IT6105 - SOFTWARE DEVELOPMENT PROJECT GUIDELINES

PROJECT EXAMINATION BOARD (PEB)

2016

Degree of Bachelor of Information Technology of the University of Colombo School of Computing

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The current version of Guidelines was prepared using three previous versions (IT6102 [1], IT6103 [2] and IT6104 [3]) of the BIT individual project guidelines.

Note that any changes introduced to these guidelines during the academic year will be notified via the BIT web site (http://www.bit.lk/) or the virtual learning environment (http://vle.bit.lk/project/).

Abstract

This is a document that provides guidelines for you in order to successfully finish your BIT software development project. Thus it provides information on project selection, supervisor selection, project registration, project schedule, the details of the submissions that you have to make, and also the method that will be used to assess your project work. It also provides information on the structure of your dissertation as well as some hints on good report writing and good project management. If you carefully follow the instructions in this document, you will be on a path leading to successful project grade.

Acknowledgements

There are many people who have helped us in preparing this document, especially those who contributed for the previous versions and others who have given feedback. We remember with gratitude the vision, the initiative and the advice of the founder Director of UCSC late Prof. V.K. Samaranayake. In addition to his innumerable contributions for computing in Sri Lanka, he also initiated the BIT degree program and was closely involved in formulating the project course for this degree program. We also thank the former Director of the UCSC, Dr. Ruvan Weerasinghe for his initiatives and advices. We also thank Prof. Athula Ginige from University of Western Sydney, Australia for his advice. Last but not least, we would like to thank all the past students of the BIT programme who took this course and helped us fine tune this document based on our experience with evaluating their work.

Contents

List of Figures

List of Tables

List of Acronyms

BIT	–	Bachelor of Information Technology
CD	–	Compact Disk
EDC	–	External Degrees Centre
PEB	–	Project Examination Board
UCSC	–	University of Colombo School of Computing
VLE	-	Virtual Learning Environment (www.bit.lk)

Chapter 1 - Introduction

The software development project is by far the most important single piece of work in the BIT degree programme which should be conducted individually by each student. The students will get 8 credits for this work. It provides the opportunity for a candidate to demonstrate independence and originality, to plan and organize a large project over a long period, and to put into practice some of the techniques that have been taught throughout the course. The Project also aims to assess a candidate's ability to communicate his ideas and work. Whatever your level of academic achievement is so far, you can show your individuality and inspiration in this project. It should be the most satisfying piece of work in your degree. It is equivalent to three courses in the BIT degree programme and is an extended piece of individual work, occupying a candidate's time from the end of the second year through to the end of the third year covering over 300 hours of work.

A candidate will select a supervisor and a project. A project is selected from a workplace or an organization. Candidate may also select a topic on his own to address an existing problem in an organization. However each project should have a client appointed from top-level management of the organization. Candidate should gather user requirements and develop a prototype and demonstrate that the requirements are met through the system. Candidate will have regular meetings with the supervisor to discuss project work and produce a formal dissertation (report) in a structured way along the suggested guidelines. It should demonstrate that the relevant work has been carried out under proper supervision. Also, candidate should get the system evaluated by a sample group of users and obtain a client certificate to prove that candidate has met the user requirements and thereby successfully completed the project.

The rest of this document is organized as follows. Chapter 2 gives an overview of the project. Chapter 3 describes the various submissions you have to make to fulfil the partial requirements of the project. Chapter 4 gives the schedule for the project. Chapter 5 gives guidelines on writing your dissertation. Chapter 6 describes how the Project Examination

Board (PEB) assesses your project. Finally, in Chapter 7 we describe the pitfalls you should be aware of to ensure the success of your project.

Chapter 2 -Project Overview

2.1 Registration

Project can be done only by students registered for the third year of the BIT degree programme. Project fee is Rs. 6000 and it should be paid at the beginning of the academic year. The payment vouchers can be downloaded from the BIT website [5]. All payments can be made at any branch of the People's Bank. In addition, payments also can be done using a Credit Card through the BIT website. The payment receipts (EDC copy-1) should reach the External Degrees Centre (EDC) of UCSC, before the respective deadline given in Chapter 4. You will get access to the Project VLE within two-three weeks after getting registered to the course,

2.2 Duration

The candidate is expected to spend, on an average, at least 12 hours per week amounting to a minimum total of 300 hours, excluding the time taken for report writing and preparation of presentation material. Effective time management is the candidate's responsibility. Devoting a regular time slot for the project work consistently throughout the year will help. Always keep track on the project report/dissertation submission deadlines and plan on what has to be done to meet them.

2.3 Project Selection

The project should be an implementation of an information system as a business solution for an organization and it should have a client. The client should be one from the top-management of the organization for whom the project is being undertaken. It is the responsibility of the candidate to identify a suitable project. However, research type projects and simulations are not recommended. The project should comprise a substantial amount of individual work to satisfy the PEB that the project objectives have been met as well as the time spent on the project is justified.

The candidate will work on a topic of interest which may have originated from his work place or may be based on an organization's requirement or may be based on a candidate's

idea that an organization would like to try out. The candidate should verify from the client whether they had previously given such a project to any other students, as implementing a similar project for the same client is not allowed. Candidate should note that the project would be evaluated based what would be demonstrated at the UCSC and not by the features that is supposed to be there but cannot be demonstrated at the UCSC for some reason.

A good project involves a combination of sound background study, a solid implementation with substantial system functionality and a thorough evaluation of the project's output in both absolute and relative terms. Good projects invariably cover some new ground. For example, the project may involve developing a complex application which does not already exist, or it may involve enhancing some existing application or method to improve its functionality, performance, etc. **A good criterion to select a project is its usefulness to mankind: a system developed by your project should improve the work of the people even in a small way. It should never be a system that only uses computers with no real gain for its users.**

We hope that you would be able to find a good project topic. The candidate is expected to look at some of the project dissertations kept for reference at the EDC or in the VLE and get an idea of the type of work that has to be done. However, the candidates are strongly advised not to copy any content from dissertations of previous students or any other published or unpublished resources (see section 5.1 – (16) for more information). A list of example project topics to help you make your decision is provided in Appendix A.

The project should involve the main activities associated with the design, development and implementation of an information system: requirement analysis, specification, design, implementation, testing, evaluation, documentation and maintenance. The candidate should get a client agreement form (see Appendix D) signed by two staff members of the organization – at least one of them should be from the top-level management of the organization. The completed client agreement form should be submitted to the EDC on or before the given deadline. At the end of the project the candidate must be able to certify

that all the requirements of the project were met. For this, a letter from the client indicating the satisfactory completion of your system (Client Certification) should be attached to the appendix of the dissertation.

