# IT 411 IT Capstone Project 2

## Requirements in the Preparation of the Final Manuscript

- 1. **Type of paper:** The paper required must conform to the following requirements:
  - Color: White
  - Size: 8 ½ by 11 inches
  - Substance 20 or higher GSM
- 2. Text, tables and figures must be presented in **black ink only**.

## 3. Page Margins

- Left margin 1 ½ inches
- Other sides 1 inch
- 4. All signatures on the **approval page** must be original and signed using inked pen. The document must be signed by the Chairman of the Panel, the panel members, the adviser, and the College Dean.

## 5. Text/Font Styles and Sizes

- Serif type font style is Times New Roman 13.
- Figures and tables font size shall not be smaller than 9 points.

## 6. Spacing, Paragraphing and Indentions

- The general text of the manuscript shall be **double spaced**.
- Single-space should be used in the:
  - o Tables with more than ten (10) rows
  - Bibliographic entries
- Paragraph indentions shall be five (5) spaces or one standard tab.
- Additional indentations on the first line should be done for sub-topics or subsections.

## 7. Page Numbering

- The preliminary pages are numbered in consecutive lower case Roman numerals. (i, ii, iii, ...)
- These should be centered at the bottom.
- The text and all reference pages, including the Appendices, are numbered consecutively in Arabic numbers, beginning with 1 on the first page of the text.
- The title page segregating each chapter and major sections are counted but not numbered.

## 8. Preparation of Tables

- Every table should be given a number and should be cited in the text by that number, either directly or parenthetically.
- In presenting any tables, the introduction in text form should come first before displaying the table followed by the discussion. Avoid using the reference "above" or "below", instead refer to them with the Table number. **Introduce. Display. Discuss**
- Numeration of tables should be chronologically continued through the text or the whole book. Arabic numerals are used. (Table 1, Table 2, Table 3, ...)
- Tables must not be divided or cut into two pages.
- If the table will really not fit on one page, table can continue onto subsequent page/s, and the caption should not be repeated and the top line must read:

  Table 16 (cont'd)
- Use APA table format <a href="https://www.bibliography.com/apa/apa-table-guidelines-made-simple/">https://www.bibliography.com/apa/apa-table-guidelines-made-simple/</a>
- Sample Table

Table 5
Results of the Multiple Regression Analyses by Level of Restriction

Level of restriction	t	p	β	F	df	p	adj. R
No time pressure							
Overall model				9.44	3, 66	.001	.26
Computation latency	-2.16	.034	22				
Computation accuracy	4.94	.001	.51				
Number identification	-0.83	.411	09				
Time pressure							
Overall model				19.72	3, 66	.001	.45
Computation latency	-6.75	.000	63				
Computation accuracy	3.35	.001	.30				
Number identification	1.03	.307	.10				
Model involving entire sample	with experimen	ntal condit	ion Added	as an indep	pendent vari	able	
Overall model				51.73	4, 135	.000	.59
Computation latency	-5.49	.000	30				
Computation accuracy	5.46	.000	.29				
Number identification	-0.78	.432	04				
Experimental condition	-12.57	.000	69				

Note. The dependent variable for all regressions was algebraic inequality accuracy.

#### 10. Preparation of Figures

- Numeration of figures should be chronologically continued throughout the manuscript. Arabic numerals are used. (Figure 1, Figure 2, Figure 3, ...)
- A period follows after the number of the figure.
- Title or caption is set below the figure.

- All figures must be placed immediately after the page where a particular figure number is mentioned.
- All figures must be well explained in the text.
- In presenting any figures, the introduction in text form should come first before displaying the figure followed by the discussion. Avoid using the reference "above" or "below", instead refer to them with the Figure number. **Introduce.**

## **Display. Discuss**

- Figures should be oriented vertically whenever possible.
- Use APA figure format <a href="https://www.bibliography.com/apa/apa-table-guidelines-made-simple/">https://www.bibliography.com/apa/apa-table-guidelines-made-simple/</a>
- Sample Figure

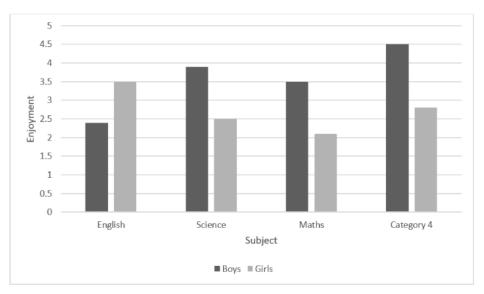


Figure 2. Boys' and girls' self-rated enjoyment of core subjects.

