Smart Travel

**A dissertation submitted in partial fulfilment of**

**The requirement for the degree of**

**MASTER OF SCIENCE in Software Development**

**in**

**The Queen’s University of Belfast**

**By**

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# Chapter 1: Problem Specification

This should primarily consist of the original specification (as outlined in the initial Problem Specification / Project Plan submission). Any changes to the original specification should be identified and explained. The student must clearly describe the perceived problem and the target audience. It should be obvious from the chapter that the student has a thorough understanding of the problem domain and current applications used (if available) to address the problem at present.

# Chapter 2: Proposed solution and justification of the development model

This chapter should clearly follow on from where chapter 1 left off. The proposed solution must be sensible and clearly justified and should demonstrate some flair and originality. The development strategy must be clearly described, adequately justified and appropriate. Also included within this chapter should be a clear identification of the design details in line with the chosen development strategy.

# Chapter 3: Requirements analysis and specification

This chapter should explain and justify the process by which the requirements have been elicited. It should then also clearly identify the requirements of your project, which can be later tested. Depending on the chosen development strategy this chapter may be written retrospectively. The student’s academic supervisor will provide additional advice on this where required. The following are some of the details which would be expected in this chapter:

 A clear and precisely defined data model

 A complete set of function definitions

 Details of error conditions

# Chapter 4: Design

This chapter should describe, illustrate and justify the design of the proposed system. This should normally have two parts:

1. User Interface Design (if the proposed system has user interfaces)

2. Software System Design: the system should be decomposed into components with the interfaces

between components and the role of each component described. A clear correlation should exist between the design and the specification.

# Chapter 5: Implementation

The methodology used in the development of the proposed project has to be clearly described in this chapter with a description of the main functions of the software. It should include:

 A precise specification of the most significant aspects of the systems implementation. This may include detailed descriptions of the implementation of important components, functions or algorithms.

 Specification and justification of the testing strategies employed

In keeping with the principle of making the dissertation as readable and fluent as possible, it is not necessary to present all of the detailed program code in the main text. Some illustrative examples of the most significant snippets of code would suffice with the context of where the snippet was extracted from the remainder of the program code presented as a listing in one of the appendices. The program listing must be appropriately annotated with comments and each component should have a complete module header. Programs should be written in a clear style with good program structure and well-defined data structures. The program code should reflect its design. All of the program code must be submitted with the memory stick supporting the dissertation.

# Chapter 6: Evaluation and Conclusion

The evaluation chapter should demonstrate that the student understands the process of evaluation and testing in Software Development and can relate this to the project being developed. This section should include a general evaluation of the success of the project measured against the criteria stated in the introduction and/or requirements. An evaluation of the hardware/software environment and language used may also be presented. Suggestions for further work should also be discussed. Do not be afraid to be critical or to draw a negative conclusion; not all projects will be successful. This section should provide a thorough and honest reflection on the process followed in the project and the results of that process. To do this well, the student should not leave any blind spots in their reflection and should identify the most and least successful aspects of the project.