2.4 Scope

Although the project is done for a client, a candidate should remember that the purpose of the project is to fulfil an examination requirement of the BIT degree programme. Hence satisfying a client does not guarantee that the project is successful as the client's expectation could be well below the expectation of the PEB. Also some clients may expect more than what is expected by the PEB and hence the candidate may fail to fulfil all the requirements of the PEB within the allocated time. Thus the candidate should consult his supervisor and agree on a suitable scope for the project that will satisfy the requirements of the PEB. You will find several examples of projects and their scopes in the VLE.

2.5 Objectives

The project encourages and rewards individual inventiveness and application of effort. The project will develop a candidate's ability to:

- construct a project from initial ideas, via a thorough analysis of the problem;
- plan, schedule, monitor, and control own work;
- work independently;
- defend ideas in discussions and presentations;
- use references, libraries and other information sources;
- apply theories, tools and techniques from taught courses;
- demonstrate the solution to the problem through developed software;
- write formal reports.

2.6 Supervisor/Advisor

A candidate should have a project supervisor/advisor. He should be able to guide the candidate throughout the project. He should have appropriate knowledge in the application area and be an information technology (IT) graduate, a professionally qualified person in IT or a senior user of IT. A person who has successfully done / supervised / advised an IT project at a similar level will be usually familiar with all stages of a project and hence be suitable to supervise/advise you and the PEB strongly recommends such a person as your supervisor/advisor. The candidate should ensure that the supervisor/advisor will not be away for very long periods and he is willing to spend the expected time with you. The supervisor/advisor should also be able to go through your project proposal and dissertation and provide feedback. The chosen supervisor/advisor sometimes may not be familiar with the client's domain and may not be able to guide you in that aspect. In such cases you are advised to have a second supervisor/advisor. This person need not be familiar with IT and preferably should be from the client domain. Note that members of the PEB are prohibited from being project supervisor/advisor. Also, **you should not select project supervisors or clients from your close relatives (including family members) or family friends**.

The candidate should obtain the consent of the supervisor(s)/advisor(s) to supervise/advise the project and his consent should be indicated in the Supervisor/Advisor Agreement Form available in the VLE and that form should be submitted to the EDC. Any change of project supervisor/advisor should be notified to the EDC in writing with reasons given. Also, a fresh Supervisor/Advisor Agreement Form should be submitted to the EDC.

It is a formal requirement that the candidate regularly meets the project supervisor/advisor during the project period. The candidate should work independently but report the progress and seek guidance from the supervisor/advisor to ensure the correctness of the work. The candidate should agree on a timetable with information about methods of contact with the supervisor/advisor at the start of the project. Typically, a candidate should meet the supervisor/advisor at least once in every two weeks. You may meet the second supervisor/advisor on a monthly basis or as and when required. During the entire project a supervisor/advisor should have typically spent around 10 hours with the candidate for

discussions in addition to the time spent to read and correct the proposal and dissertation to be submitted to the EDC. Some supervisors/advisors would want to meet the candidate more often than this. A record of the meetings with the supervisor/advisor should be formally recorded through the VLE Progress Report. When you go to see your supervisor/advisor you should have prepared a written list of points you wish to discuss. Take notes during the meeting so that you do not forget the advice you were given or the conclusions that were reached. Candidate should obtain the supervisor's/advisor's approval before submitting the project proposal, and the dissertation in order to ensure that the documentation meet the PEB requirements.

2.7 Online Support

The UCSC provides support to the students via a virtual environment (VLE) and a project management system. You can access the VLE from http://vle.bit.lk/project/ and the project management system from http://dev.lms.bit.lk/2plan.

2.7.1 Project VLE

It is mandatory for all candidates to use the Project VLE for submitting forms, reports and dissertations. Candidates will get access to this environment within two or three weeks after getting registered to the project course. The VLE provides access to learning resources which include some dissertations of previous students, reading materials, and templates for preparing forms and dissertation cover and title pages. Candidates can use the forum discussions in the VLE to discuss their issues and concerns regarding the project. Course coordinator and facilitator use this VLE for sending messages and announcements to the students. Therefore candidates are advised to update their profile page in the VLE with a working email account. Any issues regarding the VLE should be conveyed to the facilitator of the BIT project course or the VLE administrator – contact (Tel. No. 011-2591080) the e-Learning Centre of the UCSC.

2.7.2 Project Management System

The UCSC will introduce a project management system to the candidates of the BIT project course. This system will be in a testing stage. Therefore, only those who wish to get support through this system and provide feedback and suggestions to the UCSC are advised to use this system. Candidates who would like to use this system should get their supervisors and clients registered to the system. This system will support the candidate to keep project activities on track, be on the time plan and receive comments and feedback from the client and the supervisor(s). All draft versions of the reports and dissertation sections can be uploaded to the project management system for receiving comments and the final version should be submitted via the Project VLE.

Chapter 3 - Submissions

3.1 Project Proposal

Prior to commencing the project work, the candidate should register for the project and submit the project proposal through VLE. A project proposal summarizes the intended work to be carried out during the project period. The candidate should discuss the proposed project with the chosen project supervisor, prior to submission of this proposal. The candidate should keep a copy of the project proposal for later reference. The project proposal should be uploaded to the VLE by mid-March (Exact date is available in the Table 4.1). The project work starts from the time you commence to prepare the project proposal. Note that the PEB is not in a position to give any feedback for the proposed project. The candidate should get the Supervisor Agreement Form (which is available in the VLE) signed by his supervisor(s) and post it to reach/hand it over to the EDC not later than the mid-February (Exact date is available in the Table 4.1).

3.2 Progress Reports

The candidate should submit a progress report every fortnight through the VLE. These reports should indicate the progress the candidate is making with his project, details of meetings with supervisor(s), decisions taken, problems encountered etc. Get your progress reports signed by your supervisor, scan the completed and signed form and submit it via the VLE. The schedule for progress report submissions are given in the Table 4.1.

3.3 Interim Report

The candidate should also submit an interim report to the VLE by mid-June of the relevant academic year. This report should include the Introduction, Analysis and Design chapters of the dissertation along with relevant references and design diagrams. Those who failed to make the proper submission will not be called for the evaluation. (Exact date for submission is given in the Table 4.1).

3.4 Dissertation

A project dissertation describing your project is a major submission. The candidate should plan properly so that he can finish the dissertation writing by its deadline. Details on writing the dissertation are provided in Chapter 5.

Candidate has to register for the project evaluation and should have submitted the supervisor and client agreement forms and the project proposal in order to be eligible for the final evaluation. The eligible candidates can submit their dissertations via VLE. Dissertation is initially uploaded to the VLE as a softcopy (refer Table 4.1 for the submission date).

3.5 Final Dissertation

Based on the outcome of the project evaluation the successful candidate will be asked to complete the project. These candidates should do any improvements to the submitted draft dissertation as suggested by the PEB and submit one hard-bound copy of the final dissertation to the Project Coordinator at the UCSC by the specified deadline. A softcopy of the final dissertation should also be submitted via the VLE. It is a single file in pdf format containing from cover page to appendices.

