

**<RESEARCH PROJECT TITLE>**

**A Reaseach Project**

**Presented to the Faculty of the College of Computing Studies**

**Norzagaray College, Norzagaray, Bulacan**

**In Partial Fulfilment of the Requirements for the Degree  
Bachelor of Science in Computer Science**

**<Researcher's Given Name MI. Family Name>  
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**<Date of Proposal Defense>**

## APPROVAL SHEET

This Research project titled: <Research Title> prepared and submitted by <Researcher's Given Name MI. Family Name>, <Researcher's Given Name MI. Family Name>, <Researcher's Given Name MI. Family Name>, and <Researcher's Given Name MI. Family Name>, in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science, has been examined and is recommended for acceptance and approval.

**<Research Project Adviser's Given Name MI. Family Name>**  
Reasearch Project Adviser

Accepted and approved by the Research Project Review Panel  
in partial fulfillment of the requirements for the degree of  
Bachelor of Science in Computer Science

<Panelists' Given Name MI. Family Name>	<Panelists' Given Name MI. Family Name>
<b>Panel Member</b>	<b>Panel Member</b>

<Panelists' Given Name MI. Family Name>  
**Lead Panelist**

**<Date of Proposal Defense>**

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## INTRODUCTION

### Background of the Problem

This part should be at least two pages of presentation and discussions. This should introduce the presentation of the problem, that is, what the problem is all about. The proponent should describe the existing and prevailing problem situation based on his/her experience. This scope may be global, national, or regional. The project context gives a strong justification for choosing such a research problem based on his/her capacity. Finally, in the project context, provide a statement that shows the relationship between the rationale of the study and the proposed research problem.

In the succeeding paragraphs, there should be no indentations, paragraphs are justified with left alignment. Delete this highlighted section and replace it with your project context.

### Setting of the Study

This should be written using general language and non-technical terms. The "Setting of the Study" in a thesis refers to the context in which the research is conducted. It describes the physical, geographical, and/or social environment where the study takes place. This section is important because it helps readers understand the backdrop of the research, including where, when, and how the study was carried out, as well as the specific conditions under which data was collected

In the succeeding paragraphs, there should be no indentations, paragraphs are justified with left alignment. Delete this highlighted section and replace it with your

purpose and description of the project.

### **Statement of the Problem**

The problem should be such in which researcher may be deeply interested.

The problem should be related to the chain of thinking because the stray problem can mislead the whole research project.

The problem selected should not necessarily be a new one. It might be old problems or one which work has already been done.

The problem should be within meaningful limits i.e. it should not be too comprehensive.

### **Objectives of the Study**

The objectives of the study guide the researcher and the reader to know what the proponent needs to do. These usually follow the chronological sequence of the statement of the problem and its specific questions.

Objectives are written by either beginning with a verb or an infinitive.

The importance of the capstone project must contain explanations or discussions of any or all of the following:

- The rationale, timeliness, and relevance of the study;
- Possible solutions to existing problems or improvements to unsatisfactory conditions;

- The beneficiaries and how they are going to be benefited;
- Possible contribution to the fund of knowledge (if any); and
- Possible implications

Delete this highlighted section and replace it with your objectives.

### **Significance of the Study**

The introduction section within the significance of the study should include you writing the problem statement and explaining to the reader where the gap in literature is.

Then think about the significance of your research and thesis study from two perspectives: (1) what is the general contribution of your research on your field and (2) what specific contribution have you made to the knowledge and who does this benefit the most.

Delete this highlighted section and replace it with your Significance of the Study.

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

This part should include a brief statement of the general purpose of the study, the target users/beneficiaries of the study, the period of the study, and the features of the proposed software.

The limitation of the study includes the weaknesses of the study beyond the control of the researcher.

Delete this highlighted section and replace it with the scope and limitations of your study.

## **Definition of Terms (20)**

### **Theoretical And Conceptual Framework**

The theoretical framework presents the theory from which the research problem was derived (in the case of some experimental studies), or to which it is linked (in the case of some survey studies). In formulating the theoretical framework for the study, you may look at the various theories upon which you can base your study. In other words, this is a discussion of the theory which serves as the basis for the study. The conceptual framework, on the other hand, presents the relationship between the specific concepts that may be studied. The concepts used at this level should be derived from the concepts used in the theoretical framework.

In the succeeding paragraphs, there should be no indentations, paragraphs are justified with left alignment. Delete this highlighted section and replace it with your own Theoretical And Conceptual Framework

The most common framework used in studies is the Input- Process- Output (IPO) model. It analyze the performance and processing system that assumes raw materials (inputs) are transformed by internal system (process) to generate results (output).



## REVIEW OF RELATED LITERATURE/SYSTEMS

### Review of Related Literature

A literature review aims to show the reader what the researchers have read and had a good grasp of the main published work concerning a particular topic or question in the particular field. This work may be in any format, including online sources.

It is very important to note that the review should not be simply a description of what others have published in the form of a set of summaries but should take the form of a critical discussion, showing insight and an awareness of differing arguments, theories, and approaches. It should be a synthesis Project and analysis of the relevant published work, linked at all times to your own purpose and rationale.

Literature reviews should comprise the following elements:

- An overview of the subject, issue, or theory under consideration, along with the objectives of the literature review;
- Division of works under review into categories (e.g., those in support of a particular position, those against, and those offering alternative theses entirely);
- Explanation of how each work is similar to and how it varies from the others; and
- Conclusions as to which pieces are best considered in their argument are

most convincing of their opinions and make the greatest contribution to the understanding and development of their area of research.

