

School of Public Administration  
Bachelor of Science in Computing

**COMP491/492 Final Year Project  
Progress/Final Report**Academic Year 2014/15

|  |  |
| --- | --- |
| [Your project title] | |
|  |  |
| Project number: | [Your project number] |
| Student ID: | [Your student ID] |
| Student Name: | [Your name] |
|  |  |
| Supervisor: | [Your supervisor] |
| Assessor: | [Your assessor] |
|  |  |
| Submission Date: | [Submission date] |

Declaration of Originality

I, [replaced by student’s name], declare that this report and the work reported herein was composed by and originated entirely from me. This report has not been submitted in any form for another degree or diploma at any university or other institute of tertiary education. Information derived from the published and unpublished work of others has been acknowledged in the text and a list of references is given in the bibliography.

[Your signature]

[Date of signature]

Abstract

Sample text sample text Sample text sample text Sample text sample text Sample text sample text. Sample text sample text Sample text sample text, Sample text sample text Sample text sample text.

Sample text sample text Sample text sample text Sample text sample text Sample text sample text. Sample text sample text Sample text sample text, Sample text sample text Sample text sample text.

Acknowledgement

[An example of acknowledgement follows:]

This report would not exist if not for the support and guidance of a special group of people who will always have my deepest appreciation.

I would like to thank XXX, my project supervisor, who has offered his/her technical supports and guided me into this research….

I would like to thank YYY who has been the assessor of my report….

I would like to thank my classmates and friends in the Computing Program of Macao Polytechnic Institute…

I cannot find words strong enough to express my appreciations for my family…

Table of Contents

[1 Introduction 1](#_Toc388018701)

[1.1 Objectives 2](#_Toc388018702)

[1.2 Summary 2](#_Toc388018703)

[1.3 Risk Assessment 2](#_Toc388018704)

[2 Background and Related Work 3](#_Toc388018705)

[3 Design Approach / Methodology 4](#_Toc388018706)

[3.1 Something 4](#_Toc388018707)

[3.2 Something more 4](#_Toc388018708)

[4 Implementation / Experiment 5](#_Toc388018709)

[4.1 Something more 5](#_Toc388018710)

[4.2 Something more 5](#_Toc388018711)

[4.2.1 Module Design 5](#_Toc388018712)

[4.2.2 Module Design 6](#_Toc388018713)

[5 Results and Discussion 8](#_Toc388018714)

[5.1 Project Outcome 8](#_Toc388018715)

[5.2 Testing 8](#_Toc388018716)

[6 Conclusion and Further Work 9](#_Toc388018717)

[References 10](#_Toc388018718)

[Appendix A. Project management 11](#_Toc388018719)

[Appendix B. Program source code / UML diagram, etc 12](#_Toc388018720)

Table of Figures

[Figure 1: Decision tree elements 6](#_Toc388018699)

[Figure 2: Probability density function of normal distribution 7](#_Toc388018700)

List of Tables

[Table 1: SQL operators 8](#_Toc388018721)

[Table 2: Repeated SQL operator 8](#_Toc388018722)

# Introduction

This document template helps you to format your FYP report. You must use a consistent formatting style when preparing your report. In this template, we use the following style with which you may wish to comply:

1. Body Text: in Times New Roman, 12-point, normal font. Justified on both sides. Line spacing is 1.5 lines.
2. Headings of Abstract/Acknowledgement/Declaration of Originality: in Times New Roman, 16-point bold type. Use the same formatting for Table of contents, Table of figures, List of tables, Reference, Appendix and Project Management.
3. Chapter Headings: Print chapter headings in Times New Roman 16-point bold type. Number chapters with Arabic numerals. (Note: the chapters from References are NOT numbered any more.) Chapters must start on a new page. The report must include the 6 standard chapters: 1. Introduction, 2. Background and related work, 3. Design Approach / Methodology, 4. Implementation / Experiment, 5. Results and Discussion, 6. Conclusion.
4. Section Headings: Print section headings in Times New Roman 14-point bold type. Number sections with the chapter number and the section number (in Arabic numerals) separated by a period. For example, 1.1 Objectives, 1.2 Summary, 1.3 Risk Assessment
5. Subsection Headings: Print subsection headings in Times New Roman 12-point italic type. Number subsections with the chapter number, section number and the subsection number (in Arabic numerals) separated by a period. For example, 5.2.1 Result of experiment 1.
6. There must be no sections below subsection. (e.g. 5.2.1.2)
7. Bibliography items in References: in Times New Roman, 10-point.
8. The page margins follow the standard settings in Word: top is 1inch (2.54cm), bottom is 1inch (2.54cm), left is 1inch (2.54cm) and right is 1inch (2.54cm).
9. Figures and Tables: Place all figures and tables throughout the report at the places where they are first discussed. Number them sequentially: Figure 1, Figure 2, Table 1, etc. Use 10-point Bold Times New Roman for captions. Figure captions should be below the figures; table captions should appear above the tables.