The final dissertation should be sewn, trimmed and bound and covered with dark cloth, leather or rexine, in navy blue. On the spine of the dissertation, the initials and surname of the candidate (at top of the spine), the title of the project (abbreviated if necessary at the centre of the spine including dropping the client information) and year (at the bottom of the spine) shall be given in gold lettering of suitable size. Figure 3.1 gives an example of a spine of the dissertation.

Figure 3.1: Spine of the dissertation

The same information without dropping the client information should be placed on the cover of the HB dissertation. The template of the cover page is in Appendix E.

3.6 Read-only CD

ISO 9660 Read Only CD (most common file format for CD-ROM) consisting the system should be prepared to fulfil the information in Table 3.1. Candidate need **not** include the software packages used such as the database management system. Two versions of the CD should be submitted by the specified date. The first version should be submitted on the date of the project evaluation. The second version should be submitted once your final dissertation is approved for hard bound by the PEB. The CD should be labelled indicating the candidate's index number, name and year. A printout of the directory contents showing the file names should be attached with appropriate comments to the cover of the CD so that the PEB can identify the contents of the CD.

Item No.	Description
1	Developed software
2.	Source code files
3.	Databases (if applicable)
4.	Test Results
5.	Manuals
6.	README file (describe how to install the software)
7.	Dissertation (PDF document)
8.	Any other reports

Table 3.1: Contents in the CD-ROM

Chapter 4 – Schedule

The project schedule is given in Table 4.1. Refer to the VLE for details and forms. All submissions should be either reached the EDC or uploaded to the VLE on or before the specified deadlines. If the deadline falls on a holiday, then its immediate previous working day should be considered as the deadline. No postal or email submissions will be entertained. Late submissions will not be accepted.

Deadline (on or before)	***Description***
01st January, 2016	Beginning of the academic year
14th January, 2016	**Registration for project & project evaluation** (Pay Rs.6,000 at the EDC on or before **14th of January, 2016**)
15th February, 2016	**Submission of the signed Supervisor Agreement Form** to the EDC/VLE
15th March 2016	**Submission of the Project Proposal** through the VLE (Submission will only be allowed if the payment is made before **14th of January, 2016**)
29th March 2016 12th April 2016 26th April 2016 03rd May 2016 17th May 2016 28th June2016 12th July 2016 26th July 2016 09th August 2016 23rd August 2016	**Submission** of 10 **Progress Reports** through the VLE
14h June 2016	**Submission** of **Interim Report** through the VLE
30th September 2016	**Submission of the project dissertation** (PDF) through the VLE
October	Publication of **project evaluation schedule** on the BIT web site
October /November	**Project evaluation** at the UCSC (Each candidate should bring **one spiral bound copy** of the **project dissertation, CD with a copy of project software** and a computer with all software installed and data entered.)
November/ December	**Feedback** for dissertation corrections (through the BIT web site)
December	**Approval** for dissertation corrections (payment of Rs.1,500 for resubmission, if applicable)
January	**Submission of Final Dissertation** (One hard-bound copy of the dissertation prepared according to guidelines described under Section 3.5) and one CD with a printout of its directory contents to the UCSC (see section 3.6)

Table 4.1: Project schedule

Chapter 5 -Dissertation

5.1 General

(1) The project dissertation is a formal document and the structure and the general content requirements are described in Section 5.2. This includes advice on how to organize the work into chapters, what should be covered in the main body of the work and what should go in the appendices.

(2) Candidates are strongly advised, while writing is in progress, to show each chapter to their supervisors for necessary feedback especially on technical content. Please follow the instructions given in this chapter to minimize correction time.

(3) The format requirements are not overly restrictive (e.g., there is no requirement to use a particular font style for some parts of the dissertation). However, do not use too many different typefaces in the dissertation, or in general, too much time developing an elaborate visual presentation. It is better to keep the look of the dissertation simple and straightforward. (Note that an elaborate presentation can in fact create a negative impression.)

(4) The candidate is recommended to use tables and figures, if they aid in the explanation of information in the text. Use of plotting/drawing packages to create figures is recommended as hand-drawn figures will not be accepted. Please note that all tables and figures should be numbered and suitable captions should be given to them. **The table/figure number and the caption should be placed immediately below the table/figure**. Note also that all of the tables and figures must be referenced in the text of the dissertation-*e.g. the project schedule is given in Table 4.1.*

(5) With regard to the number of pages, the opinion of the PEB is that the quality of the dissertation is more important than its number of pages. Keeping text simple and concise is a good strategy to follow for any form of writing. Thus, the candidate

must carefully read through his written dissertation and refine it by removing all repeating and unnecessary text. The PEB notes with regret that some candidates tend to inflate their dissertations by repeating the same text at separate places in the dissertation. This has to be avoided. Remember: keep it simple.

(6) The dissertation text (defined as everything except title page, table of contents, references and appendices) should be around 50 A4 pages. The length (dissertation text together with appendices) of the dissertation should be less than 110 pages.

(7) The candidates are advised to follow the typing recommendations given in Table 5.1 to typeset their dissertations. Note that in order to save paper, we recommend double-sided printing. A typeface less than 10 points should not be used under any circumstance.

Description	**Draft Report**	**Hard Bound**
dissertation text Times New Roman	12pt	12pt
text in tables and code listing	11pt	11pt
line spacing (preface and main text)	1.5	1.5
line spacing appendices	1.0	1.0
left margin	37mm	37mm
top/bottom/right margins	25mm	25mm
chapter heading	24pt bold	24pt bold
section headings	16pt	16pt
subsection headings	14pt	14pt
other headings	12pt bold	12pt bold
tables headings font	11pt bold	11pt bold
printing	on both sides of paper use mirror image option	Single sides of paper

Table 5. 1: Typesetting recommendations

(8) All pages should be numbered including Chapter 1 beginning from page 1. Use roman numerals for pages before that as used in this guidelines document.

(9) Any piece of writing should be directed to a specific reader. The readers of your dissertation will be the members of the PEB and any interested future users/modifiers of your system. Thus you are advised to tailor your writing with them in mind.

(10) **Report writing style should be of the passive form**. It is considered very bad style in a formal report to make explicit references to what the candidate himself did as in for example “I decided...”. Scientific papers never use the first person in this way. The passive form as in “it was decided...” is strongly preferred. In the dissertation, the first person could be used judiciously in the introduction and conclusions, but the use of “we” is recommended over “I”. **The use of first person writing should be avoided everywhere else in the dissertation**.