#### 11. Placement of Tables and Figures

- All tables and figures are placed either at the top or bottom portion of the page.
- Tables and figures must first be introduced in textual form before its presentation.
- The page on which the table/figure appears is numbered consecutively with the main text.
- This page number is used in the List of Tables or List of Figures.

### 12. Arrangement of Pages and its Contents

#### **Preliminary Pages**

- a. Blank Sheet. This serves as the flyleaf.
- b. Title Page. See Appendix A
- c. *Approval Sheet*. See Appendix B

- d. Abstract See Appendix C
  - Length approximately 250 words
  - Contains all sections of paper
    - Introduction
    - Methods in pertinent detail
    - Results of testing the main hypothesis and most significant other results only
    - o Discussion of a sentence or two on main implications or conclusion
- e. Acknowledgement. See Appendix D
- f. *Dedication Page*. See Appendix E

\*Use MS Word References - Table of Contents - Captions for the following:

- g. Table of Contents.
- h. List of Tables
- i. List of Figures

### 13. Citation and Referencing

- Use APA 7.0 for citation and referencing
- Recent 5 years for all references including related studies and systems (2017-2022)
  - https://owl.purdue.edu/owl/research\_and\_citation/apa\_style/apa\_formatting\_and\_style\_guide/in\_text\_citations\_author\_authors.
     html
- Use Mendeley Cite
- Mendeley Cite will style all of your citations and bibliography according to the citation style you have selected.
- Your bibliography will automatically reorder and restructure itself
   every time you add an additional citation there's no need to completely
   rebuild it.
  - o https://www.mendeley.com/download-reference-manager/linux

## 13. Use researcher/s, not proponents, not developers

## 14. Web Hosting

- Local host not allowed
- Free web hosting is not allowed
- If client is from BatStateU you may request to ICT office
- For generic projects, games, mobile app with no clients must be uploaded to a digital distribution service like Google Play Store and iOS App Store

#### MAIN BODY OR THE CHAPTERS AND ITS CONTENTS

The main body of the BSIT Capstone Project document is divided into chapters and subtopics or sections.

## Chapter I INTRODUCTION

• The first chapter should describe the importance of the study, the expectation and its impact on the specific areas once it is completed.

#### **Project Context**

- Cite all your references.
- This section will be the general overview of the project.
- It should be able to capture the reader's interest in the first paragraph.
- It should contain a rationale or justification intended to convince target users of your system on how it can be useful or resolve the problem in question by implementing your system/project.
- Discuss the problem background and why you decided to develop your project. What's wrong with the traditional method?
- The necessary knowledge, programming software, API's, hardware, etc used in the development of the project may also be discussed.

## **Purpose and Descriptions**

- This section should provide a concise description of the project being specified and its purpose, including relevant benefits (or beneficiaries). The following are the guide questions in writing this section:
  - What is your main purpose in doing the project?
  - What are the main or general features of the system/software?
  - How will the system/software work?
  - Who is/are your target clients, end user/s or beneficiaries of the project?

## **Objectives of the Study**

- The objectives of the study are the detailed statements or elaboration of the project goal.
- The main objective usually should be in consonance with the title of the project.
- The objectives should state the general and specific objectives and should be consistent with the problem.
- It should also be aligned with the specific functional requirements of your system/software.
- Specific objectives should be written by either beginning with an action verb or an infinitive statement.

• There should be at least one specific objective that is track-oriented.

## **Scope and Limitations of the Study**

This section should include a brief statement of the general purpose of the study, the target user and beneficiaries and the period of the study.