The Cover page should include title of your project, course code, your name and your supervisor's name, your assessor’s name and submission date.

The words highlighted in blue are blanks for you to select or fill in. Change the colour of your text to black.

If you choose editing software other than Microsoft Word to finish the report, you are required to conform to the same set of formatting standards and submit a pdf file compliant with PDF standard version 1.4 and has all necessary fonts embedded.

## Objectives

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin pellentesque diam vitae varius euismod. Fusce commodo diam a est interdum, sed faucibus mi malesuada. Proin congue pulvinar congue.

## Summary

The summary should be finished like this: This report is organized as follows: Chapter/Section 2 introduces the background of our work. Chapter/Section 3 presents our design approach. Chapter/Section 4 shows the implementation details….

## Risk Assessment

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin pellentesque diam vitae varius euismod. Fusce commodo diam a est interdum, sed faucibus mi malesuada. Proin congue pulvinar congue.

# Background and Related Work

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin pellentesque diam vitae varius euismod. Fusce commodo diam a est interdum, sed faucibus mi malesuada. Proin congue pulvinar congue. Donec consectetur nunc at mauris scelerisque gravida. Donec cursus blandit orci. Mauris nulla nisi, posuere eu pellentesque ac, tincidunt vitae lorem. Suspendisse euismod nunc id nibh ullamcorper pretium. Etiam volutpat magna enim, sit amet elementum lacus rhoncus nec.

Vivamus gravida ut odio eu gravida. Nullam cursus, velit sed tincidunt dapibus, odio nulla dapibus arcu, in interdum augue nunc sed nisl. Pellentesque eu fringilla diam. Nunc erat metus, bibendum at nisl ut, ullamcorper egestas tortor. Pellentesque eu bibendum mi, sit amet cursus eros. Quisque fermentum tristique dolor id malesuada. Nam porta tortor sed nibh scelerisque, in feugiat ipsum viverra. Aliquam gravida tincidunt libero, non suscipit velit porta nec.

# Design Approach / Methodology

Introductory paragraphs. Sample text sample text Sample text sample text Sample text sample text Sample text sample text. Sample text sample text Sample text sample text, Sample text sample text Sample text sample text.

Sample text sample text Sample text sample text Sample text sample text Sample text sample text. Sample text sample text Sample text sample text, Sample text sample text Sample text sample text.

## Something

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin pellentesque diam vitae varius euismod. Fusce commodo diam a est interdum, sed faucibus mi malesuada. Proin congue pulvinar congue.

Integer quis sem velit. Nulla sollicitudin erat enim, ac feugiat nulla bibendum eget. In aliquam leo quis nibh elementum vulputate. Maecenas quis ornare erat. Integer cursus tortor sed nibh accumsan consectetur. Phasellus fringilla placerat commodo. Nunc blandit mi id sodales vehicula.

## Something more

Integer quis sem velit. Nulla sollicitudin erat enim, ac feugiat nulla bibendum eget. In aliquam leo quis nibh elementum vulputate. Maecenas quis ornare erat. Integer cursus tortor sed nibh accumsan consectetur. Phasellus fringilla placerat commodo. Nunc blandit mi id sodales vehicula.