(11) The suggested chapter structure for the dissertation is given in section 5.2.2. If needed, the candidate should carefully decide on suitable sections and sub-sections for each chapter. Section and sub-section headings should be short, meaningful, and similar in tone. **It is not recommended to keep more than two levels of sub-sections**, unless it is absolutely necessary. Note that when a section of text is sub-divided, there should ordinarily be at least two sub-sections (e.g., If there is no Section 1.2, you should never number a section as Section 1.1 as then a reader would look for a non-existent Section 1.2)

(12) The candidate should carefully decide on the paragraphs to be included in each section/subsection. Each paragraph should consist of the development of a single idea through a collection of sentences. It is suggested in writing literature to compare a good paragraph to a train. The engine gives the direction to a train and the cars follow it. The topic sentence of a paragraph can be considered the engine and the other sentences of the paragraph, the cars of the train. The topic sentence should give the “direction” to where the paragraph is going. In other words, it should give the gist of the paragraph and set its tone. As such, it usually occurs at the beginning of the paragraph although it could come in at the middle or at the end. Each sentence in the paragraph should be relevant to the topic sentence. Following is an example [4] of a good paragraph with topic sentence in bold for illustration:

Researchers have also compared decision tables to decision trees. *The pioneers of structured analysis and design thought decision tables were best for portraying*

complex logic while decision trees were better for simpler problems. Others have found decision trees to be better for guiding decision making in practice, but decision tables have the advantage of being more compact than decision trees and easier to manipulate. If more conditions are added to a situation, a decision table can easily accommodate more conditions, actions, and rules. If the table becomes too large, it can easily be divided into sub-tables, without the inconvenience of using flowchart-like tree connections used with decision trees. Creating and maintaining complex decision tables can be made easier with computer support.

(13) Please note that in writing, only the first letter of a proper noun should be capitalized at the middle of a sentence. All the others should be written in lower-case. If you are not sure whether to capitalize or not, use lower-case.

(14) Note also that you should not use shortened word forms in writing. Thus for example, have not should be used instead of haven't, is not instead of isn't, do not instead of don't and so on.

(15) If you have to write numbers below ten in a statement, use words instead of digits. Two correct examples are: We performed seven tests with our new system and there were 20 cases of error.

(16) Plagiarism is the presentation of another person's thoughts or words as though they were candidate's own. The candidate should avoid this when writing his dissertation. All sentences or passages quoted in report from other people's work have to be specially acknowledged by clear cross-referencing to author, work and page(s). Direct quotations from published or unpublished work of others should always be clearly identified as such by being placed inside quotation marks, and full reference to their source should be provided in the proper form. Equally, if another person's ideas or judgements are summarized, the candidate should refer to that person in the main text of the dissertation, and include the work referred to in the references section of the dissertation. Failure to observe these rules may result in an allegation of cheating. All suspected cheating will be reported as examination

offenses. Any illustrations, which are not the work of the candidate can be used only with the explicit permission of the originator and should be specially acknowledged. The project is an important component of the degree and plagiarism in project work is taken very seriously, and when discovered will imply severe penalties and consequences for the culprit's degree and possibly for his entire future career. Such a candidate will fail the project and the degree examination as a whole when plagiarism in project work is discovered. Candidate will not be allowed to repeat the project and other degree components for a specified number of years. Therefore, it is important to give credit where it is due and acknowledge all work borrowed, and emphasize what the candidate's distinct contribution has been in the project.

(17) You may follow the formatting used in this guidelines document as your guide to format your own dissertation.

(18) A suggested schedule that will help you to complete dissertation writing on time is given in Table 5.2.

Academic Year	**Description**
By 13th week	Upload project proposal
By 16th week	Finish writing introduction Chapter
By 21st week	Finish analysis and finish writing analysis chapter
By 26th week	Finish design and finish writing design chapter
By 33rd week	Finish implementation and finish writing implementation chapter
By 35th week	Finish evaluation and finish writing evaluation chapter
By 36th week	Finish writing conclusion chapter
By 38th week	Finish writing appendices and the preface material in the dissertation and handover your completed dissertation to your supervisor for his feedback
By 40th week	Go through your completed dissertation for any errors, improve it if needed and submit a spiral bound copy of the dissertation to the EDC.

Table 5. 2: Recommended work schedule

Note: The references section in the dissertation should be updated as necessary when writing the dissertation.

5.2 Contents

5.2.1 Preface

This is the material that comes before the first chapter. This consists of a title page, declaration page, abstract, acknowledgement page, contents, list of figures, list of tables, and list of acronyms. These pages are numbered using roman numbers.

Title Page

This comprises the title of the dissertation, candidate's name, BIT registration number, index number, the name(s) of the supervisor(s), the date of submission (month and year), and the following statement "This dissertation is submitted in partial fulfilment of the requirement of the Degree of Bachelor of Information Technology of the University of Colombo School of Computing". The title of the dissertation should be clear and should describe the main area of work and will identify the name of the client. Do not include any abbreviations in the title. Refer the sample template for further details.

Declaration

The second page should contain the following signed declaration.

"I certify that this dissertation does not incorporate, without acknowledgement, any material previously submitted for a degree or diploma in any university and to the best of my knowledge and belief, it does not contain any material previously published or written by another person or myself except where due reference is made in the text. I also hereby give consent for my dissertation, if accepted, to be made available for photocopying and for interlibrary loans, and for the title and abstract to be made available to outside organizations.

Signature of Candidate: . . . . . Date:../.../....

Name of Candidate: . . . . . .

Countersigned by:

Signature of Supervisor(s)/Advisor(s): . . . . . Date:../.../....

Name(s) of Supervisor(s)/Advisor(s): . . . . . ."

You may submit a photocopy of this page along with the draft dissertation and use the original for the final submission.

Abstract

The abstract should help a prospective reader decide whether to read the entire dissertation or not. A good abstract could be written using just a few paragraphs. For example, a four paragraph abstract could contain the following. The problem that you have solved can be given as the first paragraph. The second paragraph can elaborate on the first paragraph for example by giving the scope of your project and functionalities of the developed system. The third paragraph can contain the methodologies, technologies, tools, languages and databases that you used in the design and implementation of the solution and the last paragraph can contain the status of your project like for example whether it achieved the anticipated benefits.

Acknowledgements

It is mandatory that a candidate thanks whoever has helped him technically or otherwise, during the project. Your supervisor and your client will obviously be pleased to be acknowledged as they would have invested a quite a lot of time overseeing your progress. Acknowledgements should be brief and to the point and should not exceed one page.

Contents

Contents identify all sections of the dissertation under the given preface, chapter and appendix headings along with their page numbers. It is recommended that sections are numbered up to three levels e.g., 5.2.1. Chapter 1 begins on page 1. Use roman numerals for all previous pages excepting the title page. That is, the numbering should start with the declaration page with page number ii. The overall structure of dissertation content should show a clear progression of logical thought. Choose self-explanatory section and sub-section titles relevant to the topic under consideration.

