PG PROJECT TEMPLATE

Introduction

The PGD, MIT and MSc. Projects are the final courses of the PGD, MIT and MSc. programmes which provide you with the opportunity to show that you have gained the necessary skills and knowledge to organise and conduct a research project. These projects are reported as dissertations that should demonstrate that you have learnt the art of identifying an area, or areas, suitable for research.

A dissertation is a formal document that should be presented in a particular format. It must have chapters that provide an introduction, a literature review, research methodology, implementation, discussion of results and finally, conclusions and recommendations.

Depending on the nature of your project work, below are three types of templates you can adopt for structuring your dissertation.

Types of Dissertation Templates

1. Software Development Project Template

Title Page

Certification

Abstract

It is either a paragraph or 2 paragraphs. The first gives can a brief background that should pique the interest of the user while putting the problem at hand in context. The second paragraph can state what the project sets out to achieve. In all, it should be about half a page.

Acknowledgements

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Table of Figures

Chapter 1

1.1 Introduction/Background

Gives a background to the problem being addressed.

1.2 Statement of problem

States the problem formally.

1.3 Aim and Objectives

List the objectives of you set out to achieve in the project. It can alternatively be Aim and Objectives, where you can clearly state the aim of the project.

1.4 Scope of Study

This aims to give a boundary to the project. Clearly give a high-level list of functionalities expected from the system. Also include limitations where necessary.

1.5 Methodology

The methodology outlines the steps expected to be followed in solving the problem. Indicate a standard systems development methodology, e.g. Scrum, Waterfall, etc. Simply state the steps involved in the methodology without elaborating on each step extensively. The steps should determine how you go ahead with the project starting from Chapter 3. Do not include implementation details here.

1.6 Significance of the project

Outline the impact the project will have.

1.7 Project Outline

Briefly state what each chapter will contain.

Chapter 2: Literature Review

Give historical background, review existing systems/work done in the area starting from the early ones to most recent.

Chapter 3 : System Analysis and Design

This chapter contains the System analysis and Design activities and deliverables. For example, chapter 3 will consist of System analysis and design.

The Chapter(s) here should document the procedure(s) followed to elicit requirement. It should also document the elicited functional, non-functional, and other requirements, augmented with appropriate diagrams (e.g., use case, DFDs). It should also include the necessary designs (e.g. Interface/Input; output; process; conceptual, logical and physical database design).

Example Outline for this chapter can be:

Chapter 3: Analysis and design

3.1 Requirements

3.1.1 Functional Requirements

3.1.2 Non-Functional Requirements

3.1.3 Specification of the Current System. For example, Use cases or Data Flow Diagrams (DFDs) of the current system.

3.2 Design

3.2.1 Input/interface design

3.2.2 Output Design

3.2.3 Process Design (Use DFDs and other relevant UML diagrams as required)

3.2.4 Use cases

3.2.5 Database Design

3.2.5.1 Conceptual Database Design – ER Diagrams

3.2.5.1 Logical Database Design – Relations

3.2.5.1 Physical Database Design – Data definitions

Chapter 4: Implementation

This is the penultimate chapter. Include Choice of programming language, implementation environment and tools, etc. Describe operating requirements (Hardware and software). Describe application developed and how it functions.

Chapter 5: Conclusion

The last chapter. Include your observations, problems encountered, areas of future work, recommendations, concluding remarks (in tandem with what you set out to achieve in the abstract).

References

Use Harvard Referencing Style. Check online for details. Any reference here must be cited in the body of the write-up.

Appendices

Include appendices where necessary. Appendices should be labelled as Appendix A, Appendix B, Appendix C, and so on.

NB: This write-up gives a general outline for a software design and development project. Please ensure you see your supervisor for further instructions and clarifications.

2. Research Based Project Template

Title Page

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1.5 Research Methodology

- Research Methodology: The research methodology outlines the steps taken in the research.
- Software Methodology: The methodology outlines the steps expected to be followed in solving the problem. Indicate a standard systems development methodology, e.g. Scrum, Waterfall, etc. Simply state the steps involved in the methodology without elaborating on each step extensively. The steps should determine how you go ahead with the project starting from Chapter 3

1.6 Significance of the project

Outline the impact the project will have.

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Briefly state what each chapter will contain.

Chapter 2: Literature Review

Give historical background, review existing systems/work done in the area starting from the early ones to most recent.

Chapter 3: Methodology

These will depend on the methodology in chapter 1. For example,

3.1 Research Methodology

3.2 Software Methodology

Chapter 4: Experiment, Results and Discussion

In this chapter, a description of the experiment is made, the results obtained presented and discussed.

4.1 Experiment Design

4.2 Results

4.3 Discussion

Chapter 5: Conclusion

The last chapter. Include your observations, problems encountered, areas of future work, recommendations, concluding remarks (in tandem with what you set out to achieve in the abstract).

References

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Appendices

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3. Research Based Project Template for Comparing Algorithms

Title Page

Certification

Abstract

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1.4 Scope of Study

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1.5 Research Methodology

- Research Methodology: The research methodology outlines the steps taken in the research.
- Software Methodology: The methodology outlines the steps expected to be followed in solving the problem. Indicate a standard systems development methodology, e.g. Scrum, Waterfall, etc. Simply state the steps involved in the methodology without elaborating on each step extensively. The steps should determine how you go ahead with the project starting from Chapter 3

1.6 Significance of the project

Outline the impact the project will have.

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Briefly state what each chapter will contain.

Chapter 2: Literature Review

Give historical background, review existing systems/work done in the area starting from the early ones to most recent.

Chapter 3: Methodology

3.1 Research Methodology

3.2 Software Methodology

3.3 Description of Algorithms

Chapter 4: Experiment and Results

In this chapter, a description of the experiment is made, the results obtained presented and discussed.

4.1 Experiment Design

4.2 Algorithm Comparison Results

4.3 Discussion

Chapter 5: Conclusion

The last chapter. Include your observations, problems encountered, areas of future work, recommendations, concluding remarks (in tandem with what you set out to achieve in the abstract).

References

Use Harvard Referencing Style. Check online for details. Any reference here must be cited in the body of the write-up.

Appendices

Include appendices where necessary. Appendices should be labelled as Appendix A, Appendix B, Appendix C, and so on.

Finally, ensure you consult your Supervisor before adopting any of the above templates. Your Supervisor is at liberty to modify the templates to suit your needs.