# Implementation / Experiment

Introductory paragraphs. Sample text sample text Sample text sample text Sample text sample text Sample text sample text. Sample text sample text Sample text sample text, Sample text sample text Sample text sample text.

## Something more

Integer quis sem velit. Nulla sollicitudin erat enim, ac feugiat nulla bibendum eget. In aliquam leo quis nibh elementum vulputate. Maecenas quis ornare erat. Integer cursus tortor sed nibh accumsan consectetur. Phasellus fringilla placerat commodo. Nunc blandit mi id sodales vehicula.

There are Several cases:

* Integer quis sem velit. Nulla sollicitudin erat enim, ac feugiat nulla bibendum eget. In aliquam leo quis nibh elementum vulputate.
* Maecenas quis ornare erat. Integer cursus tortor sed nibh accumsan consectetur. Phasellus fringilla placerat commodo. Nunc blandit mi id sodales vehicula.
* Integer quis sem velit. Nulla sollicitudin erat enim, ac feugiat nulla bibendum eget.

## Something more

Describe the low-level structural model of your system. E.g. major components in yours system, communication and control flow among modules, which module implements each of the functional requirements.

What about a quote: Keep it short and simple.

### Module Design

Integer quis sem velit. Nulla sollicitudin erat enim, ac feugiat nulla bibendum eget. In aliquam leo quis nibh elementum vulputate. Maecenas quis ornare erat. Integer cursus tortor sed nibh accumsan consectetur. Phasellus fringilla placerat commodo. Nunc blandit mi id sodales vehicula.

### Module Design

Integer quis sem velit. Nulla sollicitudin erat enim, ac feugiat nulla bibendum eget. In aliquam leo quis nibh elementum vulputate. Maecenas quis ornare erat. Integer cursus tortor sed nibh accumsan consectetur. Phasellus fringilla placerat commodo. Nunc blandit mi id sodales vehicula.

The following comes from Wikipedia. <http://en.wikipedia.org/wiki/Decision_tree>

Drawn from left to right, a decision tree has only burst nodes (splitting paths) but no sink nodes (converging paths). Therefore, used manually, they can grow very big and are then often hard to draw fully by hand. Traditionally, decision trees have been created manually - as the aside example shows - although increasingly, specialized software is employed

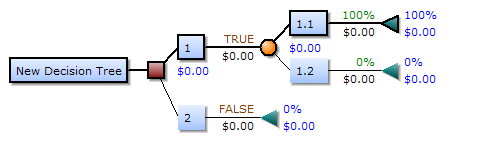


Figure : Decision tree elements

In probability theory, the normal (or Gaussian) distribution is a very commonly occurring continuous probability distribution—a function that tells the probability that any real observation will fall between any two real limits or real numbers, as the curve approaches zero on either side. Normal distributions are extremely important in statistics and are often used in the natural and social sciences for real-valued random variables whose distributions are not known.

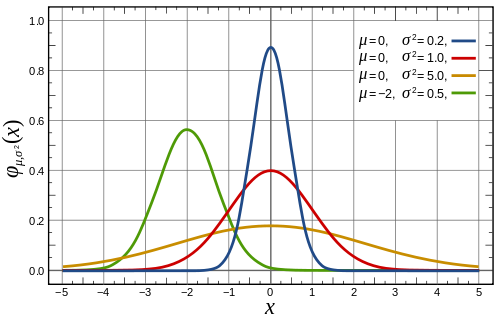


Figure : Probability density function of normal distribution

The normal distribution is immensely useful because of the central limit theorem, which states that, under mild conditions, the mean of many random variables independently drawn from the same distribution is distributed approximately normally, irrespective of the form of the original distribution: physical quantities that are expected to be the sum of many independent processes (such as measurement errors) often have a distribution very close to the normal. Moreover, many results and methods (such as propagation of uncertainty and least squares parameter fitting) can be derived analytically in explicit form when the relevant variables are normally distributed.

# Results and Discussion

## Project Outcome

Integer quis sem velit. Nulla sollicitudin erat enim, ac feugiat nulla bibendum eget. In aliquam leo quis nibh elementum vulputate. Maecenas quis ornare erat. Integer cursus tortor sed nibh accumsan consectetur. Phasellus fringilla placerat commodo. Nunc blandit mi id sodales vehicula.