List of Figures

All figures in the dissertation should be numbered and named using an appropriate caption. Numbering is done using chapter number and a sequence number (e.g. Figure 3.2 for second figure in Chapter 3). Figures in the appendices are numbered using the Appendix letter (e.g. Figure C.2 for second figure in Appendix C). List of figures consists of figure number, captions and page numbers. List can be generated using features of a word processing package. All figures used in the main chapters must be described in text prior to its use and must be referred to using its figure number. For example, in Section 3.5 of this document Figure 3.1 is referred to in text in the paragraph before the figure.

List of Tables

All tables in the dissertation should be numbered and named using an appropriate caption. Numbering is done using chapter number and a sequence number (e.g. Table 3.2 for second table in Chapter 3). Tables in the appendices are numbered using the Appendix letter (e.g. Table C.2 for second table in Appendix C). List of tables consists of table number, captions and page numbers. List can be generated using features of a word processing package. All tables used in the main chapters must be described in text prior to its use and must be referred to using its table number. In section 5.1 of this document Table 5.2 is referred to in text in the paragraph numbered as (18).

List of Acronyms

Provides the meanings of all abbreviations used in the dissertation in alphabetical order. Refer page (ix) for an example.

5.2.2 Main chapters

Chapter 1 – Introduction

This is one of the most important components of the report. The motivation for the project should be argued here. Then a brief introduction to the project should be provided indicating its objectives and scope. Finally, a paragraph containing an outline of the remaining chapters (starting with Chapter 2) is recommended.

Chapter 2 – Analysis

In this chapter, information on the existing system should be provided through a Top-Level Use Case Diagram. **Note**: The candidates can incorporate different types of diagrams to describe the processes and functionalities of the existing system. However they should select only the diagrams that are most appropriate to their project. Also they should also be judicious in picking the right amount of detail that the reader- especially the PEB- will appreciate and relegate any detailed diagrams to the appendix B.

The candidate should **review at least two existing software** that are similar to the proposed system. The review must be comprehensive and up-to-date. It may be appropriate to incorporate criticisms of these systems where needed (and to justify the criticisms). This review will also help you identify the ideas from these software that are useful and can be applied to your project and those that are not. Also note that everything used should be cited by reference to the ``References" section at the end of the dissertation.

An analysis of the requirements should also be provided in this chapter. For example, the requirements of the system could be listed. A specification of the number of users, the frequency of use, and the jobs of the users could be provided. Functional requirements covering system functionality expected by the users and non-functional requirements covering reliability, portability, and response and processing times should be addressed with detailed justification. Description of the prerequisites that must be applied for the system to be used (called success factors) should be given.

Include a section to the end of the analysis chapter to describe the selected methodology. Here candidate can describe the selected methodology such as Rapid Application Development (RAD), Rational Unified Process (RUP), an Agile Process, etc.

Chapter 3 – Design

In this chapter the candidate should consider different competing design strategies (“alternate solutions” as given in dissertation evaluation form –see Table 6.1) for his system. The different strategies may involve the way of development (developing from

scratch, using open-source components, etc.,), the development platform (stand-alone personal computer, client-server environment, etc.,), choice of system software (Windows, Linux, etc.). The candidate should compare how the project requirements are satisfied through each alternative as well as the costs involved in each and select with justification a single design strategy for implementation.

The design of the proposed system should be another major section of this chapter. The structure of the system should be clear to the reader after reading this chapter. There should be evidence of a methodical approach to the design of the system. In this chapter, the candidate should describe the design of the system referring to different types of diagrams/models; for example, if non-object oriented methodology has been selected then include *use case diagrams, use case narratives, activity diagrams, and entity relationship diagrams*, and if object oriented methodology has been selected then include *use case diagrams and use case narratives, class diagrams, sequence diagrams, etc.* **Note: Do not forget to refer all figures and tables in text.**

User interface design is the next major section of this chapter. The candidates should describe the design considerations for designing user interfaces of the system and justify the design decisions that were made. Layouts of relevant interfaces should be included in order to clarify the design decisions taken.

Chapter 4 – Implementation

This chapter should describe the implementation of the system. For example, it should identify and explain all major code and module structures. Include a diagram to depict and describe the interaction between modules of the system. Also, the implementation environment (hardware and software), any existing code that was reused by the candidate, development tools used, and any platform dependence must be discussed. When re-using existing code, the candidate's contribution in the implementation must be closely indicated, and the original authors/sources must be appropriately acknowledged. Appropriate technical documentation may be included as appendices to the dissertation if they are expected to be useful for the reader. Note that a list of selected code will appear in appendix and the code used in this chapter should be presented for the purpose of

explaining the implementation aspects of selected important code. This code should be presented as a code segment that is usually visible within the same page - avoid spanning the code into multiple pages.

Chapter 5 – Evaluation

This chapter should prove that proper testing of system was done. For this purpose, a comprehensive test plan that was used to verify and validate the system should be provided. Evidence should be provided of using a wide range of test data. Evidence should be produced to show that all aspects of the system have been tested and specification has been met. Description of the effects of various kinds of errors and the required system behaviour upon occurrence of an error should be included. The candidate should report the test results in text in a table in this chapter and include detailed actual test results (in screen shots) in an appendix of the dissertation.

The evaluation of your project by potential users (user-acceptance test) from each user-level should also be provided here. Describe how user feedback was collected and with how many users the test was conducted. Include the tools (e.g. questionnaire form) that was used to collect feedbacks and comments and present the summary of test results –the candidate may include a chart to present the results. Any other documents related to client's evaluation of your system (e.g. one or two completed evaluation forms) and the client certification letter indicating the level of achievement of the set objectives and usefulness of the system should be included in the appendix.

Chapter 6 – Conclusion

This chapter will conclude the dissertation with a critical evaluation of the system and suggestions for any future work.

The evaluation should include a critical discussion and assessment of results of project. This chapter should discuss whether the project objectives were satisfied and if not, the reasons for them. Lessons learnt during the course of the project should also be expanded upon. It is important that any failures to achieve given objectives should be discussed and analyzed. This does not mean that the candidate will be penalized. Problems beyond the

control of the candidate (e.g., client requests, obtaining necessary hardware/software) that have affected the progress of the work may be mentioned here. However, avoid labouring these points too strongly, as this may sound too much as if the candidate is seeking excuses for poor results, and may leave the reader with a negative impression of the work. Be positive and upbeat, even if the candidate feels that he has had a tough time.

This chapter should also identify any deficiencies in the final product and highlight how improvements could be made, perhaps by another candidate next year.

References

It is very important to acknowledge any of the work of others that the candidate used or adapted in the project, or that provided the essential background or context to the dissertation. Please note that IEEE is the recommended referencing and citation style for your dissertation. The details of these references are provided in References section of the dissertation. You should include any web links too.

This is how the referencing should be done. In the main body of text, external work may be referred for example in the following ways:

Example 1:

Systems analysis and design techniques are considered essential for developing client/server and web-centric applications [6, 7].