- Discuss here the boundaries of the study and those likely part of the project researcher/s do not intend to accomplish (or what the design of the project inherently will not allow)
- Describe any global limitations or constraints that have a significant impact on the design of the system/software (and describe the associated impact).
- Describe any items or issues that will limit the options available to the researchers. These might include: corporate or regulatory policies; hardware limitations (timing requirements, memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; parallel operations; language requirements; communications protocols; security considerations; design conventions or programming standards
- Limitations that are not readily apparent at the start of the research project may develop or become apparent as the work progresses.

#### **Definition of Terms**

- Cite all your references.
- This section provides definitions for terms used in the proposal that are unusual or not widely understood.
- In addition, common terms that have special meaning in the project should be defined in this section.
- Important terms from the title, statement of the problem or objectives and paradigm should also be defined.
- Define terms operationally or how you use such terms in the project.
- If the term is too "technical" conceptual definition can be used provided that the source/s will be properly cited.
- Definitions should be brief, clear and equivocal (no double meanings)
- A brief introductory statement usually precedes the actual list of definitions, first line indented, and listed in alphabetical order.
- Acronyms should be spelled out fully.
- Must be alphabetical

## Chapter II REVIEW OF RELATED SYSTEMS/STUDIES

The following sections/subtopics included in this chapter are:

- Cite all your references.
- At least 20 related systems, 10 local studies, 20 foreign studies
- Avoid **n.d**. no date
- Avoid using **Unpublished capstone projects/theses** (library)
- Use PUBLISHED RESEARCHES Published journals
  - o IEEE, Science Direct, Hindawi, ACM, Springer

## **Technical Background**

- Cite all your references.
- The technical background should contain an in-depth discussion of the technical aspects or concepts that are important in the development of the project.
- Align to the attainment of the objectives
- The technical aspects **are not limited** to the software programming or tools used, but it is about the concepts and methodology used that contribute to the successful completion of the project.
- Discussions should be elaborated as much as possible in layman's terms.
- However, it should not be too detailed that you end up repeating or lifting practically the discussion from different sources.
- It should not be too shallow or vague that the discussion becomes useless.
- It should contain enough detail to help the readers appreciate its application in the thesis.
- It must be written in narrative form.
- It is important that the section starts with a paragraph that describes what the readers should expect.
- Subheadings are recommended for discussions that are substantially long.
- Topic items should be arranged logically by order of importance or by theme.

#### **Related Studies**

- Cite all your references.
- Related studies are the previous studies relevant to the present research.
- This part is an examination and discussion of the previous and present researches and projects undertaken that gives the researchers a better idea and had motivated them in pursuing the specific field of study.

- It is more than an annotated bibliography or a summary, because you are organizing and presenting your sources in terms of their overall relationship to your study.
- This section shows evidence that you have enough knowledge of the project based on the studies conducted by previous researchers.

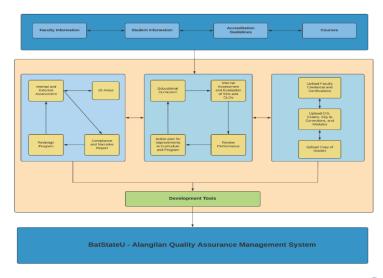
## **Related Systems**

- <u>Cite all your references.</u>
- Related systems are the previous IT projects undertaken which were reviewed by the researchers as guide or basis for the development of their capstone project.
- The researchers should be able to explain how the said projects had helped and what new development will be done for the present project.
- One or both sections can be presented depending on the related previous works that can be reviewed.

# **Conceptual Framework**

- The conceptual framework gives readers a clear mental image of the fundamental organization of the study, the relationships between variables, and other relevant facts.
- The conceptual framework shows and illustrates all of your plans, concepts, or ideas regarding the various aspects of your research both graphically and verbally.

## Sample:



## **Chapter III DESIGN AND METHODOLOGY**

- Chapter 3 shall be based on the development model.
- Each phase must be elaborated and discussed properly.
- Please note that there should be no discussion of any theory or technology in this Chapter.
- Discuss only the processes performed for each phase.
- Technical descriptions/discussions should be in Chapter 2 Technical Background.

