**IMAT3451 Project Contract Template**

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| **Student Name** | Gary Nicolson |
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| **Programme** | Computing BSc |
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| **Project Title** | Corner Shop Systems |
| **Project Proposer** | Self |

**Supervisor**

Mr John Platt

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**Introduction**

To build an E-POS system using web technologies that is aimed at small business using a barcode based sales system.

Specifically one that processes till sales, adjusts inventory accordingly and produces reports on profits/losses and predictive stock orders automatically alleviating the need for manual inventory checks.

**Project Background**

With the ubiquitous rise of Web technologies new ways have been found to build native like apps that can be built with Web technologies such as NodeJS, MongoDB and Electron all using the JavaScript language.

Current E-POS systems require installation into a specific machine and are generally licenced and non-transferable and costing around £3000. I aim to create a Web based system that is easier to setup and cheaper than existing systems.

The target buyer would be a typical corner shop at its most simplest but easily scale able to any shop that uses a barcode in-out system. It would be able to function offline and work as if it were a native application but with the benefits of being accessible anywhere.

There are over 16000 such business in the UK with sales over 38billion, many of these are in the form of mini supermarket shops such as Tesco etc., my aim is to target the more familiar corner shop/ 1 man business though the system could theoretically replace a major chains current E-POS systems.

Expansion into an E-BUS suite would be the final evolution but that is beyond the scope of this project.

**Aim/Objectives/Deliverables**

**Aims**: To produce a Web technology based E-POS system with inventory management and stock order facilities to be used buy a business that uses a barcode system as its primary means of sales.

Goal is to simplify and automate the process of tracking sales and eliminate the need for manual stocktaking for small business where this is a repetitive, time consuming, error prone and manual endeavour.

**Objectives**:

A sales interface – Frontend till system – search facilities – manual entry

Inventory Interface – Add remove change stock info – Auto stock order report

Management interface – reports - basic expenses -

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|  | **Development Projects** |
| **Final Submission**  These are some examples: each project will need a complete set of objectives/deliverables  Week 27 | * Project contract * Project Plan (e.g., Gantt Chart) * Global Checklist * Literature Review * Requirements * Use Case Diagrams/Use Case Descriptions/Class diagrams/ER model * Story boards/Interface Designs * Design Documentation * Test Plan * Prototype * critical evaluation * Software * Appendices (e.g. further design documentation, test logs) * Maximum word count (main body): 10.000 |
| **Viva examination:**  attended by the supervisor and the 2nd marker  Weeks 31-33 | * Oral examination (demo of your work) |

**Resources and Constraints**

A computer/The Internet/GitHub

**Sources of Information**

Library/Internet

**Risk Analysis**

Major risk is in the use of new technologies that I do not have complete familiarity with and the possibility of reaching an impasse due to this. Solution would be to revert to other known technologies. E.g. use a Relational DB rather than a NoSQL Db such as MongoDB.

**Schedule of Activities**

Dec 14th Finish Requirement, Design specs, Interface designs, Use Cases

Jan 30th Finish prototype, integrate TDD and unit Tests

Feb 28th Finish report, Build system

Mar 31st Resolve issues (there’s always issues)

Apr 5th Hand in

**Student\_\_\_Gary Nicolson\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_22/10/2018\_\_\_**

**Supervisor\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**