Example 2:

Software testing [8] is an iterative process.

Example 3:

“Plagiarism is an act of fraud. It involves both stealing someone else's work and lying about it afterward” [9].

In the **References** section, each citation should be listed in the relevant format (Refer to an IEEE referencing and citation style guide). For example, the reference section entries for the above two examples would be;

[6] J.L. Whitten and L.D. Bentley, *Systems Analysis and Design Methods*, 7th ed. Tata McGraw-Hill, 2007.

[7] UCSC, *The Virtual Learning Environment for the BIT Students*, 2006. [Online] Available: http://vle.bit.lk , [Accessed: 30 Oct, 2013]

[8] I. Sommerville, *Software Engineering*, 8th ed. Addison-Wesley, 2006.

[9] Plagiarism.org - Best Practices for Ensuring Originality in Written Work, "What is Plagiarism?", 2015. [Online]. Available: http://www.plagiarism.org/plagiarism-101/what-is-plagiarism/. [Accessed: 29- Dec- 2015].

Please note that every item included in the references should be cited within the text of the dissertation. Use a referencing and citation style guide from IEEE. The candidate may refer to IEEE Editorial Style Manual [11].

5.2.3 Appendices

The appendices include further information that is not essential to be included in the main text, but nevertheless could be useful to interested readers. The following appendices should be included in the dissertation:

Appendix A - System Documentation

Technical documentation is included here. These details should guide candidates who wish to continue or use the candidate's project work and allow amendments and extensions to the code. Provide program installation, compilation and execution details. Documentation should point to locations where DLL's and reusable code can be found, if they are publicly available.

Appendix B - Design Documentation

Any design documentation that is not critical to be included in the main text (Chapter 3) but could still be of interest to a reader can be added to the appendices. These could be for example design diagrams (e.g., data flow, entity relationship, database schema and UML) that have not been included in the main text.

Appendix C - User Documentation

May include a through and comprehensive documentation at a level, which is appropriate to the identified users. User documentation may cover all aspects of the system, with appropriate screen shots and explanations. **Failing to include such documents means that the candidate had failed to implement a critical component of his system and it could result in not calling for project evaluation**.

Appendix D - Management Reports

In addition to producing day to day transaction reports (e.g. a payroll system should produce an individual pay sheet, coin analysis to make cash payments, EPF report etc.) a system must produce summarised reports for the management (e.g. monthly, quarterly payments made by organisation, employees, overtime hours by employee, etc.). These reports will be included here. Usefulness of the system will be judged using these reports. **Failing to include such reports means that the candidate had failed to achieve his objectives and it could result in not calling for project evaluation**. Ensure that the reports contain meaningful information which could be obtained through your system using sufficient amount of data.

Appendix E – Test Results

The test plan should be thorough and comprehensive to verify and validate the system. It has to be used to generate a wide range of test data. Test results should be included in a tabulated form. Evidence should be produced to show that all aspects of the system have been tested and specification has been met.

Appendix F - Code Listing

All code should be well structured, readable and should contain appropriate comments. If there is a great deal of code, and including all of it would exceed the page limit, the candidate should include only an overview of his code listing in the dissertation and refer to the CD-ROM. Note that the implementation chapter will consists of code segments

used for explanation as part of the main text, while this appendix will consists of the entire code modules used for the development of the system.

Appendix G - Client Certificate

Client certificate should indicate the suitability of the developed software for the organisation and the level of fulfilment of the software with respect to client's original requirements. It should be printed on an official letterhead signed by at least a sectional head.

5.3 Glossary and Index

This will consist of Glossary of terms and an extensive index. This will appear at the end of the dissertation.

Chapter 6 - Assessment

The project work is assessed based on the progress reports and the interim report submitted to the VLE and the final evaluation. The final evaluation is consisted of three main phases: Phase 1- presentation, demonstration, and viva, Phase 2- code modification test and Phase 3- dissertation evaluation and providing feedback. Through all phases of the project the PEB should be satisfied that the candidate has submitted his own work and the project objectives have been met as well as the outcome has justified the time spent on the project. To pass the project, the candidate must satisfy the PEB in all of the above aspects of the project in the same academic year.

6.1 Evaluation

After the dissertation is submitted, a project evaluation will be held at the UCSC. The importance of this is the demonstration that the work belongs to the candidate except where acknowledgements have been made and that the dissertation merits the award of the degree. **It also assesses the candidate's ability to communicate his ideas and work**. Candidate should be able to convince the PEB that they have undertaken a project that is acceptable at the degree level (e.g., 300 hours of work) and have implemented a substantial software component by him. The evaluation of projects will be done only once during an academic year. The evaluation consists of a Presentation, Demonstration, Viva, Code modification and Dissertation feedback as described below.

6.1.1 Presentation

A presentation of the project should be done in about five minutes. Candidate should bear in mind that the majority of the PEB will not be familiar with the project and thus the presentation should indicate what the project is about, the motivation for the work, and the scope of project. It should be clear, understandable and well structured. And the style and content should be appropriate for an academic audience. Visual material should be of high standard. Contingency arrangements should be made to ensure the availability of presentation material.

6.1.2 Demonstration

Demonstration of the software should be done at the UCSC and should be limited to a maximum of 20 minutes. Candidate should take necessary action to ensure that this part is tested prior to the viva date using the same equipment/environment you intend to use at the evaluation. Candidate is responsible to bring his own equipment and not more than 10 minutes will be given to set up the equipment. The candidate should confidently demonstrate the operations of the system. The candidate should plan so that the demonstration includes the main aspects of the system. The PEB will be judging the quality of your project by what you demonstrate at the UCSC and not by the features that your system supposedly contains but cannot be demonstrated at the UCSC for some reason. Candidate should ensure that all aspects of the systems have been pre tested and all such data should be brought for the demonstration. Typically for example, for database based projects, each database table must have a minimum of 10-15 records. Note that you may also be asked questions during the demonstration.

6.1.3 Viva

The candidate will be asked questions (approximately 10 minutes) based on the presentation and demonstration. Candidate should provide confident and sufficient responses to questions.

6.1.4 Code modification

The candidate will be required to explain any part of the system code and also perform modifications such as changes to the database structures and reflecting them in the program interfaces; reports etc. and demonstrate the changes. Such changes should be demonstrated within a specified time period of 30 minutes duration. Note that the code modification is a very important item in the grading process. Based on the performance of the candidate, the PEB panel will assess your competency in coding and authenticity of the demonstrated code. The candidate is subjected to further evaluations described below, only if he passes this code modification component. If he failed this component, the candidate will receive a FAIL grade for the project and may be reported for plagiarism.

When the project evaluation is done, your work will be evaluated by the PEB and feedback given to you (later through the web site) on the result of your project. You will be given feedback on your submitted dissertation also, to improve it for the final dissertation submission.