Table : SQL operators

|  |  |  |
| --- | --- | --- |
| Operator | Description | Example |
| = | Equal to | Author = 'Alcott' |
| <> | Not equal to (most DBMS also accept != instead of <>) | Dept <> 'Sales' |
| > | Greater than | Hire\_Date > '2012-01-31' |

## Testing

Describe test cases design and/or requirement-based tests. Explain how you ensure that you have implemented the major, non-trivial functions with appropriate data validation and error checking. Also describe the sample data you use to test the robustness and correctness of your system.

Table : Repeated SQL operator

|  |  |  |
| --- | --- | --- |
| Operator | Description | Example |
| = | Equal to | Author = 'Alcott' |
| <> | Not equal to (most DBMS also accept != instead of <>) | Dept <> 'Sales' |
| > | Greater than | Hire\_Date > '2012-01-31' |

Integer quis sem velit. Nulla sollicitudin erat enim, ac feugiat nulla bibendum eget. In aliquam leo quis nibh elementum vulputate. Maecenas quis ornare erat. Integer cursus tortor sed nibh accumsan consectetur. Phasellus fringilla placerat commodo. Nunc blandit mi id sodales vehicula.

# Conclusion and Further Work

Summarize your work, describe limitations, and suggest future work.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin pellentesque diam vitae varius euismod. Fusce commodo diam a est interdum, sed faucibus mi malesuada. Proin congue pulvinar congue.

Integer quis sem velit. Nulla sollicitudin erat enim, ac feugiat nulla bibendum eget. In aliquam leo quis nibh elementum vulputate. Maecenas quis ornare erat. Integer cursus tortor sed nibh accumsan consectetur. Phasellus fringilla placerat commodo. Nunc blandit mi id sodales vehicula.

References

[1] Harold Abelson, Gerald Jay Sussman, and Julie Sussman. Structure and Interpretation of Computer Programs. MIT Press, Cambridge, Massachusetts, 1985.

[2] Robert Baumgartner, Georg Gottlob, and Sergio Flesca. Visual information extraction with Lixto. In Proceedings of the 27th International Conference on Very Large Databases, pages 119–128, Rome, Italy, September 2001.Morgan Kaufmann.

[3] Ronald J. Brachman and James G. Schmolze. An overview of the KL-ONE knowledge representation system. Cognitive Science, 9(2):171–216, April–June 1985.

[4] Georg Gottlob, Nicola Leone, and Francesco Scarcello. Hypertree decompositions and tractable queries. Journal of Computer and System Sciences, 64(3):579–627,May 2002.

[5] Georg Gottlob. Complexity results for nonmonotonic logics. Journal of Logic and Computation, 2(3):397–425, June 1992.

[6] Hector J. Levesque. Foundations of a functional approach to knowledge representation. Artificial Intelligence, 23(2):155–212, July 1984.

[7] Hector J. Levesque. A logic of implicit and explicit belief. In Proceedings of the Fourth National Conference on Artificial Intelligence, pages 198–202, Austin, Texas, August 1984. American Association for Artificial Intelligence.

[8] Bernhard Nebel. On the compilability and expressive power of propositional planning formalisms. Journal of Artificial Intelligence Research, 12:271–315, 2000.

[9] Ivan Marsic. A short guide for writing a thesis. http://www.ece.rutgers.edu/~marsic/thesis-guide.html, 2004 [Mar. 6, 2014].

[10] Matlab documentation. http://www.mathworks.com/help/?s\_tid=hp\_ff\_s\_doc [Mar. 6, 2014].

[11] George Sparling. Spacetime is spinorial; new dimensions are timelike. arXiv:gr-qc/0610068v1, 2006.

[12] Ryan Rifkin. Everything old is new again: a fresh look at historical approaches in machine learning. Ph.d thesis, MIT, 2002.

Appendix A. Project management

Gantt chart, program plan

Appendix B. Program source code / UML diagram, etc

Not compulsory