application
- Implementation of security in your application
- Creation of a Web Service which can be consumed in your project

All of the above should be in the context of your project, and not some arbitrary codes that you found and adapted from the Internet. You are *also* expected to demonstrate understanding and answer questions about HTML, PHP, JavaScript, CSS and other web related technologies.

You are expected to work in groups of **4** persons. Groups of 2, 3 or 5 or more are strictly **not** allowed.

Working individually is not encouraged and in the event you choose to do so, please be informed that the expected scope of the project will not be diminished. You will still need to complete all of the above requirements.

Although you are a group, you will be **marked individually** based on your contribution to the project. In this respect, you will need to submit details of your individual contributions (in terms of percentage) along with the project. If you do not submit this information, you will be given the same marks.

You are expected to start working on your assignment early on and not wait for the last week to do same.

Note: You may be asked to provide evidence of your progress.

6. Performance

Things that will bring you additional marks for assignment:

- Ability to show that you have modularised your project.
- Use of naming conventions and good programming principles in your project.
- Ability to demonstrate that you learnt new techniques/technologies on your own (JSON, JQuery, etc)

7. Important dates

- Deadline for submission of Initial scenario evaluation document (hardcopy): **week 3, semester 1**
- Deadline for submission of report in printed version (hardcopy): **week 13, semester 1**
- Deadline for submission of web application: **week 27, semester 2**

This will include:

1. Softcopy version of the report you submitted in semester 1.
2. A working copy of the software on CD/DVD.

- Demo of software: **week 28 and 29 (Semester 2)**

8. Important notes: Deadline(s).

1. **No marks shall be allocated in case students fail to submit the deliverables within deadline.**
2. **Any important issue to be communicated to the lecturer well before and not 1 week before or on deadline date or after.**
3. **No request for extension shall be entertained.**