

# Lab Marking system

Heriot-Watt University

Final Year Dissertation

Lewis McNeill  
supervised by Peter J King

November 3, 2016

## Declaration

I, Lewis Francis McNeill, confirm that this work submitted for assessment is my own and is expressed in my own words. Any uses made within it of the works of other authors in any form (e.g., ideas, equations, figures, text, tables, programs) are properly acknowledged at any point of their use. A list of the references employed is included.

Signed: Lewis McNeill

Date: November 3, 2016

## **Abstract**

The project aim is to develop a web application that will be used to improve marking of computing labs. The application will be designed to be used by Students to quickly know their grade, by Lab Helpers to easily mark labs and Lecturers to see marking immediately as it is done.

# Contents

|          |  |          |
|----------|--|----------|
| <b>1</b> | <b>Aims, Objectives and Project Description</b>                        | <b>5</b> |
| 1.1      | Aim . . . . .  | 5        |
| 1.2      | Objectives . . . . .   | 5        |
| <b>2</b> | <b>Literature Review</b>   | <b>6</b> |
| <b>3</b> | <b>Requirements</b>  | <b>7</b> |
| 3.1      | System Requirements . . . . .  | 7        |
| 3.2      | Usability Requirements . . . . .                                       | 7        |
| <b>4</b> | <b>Strategy for testing and evaluation</b>                             | <b>8</b> |
| 4.1      | Testing . . . . .  | 8        |
| 4.2      | Evaluating . . . . .   | 8        |
| <b>5</b> | <b>Project Plan and Professional, Legal, Ethical and Social Issues</b> | <b>9</b> |

# **1 Aims, Objectives and Project Description**

## **1.1 Aim**

## **1.2 Objectives**

## 2 Literature Review

## 3 Requirements

### 3.1 System Requirements

| ID | Requirement | Type | Description | Priority |
|----|-------------|------|-------------|----------|
| R1 | Test        | Test | Test        | Test     |
| R2 | Test        | Test | Test        | Test     |

### 3.2 Usability Requirements

## **4 Strategy for testing and evaluation**

### **4.1 Testing**

Testing and evaluation of the system will be done in two parts. To start with throughout the development of the the system unit tests will be used to make sure that the system is robust and functional.

### **4.2 Evaluating**

Once the system is completed a useability case study will be conducted to evaluate how successful the development of the marking system was and how later versions can be improved.



## **5 Project Plan and Professional, Legal, Ethical and Social Issues**

## References

- [1] E. Heinrich, Y. Wang, *Online Marking of Essay-type Assignments*; 2003. (<http://www-ist.massey.ac.nz/MarkTool/Publications/EdMedia2003Onscreen.pdf>)
- [2] J. D. Bovey, M. M. Dodson, The Hausdorff dimension of systems of linear forms *Acta Arithmetica* **45** (1986), 337–358.
- [3] J. W. S. Cassels, *An Introduction to Diophantine Approximation*, Cambridge University Press, Cambridge, 1965.
- [4] The GAP Group, GAP – Groups, Algorithms, and Programming, Version 4.5.6; 2012. (<http://www.gap-system.org>)
- [5] J. Howie, *Generalised triangle groups of type  $(3, 5, 2)$* , <http://arxiv.org/abs/1102.2073> (2011).