## This is an example Software methodology model only



# **Agile Development Model**

# 1. **Requirement Analysis**

- \*Analysis of the existing system
- \*Fish Bone Analysis
- \*System Boundary
- \*Hardware Requirements
- \*Software Requirement
- \*Functional Requirements
- \*Non- Functional Requirements
- \*Standards
- \*Constraints
- \*Trade offs

## 2. DESIGN

- \*System Design/ Architecture
- \*UML Diagrams
- \*Use Case
- \*Sequence diagrams
- \*Database Design
- \*GUI

# 3. Development

- \*Software
- \*Operating system
- \*Web/Mobile platform
- \*Database
- \*Subscriptions
- \*Hardware for development
- \*other technologies used in the development

## 4. Testing

- \* What testing and evaluation process will be done? ISO 9126 or ISO 20510:2011
- \* Testing Procedure
- \* Data Gathering

## 5. Deployment

- \*Deployment Process
- \*Maintenance Plan

# 6. Risk Management Plan

\*Risk Matrix and Guide

## **Chapter IV RESULTS AND DISCUSSIONS**

In presenting this chapter the authors should be able to address:

- Appropriate diagrams, tables, charts and/or screen shots are used in presenting the outcome or results as **response to the objectives**.
- Order of discussion should be based on the chronology of the statement of the problems or objectives.
- However, it is not advisable to state "in toto" the objectives or research questions as the section titles in this chapter.
- Instead, a more **appropriate section title** pertaining to what will be discussed and presented should be used.

## Chapter V SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## • Summary of Findings

- Introductory paragraph on this part may include the synopsis of the problems or research questions or the objectives and synthesized methodology.
- The salient findings for each of the specific problems/objectives should be enumerated.

#### Conclusions

- These are generalized statements from a micro to a macro level based on the answers to each of the specific objectives.
- o This therefore will be also enumerated in consonance with the findings

#### • Recommendations

- o should be based on the findings and conclusions
- o should be feasible, workable, flexible and adaptable in a non-technical language
- o should include suggestions for further studies.

#### **Bibliography**

- This is a list of works cited, as well as works consulted but not cited in the construction of the research or capstone project.
- Use Mendeley Cite
- Mendeley Cite will style all of your citations and bibliography according to the citation style you have selected.
- Your bibliography will automatically reorder and restructure itself every time you add an additional citation there's no need to completely rebuild it.

#### **Appendices**

- An appendix or appendices should be after the Bibliography. Appendices may include the following:
  - Relevant Source Code
  - Evaluation Tool
  - Sample Input / Output / Reports
  - User's Guide
  - Other Relevant Documents
  - Grammarian's Certification
  - Bionote
- A single appendix is labeled "APPENDIX" on the contents page, with or without a title. (if using a title, it should be written as "APPENDIX: TITLE")

## Submission of Paper (Journal) Format

• The College Research Office requires the submission of a one-page research abstract and 8-10 pages of the paper in publishable journal format.

https://www.coep.org.in/page\_assets/491/IEEE\_Template\_4.pdf

## Copies and Distribution of the Final Report of the IT Capstone Project

• One hardbound for the Campus Library

#### **Harbound Requirements:**

 $\frac{https://docs.google.com/document/d/1cZwokRF7UWsoxaIEYNWc5BEFrzof22ScypjaLL-rRSo/edit?usp=sharing}{}$ 

## **Library Requirements:**

 $\frac{https://docs.google.com/document/d/1\_leRdKHksvsCqIJhQbJRChGJTh\_xdoVU1LpV4jt}{38j4/edit?usp=sharing}$ 

#### APPENDIX A

# THE SAMPLE TITLE PAGE FORMAT FOR THE PRELIMINARY PAGES OF IT CAPSTONE PROJECT

A Capstone Project
Presented to the Faculty of
College of Informatics and Computing Sciences
BATANGAS STATE UNIVERSITY
The National Engineering University
Batangas City

In Partial Fulfillment
of the Requirements for the Degree
Bachelor of Science in Information Technology
Major in \_\_\_