6.1.5 Dissertation feedback

At the project dissertation feedback will be given for the originally submitted draft dissertation. The items that we look for in the dissertation are given in Table 6.1. The total mark obtained through the marking scheme (Table 6.2) will be adjusted (reduced) based on the quality of the candidate's dissertation. All areas listed in the table should be addressed to the satisfaction of the examiners.

Preface
Cover page Title page Declaration Abstract Acknowledgement Table of content, Lists of Figures, and Tables List of Acronyms (if applicable)
Introduction
Motivation Objectives Scope
Analysis (see Chapter 2 of section 5.2.2 for more information)
Description of current system using a top-level use case diagram Description and list of functionalities of existing similar solutions with references Functional and non-functional requirements Selected methodology (e.g. RUP,
Design (see Chapter 3 of section 5.2.2 for more information)
Alternate solutions evaluation Selected solution description and justification Relevant design diagrams User interface design
Implementation (see Chapter 4 of section 5.2.2 for more information)
Implementation environment (hardware/software) Code and module structure description, Acknowledgement of any reused existing code
Evaluation (see Chapter 5 of section 5.2.2 for more information)
Test plan Test results User evaluation

Conclusion (see Chapter 6 of section 5.2.2 for more information)
Critical assessment of project Future work
References
Format references (Use IEEE referencing) All references cited in text (Use IEEE in-text citations style)
Appendices
System documentation Design documentation User documentation Management Reports Test Results with evidence of testing Code listing Client Certificate
General
Spelling Grammar Writing All figures and all tables referenced in text Page numbering Adherence to page limit (not more than 110)

Table 6. 1: Dissertation check list

The candidate should carry out the dissertation improvement process until he receives OK to proceed with hard-bound dissertation submission. If a candidate could not improve the dissertation satisfactorily before the deadline, probably, he will not be able to complete the course and as a result he will receive a FAIL grade.

6.2 Marking Scheme

The marking scheme for the project is as shown in Table 6.2.

Description	**Marks (%)**
Final project evaluation	90
Progress report submission	05
Interim report submission	05

Table 6. 2: Project marking scheme

6.2.1 Evaluation

The items that will be checked at the evaluation are given in Table 6.3.

Description
Scope (e.g., work involved, usefulness) Design (entire system) User interface (e.g., look, error messages, validation)

Evidence of testing
Code readability (e.g., comments, indentation)
Quality of presentation
Response to questions
Explaining any part of the system code
Making changes to the system

Table 6. 3: Project evaluation check list

6.2.2 Progress reports

The candidate should get the progress reports signed by the supervisor and submit a scan copy of the reports to the VLE according to the schedule given in Table 4.1. Template for the progress report is given in Appendix G. The progress report submissions will be rewarded with a maximum of 5% marks.

6.2.3 Interim Report

The candidate should submit an interim report to VLE by mid April of the relevant academic year. A maximum of 5% marks will be given to interim report submissions. (Exact date for submission is given in the Table 4.1).

6.3 Grade

A project grade (Pass: A+, A, A-, B+, B, B-, C+, C; Fail: C-, D+, D, D-, E) will be given only to those who submit the dissertation and appear for the evaluation. Submissions of other registered candidates will not be marked and a grade NC would be given for them. Such a grade will not be counted as an attempt.

The candidates who fail two consecutive attempts to do a project or fail code checking test may not be allowed to do the same project again depending on the decision taken by the PEB. If a candidate is informed to do a new project then the candidate should select a new client and do a new project - significantly different from what was done earlier. If a candidate fails but he is allowed to do the same project then he can either continue improving the project software that was already evaluated or do a new project.

Chapter 7 - Pitfalls

Some of the most useful things to know about individual projects are the common pitfalls. Why do some projects go wrong? Here are some of the common causes of failure [10]:

- Choosing/Starting the project too late. Submit your project proposal on time and start the project as soon as you can. The longer you leave it the harder it is to get motivated, especially when all your friends seem to be flying ahead. You should aim to submit all project components as listed under the submission schedule.
- Failing to meet your supervisor regularly. If you arrange a meeting with your supervisor, turn up at the agreed time. You gain no sympathy from anyone if you lose contact with your supervisor and produce a poor project as a result. Your supervisor will be happy to help you but they can do nothing if they are unaware that you are having trouble.
- Failing to plan a fall-back position if the planned work is not completed on time. Try to plan your project in stages so that if things go wrong in a later stage you have an alternative plan to fall back on.
- Trying to satisfy an external customer at the expense of your grades. Do not let any outside interests interfere with your work. The guidance for your project should come from your supervisor, not your prospective employer or client. While it is important to satisfy the client you should remember that the project is evaluated to meet the degree requirements. Sometimes client's expectations may be far beyond or far below a degree level project.
- Over/Under Ambition. Try to be realistic about what you can achieve in the time available. A good project requires a lot of input from you and should prove to be technically challenging throughout. At the same time, however, it is better to do a small job well than failing to do a complex job at all. Your supervisor will advise you on his expectations of the project and this will help you to set your sights accordingly.

References

[1] G.N. Wikramanayake and G.I. Gamage. (2005). *IT6102 Third (Final) Year Project Guidelines*, University of Colombo School of Computing, Sri Lanka. [Online]. Available: http://www.bit.lk/images/stories/information/2004/IT6102guide.pdf [Accessed: Aug 20, 2006].

[2] A. Caldera, et al. (2009). *IT6103 Third (Final) Year Project Guidelines*, University of Colombo School of Computing, Sri Lanka. [Online]. Available: http://www.bit.lk/IT6103/IT6103_Guidelines.pdf [Accessed: Nov 15, 2009].

[3] A. Caldera, et al. (2012). *IT6104 Third (Final) Year Project Guidelines*, University of Colombo School of Computing, Sri Lanka. [Online]. Available: http://bit.cmb.ac.lk/sites/default/files/bit_docs/BIT-%20IT6104-Project%20Guidelines%202012.pdf [Accessed: Nov 10, 2013].

[4] J.A. Hoffer, J.F.George and J.S.Valacich, *Modern System Analysis and Design*, 3rd ed. Pearson Education, 2002.

[5] UCSC, BIT (Bachelor of Information Technology), University of Colombo, Sri Lanka, 2009. Internet: http://www.bit.lk [Accessed: 10 Nov, 2013].

[6] J.L. Whitten and L.D. Bentley, Systems Analysis and Design Methods, 7th ed. Tata McGraw-Hill, 2007.

[7] UCSC, The Virtual Learning Environment for the BIT Students, 2006. [Online] Available: http://vle.bit.lk [Accessed: 30 Oct, 2013].

[8] I. Sommerville, Software Engineering, 8th ed. Addison-Wesley, 2006.