Maricel Luisa V. Borbon Jerome A. Perez Manny V. Zulueta

DANICA Z. TENORIO, PhD Adviser

December 2022

# APPENDIX B

# APPROVAL SHEET

	This	capstone	project	entitled	THE	<b>SAMPLE</b>	<b>FORMAT</b>	<b>FOR</b>	THE
PREL	<b>IMIN</b>	ARY PAC	GES OF	IT CAPS	TONE	<b>PROJECT</b>	prepared and	submit	ted by
MARI	ICEL I	LUISA V.	BORBO	N, JERON	<b>ЛЕ А.</b> ]	PEREZ and	MANNY V. Z	ZULUE	TA in
partial	fulfill	ment of the	e requiren	nents for t	he degi	ee Bachelor	of Science in	Inforn	nation
Techn	ology	major in	, has	been exar	mined a	and is recom	mended for a	cceptan	ce and
approv	val for	oral exami	nation.						

ned and is recommended for acceptance and
DANICA Z. TENORIO, PhD Adviser
Examination with a grade of
KAMINERS
NTALBO, Ph.D. person
RYNDEL AMORADO, DIT Member
llment of the requirements for the degree egy major in
PRINCESS MARIE B. MELO, DIT Dean, CICS Page 15   19

#### **APPENDIX C**

#### **ABSTRACT**

**Title:** THE SAMPLE FORMAT FOR THE PRELIMINARY PAGES

OF IT CAPSTONE PROJECT

**Researchers:** Maricel Luisa V. Borbon

Jerome A. Perez Manny V. Zulueta

**Degree :** Bachelor of Science in Information Technology

**Year:** 2022

**Adviser:** DANICA Z. TENORIO, PhD

\_\_\_\_\_

Dormitories give low-cost accommodation to some of the community's most marginalized and underprivileged individuals. It was also a suitable option for those who lived far from their workplace or school and wanted to save time and money while avoiding the stress and inconvenience of commuting. There are various reasons why people choose to live in a boarding house or a dorm, their distance from their job or school, the surroundings they may have at home, the people they need to be with, and other things that may affect their productivity and interest. It's also difficult for tenants because the unfamiliarity with the area might be confusing and stressful when looking for dormitories. On the part of landlords/landlady most boarding houses used manual processes to handle and manage their reservations. The study's main objective is to create

a web and mobile application that can be used to search for dormitories, boarding houses, and apartments in Batangas City, in order to assist tenants in finding them.

The project was developed to help tenants in finding nearby locations, particularly for those who live distant from their school or workplace. Using a map locator, the project can display all of the nearby dormitories. You can also filter the lowest rental available, as well as ratings, so you can analyze their quality and locate a suitable dormitory for you. It can also filter the gender identity, so it can filter the dormitory for male or female. In terms of managing and accepting inquiries or reservations, it adds some functions and features to assist the landlord/landlady in dormitory management and handling reservations so that they can easily manage their dormitories in terms of room availability, offered amenities for the tenants, and the location of the dormitory.

To make the system responsive to the web and smart devices, hybrid coding was used. The database for the application was PostgreSQL. Leaflet is a JavaScript interactive library that the researchers use to create maps. The researchers have made extensive use of JavaScript in both the front-end and back-end of the application. The entire project was created using only one programming language.

The respondents were selected through testing and evaluation. In conclusion, the Dormitory reservation system with map locator is well-liked and well-accepted by the tenants and dormitory owners that offers a better, easier way to promote dormitories, as well as a useful tool for finding nearby dormitories.

## APPENDIX D

#### ACKNOWLEDGEMENT

The researchers extend their deepest gratitude to the following persons who helped them make this research possible.

To their Capstone Professor and adviser, Dr. Princess Marie B. Melo who guided them and gave the best advice that made this research feasible, and her utmost support and encouragement to finish this study.

To their parents who always remind them of the importance of education in one's life and give their undying love and never-ending support.

To their friends and classmates who inspired them to do their best and help them finish every work.

Above all, to our Almighty God, for guidance, blessings, for enough knowledge and strength that made this research possible

#### **APPENDIX E**

#### **DEDICATION**

This piece of work is wholeheartedly dedicated to
Our LORD ALMIGHTY GOD, the
FATHER,
SON and HOLY SPIRIT,
With the Intercession of the
BLESSED VIRGIN MARY and SAINT JOSEPH
To their parents, relative and friends.

(Above is just an example, and the statements/wordings is not a standard-you can create your own, this is the page for you to dedicate to your work to your loved ones, etc.)

LZR MPM MAC