[9] Plagiarism.org - Best Practices for Ensuring Originality in Written Work, "What is Plagiarism?", 2015. [Online]. Available: http://www.plagiarism.org/plagiarism-101/what-is-plagiarism/. [Accessed: 29-Dec- 2015].

[10] Imperial College, Guide to Individual Projects, Imperial College, London, 2009. [Online]. Available: http://www3.imperial.ac.uk/pls/portallive/docs/1/35073696.pdf [Accessed: 20 Nov 2009].

[11] IEEE, “Editing references,” in *IEEE Editorial style manual*, 8th ed., Piscataway, NJ, USA: Transactions/Journals Department, 2014, v.8, pp. 34-40. [Online]. Available: https://www.ieee.org/documents/style_manual.pdf [Accessed: 07 Jan, 2016].

Appendix A- Examples of Project Topics

A comprehensive list of past completed project titles are available in the BIT web site [5].

(i) Student Management System for P&E Institute of Computer Studies
(ii) Hotel Management System for Hotel Janaki.
(iii) Document Management System for Sampath Bank Ltd
(iv) Container Freight Station Management system with On-line inquiry facilities for Sri Lanka Ports Authority, Container Freight Station 1
(v) Inventory & Stock Management System for Sri Lanka Survey Department
(vi) Stock Maintenance, Distribution and Control System for McLarens International Ltd.
(vii) Payroll System for New Order International
(viii) Online Course Evaluation System for the "Theducation " Learning Management System (VLE)
(ix) Online Human Resource Management System for D H Wijewardena Associates
(x) Web Based Vehicle Yard Planning Computer System for Sri Lanka Ports Authority
(xi) Automated Income & Expenditure Classification System for Institute of Technology, University of Moratuwa
(xii) Office Automation System for Advanced Technical Institute – Galle

Appendix B- Project Proposal

Full project proposal is available online on VLE. Here we only identify some of the content in the project proposal.

Project Proposal

Academic Year 2016

Candidate Details

Index No: .....

Name with initials: .....

Contact (telephone) numbers: .....

Email: .....

Client Information

Client/Organization's name: ……

Main contact person's name: ……..

Contact numbers: …….

Client's e-mail: .....

Supervisor Information

Main supervisor's name: ……

Contact number: …….……

Supervisor's e-mail: .....

Project title: ……

.....

.....

Number of Attempts (for Repeat Students Only): ……..

Appendix C- Supervisor/Advisor Agreement Form

Obtain the supervisor/advisor agreement form from the VLE. Here we only identify some of the content in the supervisor/advisor agreement form.

Supervisor/Advisor Agreement Form

Academic Year 2016

I understand that the Final Individual Project is a key component of the Bachelor of Information Technology degree programme of the University of Colombo, and have read the guidelines concerning it given to me by the following student whom I hereby agree to supervise.

……
……

Having understood of the seriousness of this assignment, I hereby agree to adhere to the following.

- To be available for meeting the student on a regular basis (generally **fortnightly**)
- To help the student to scope the project to meet the requirements set out in the guidelines
- To assist the student in resolving any problems encountered in conducting the project
- To monitor the progress of the project and intervene in case of slippage in the time line
- To give constructive feedback to enrich the project experience of the student
- To help the student in the writing up of the dissertation and planning the final evaluation

I understand that the project grade of the student I supervised/advised will be published by the UCSC, and the student's performance will finally be judged by the IT industry.

……
……

Work Experience:

(Tick appropriate)

- ☐ 3 years experience in Software Development
- ☐ 3 years experience in supervising/advising projects at tertiary level
- ☐ 1 year experience as team leader or project manager
- ☐ 5 years experience in implementing IT projects
- ☐ Other – Specify: .....

……
……

I agree to adhere above conditions.

Signature: ..... **Date:** .....

Contact Number: ……..…… **e-mail: …….**

Work place Address: …….

Appendix D- Client Agreement Form

Client Agreement form is attached to the next page.

Client Agreement Form

Name of the organization: ……...

Organization registration no. (Not for government organizations): ……....

Postal address: …….....

……

……

Project title/description: ……

……

……

……

Student's name with initials: ……

BIT registration number: ……

Hereby we agreed to provide necessary information and support to the above student to carry out an information system development project for our organization during this year.

*(A **top-management member** of the organization)*

***Signature:** …….. **Date:** ……

Name: …… **Official Seal:**

Designation: …….

Contact number (Office): …… **Contact number (mobile):** ……..

e-mail address: ……

*(A **top-management member or an employee** of the organization)*

***Signature: …… Date: …….**

Name: …… Official Seal:

Designation: ……

Contact number (Office): …… Contact Number (mobile): ……..……..

e-mail address: ……

Appendix E- Template for the cover page

Prepare the cover page of your dissertation as provided in the following page of this project guideline.

TITLE OF THE DISSERTATION

<CANDIDATE'S INITIALS AND THE LAST NAME>

2016

Appendix F- Template for the title page

Prepare the title page of your dissertation as provided in the following page of this project guideline.

TITLE OF THE DISSERTATION

<CANDIDATE'S INITIALS AND THE LAST NAME>

<BIT registration number>

<Index number>

Name(s) of the supervisor(s):

2016

BIT

UCSC

This dissertation is submitted in partial fulfilment of the requirement of the Degree of Bachelor of Information Technology (external) of the University of Colombo School of Computing

Appendix G- Template for the progress report

Prepare the progress reports as provided in the following page of this project guideline.

The candidates should follow the instructions given below when completing and submitting the progress report.

1. Meet the supervisor at least once in two weeks.
2. Use the project progress report template given on the next page to prepare your progress report.
3. Record all the work you did and the obstacles related to the project work that you encountered after the previous meeting with the supervisor. Record the references of all the project relevant articles, books and papers you could read.
4. At each face-to-face meeting, record the specific details about the meeting itself (date, time, etc.).
5. Ask your supervisor to comment on your progress appropriately.
6. Make plans for the project activities to be done before the next meeting.
7. Finally, sign the report yourself and then get your supervisor’s signature.
8. Duly completed and signed reports should be scanned and uploaded to the project VLE on or before the deadline.

IT6105 - SOFTWARE DEVELOPMENT PROJECT

Progress Report <number>

Project Identification Information

Project title	:
Student's name with initials	:
Index no.	:
Supervisor's name	:

Progress Report Period	
Start Date:	End Date:
Work Carried out between this meeting and previous meeting	

Problems Encountered
Planned work that were unable to carry out with reasons
Work planned until next meeting

Meeting information		
Meeting Date:		
Meeting time	Start:	End:
Number of participants:		

Supervisor's Comments		
Student has done	☐ More than enough ☐ Sufficient ☐ Not Enough ☐ No	work.
Student is progressing	☐ Well ahead ☐ Sufficiently ☐ Not Enough	in the project.
Further Comments (if any)		
Student's Signature		Supervisor's Signature