In the succeeding paragraphs, there should be no indentations, paragraphs are justified with left alignment. Delete this highlighted section and replace it with your own review of related literature.

### **Related Studies and/or Systems**

Published as well as unpublished research studies are sources of materials that may be included in this section. The research studies may also be identified as foreign or local.

Existing systems that are closely related to the research/design are considered in this section and may be identified as foreign or local.

Common Guidelines in Citing Related Literature and Studies:

- The materials must be as recent as possible.
- The materials must be as objective and unbiased as possible.
- The materials must be relevant to the study.
- The materials must not be too few or too many.
- After reading, the readers should gain an adequate understanding of the technical topic(s) involved in the capstone project.

Delete this highlighted section and replace it with your own review of related literature.

## **Benchmarking**

Benchmarking refers to the process of comparing your research, findings, or methodologies against existing standards, best practices, or previous research in your field. It involves identifying and evaluating key aspects of similar studies, theories, methodologies, or outcomes to assess the quality, relevance, and originality of your own work. Benchmarking helps to position your research in the broader context of existing literature and highlights areas where your work contributes new insights or improvements.

## **Synthesis**

This contains the conclusive summary of the Review of related literature/studies. In case that the proposed project is a continuation of a previous work, this section should give emphasis or justification why the proposed project is needed.

In the succeeding paragraphs, there should be no indentations, paragraphs are justified with left alignment. Delete this highlighted section and replace it with your own synthesis.

## **DESIGN AND METHODOLOGY**

## **Research Methodology**

## **Requirement Analysis**

## **Requirements Documentation**

## **Hardware and Software Components**

## **Operating Procedure**

## *Functional Specification*

## *Non-Functional Requirements*

## **Development and Testing and Evaluation Plan**

## *Data Analysis Plan*

## **Organizational Chart**

## **Project Member's Role and Responsibilities**

## **Calendar of Activities**

This should contain the detailed sequence of activities that the proponents will undergo in completing the project. This should discuss the activities, purpose, or

objectives of each activity, persons involved and the resources needed in chronological order of execution. In the succeeding paragraphs, there should be no indentations, paragraphs are justified with left alignment. Delete this highlighted section and replace it with your activities.

Have a Gantt chart of activities to summarize your activities. Use the chart provided. This should contain a chart that specifies when each of the activities listed is expected to start and end. The time unit should be in terms of weeks and not actual dates. Fill in the provided Gantt chart by encoding the activities that your group will do. Use blue and yellow alternately in highlighting the duration or period of the activity. Use this introductory paragraph:

The Gantt chart presents the summary of activities. Listed are the activities and opposite them are their duration or periods of execution.

## **Project Development Cost Estimation**

### Gantt Chart of Activities

[illegible]

## **Resources**

- **Hardware**

This should list the specific hardware resources that the proponents expect to need in completing the project.

- **Software**

This should list the specific software resources that the proponents expect to need in completing the project.

## **Appendix**

The following pages contain the references, resource person(s), and curriculum vitae of the researchers. Resource persons are those who contributed to the development of your research.



## REFERENCES

The reference list provides the information necessary for a reader to locate and retrieve any sources cited in the body of the paper. Each source you cite in the paper must appear in your reference list; likewise, each entry in the reference list must be cited in your text. Your references should begin on a new page separate from the text of the manuscript; label this page REFERENCES centered at the top of the page (bold, but do not underline or use quotation marks). All text should be double-spaced just like the rest of the text.

### Basic Rules

- All lines after the first line of each entry in your reference list should be indented one-half inch from the left margin. This is called hanging indentation.

- Authors' names are inverted (last name first); give the last name and initials for all authors of a particular work unless the work has more than six authors. If the work has more than six authors, list the first six authors and then use et al. after the sixth author's name to indicate the rest of the authors.

- Reference list entries should be alphabetized by the last name of the first author of each work.

- If you have more than one article by the same author, single-author references or multiple-author references with the exact same authors in the exact same order are listed in order by the year of publication, starting with the earliest.

- When referring to any work that is NOT a journal, such as a book, article, or Web page, capitalize only the first letter of the first word of a title and subtitle, the first word after a colon or a dash in the title, and proper nouns. Do not capitalize the first letter of the second word in a hyphenated compound word.

- Capitalize all major words in journal titles.

- Italicize titles of longer works such as books and journals.

- Do not italicize, underline, or put quotes around the titles of shorter works such as journal articles or essays in edited collections.

The following rules for handling works by a single author or multiple authors apply to all references in your reference list, regardless of the type of work (book, article, electronic resource, etc.)

Single Author: Last name first, followed by author initials.

Example:

Berndt, T. J. (2002). Friendship quality and social development. *Current Directions in Psychological Science*, 11, 7-10

Two Authors: List by their last names and initials. Use the ampersand (&) instead of "and."

Example:

Wegener, D. T., & Petty, R. E. (1994). Mood management across affective states: The hedonic contingency hypothesis. *Journal of Personality & Social Psychology*, 66, 1034-1048.

Three to Six Authors: List by last names and initials; commas separate author names, while the last author name is preceded again by ampersand.

Example:

Kernis, M. H., Cornell, D. P., Sun, C. R., Berry, A., & Harlow, T. (1993). There's more to self-esteem than whether it is high or low: The importance of stability of self-esteem. *Journal of Personality and Social Psychology*, 65, 1190-1204.

More Than Six Authors: If there are more than six authors, list the first six as above and then "et al.," which stands for "and others." Remember not to place a period after "et" in "et al."

Example:

Harris, M., Karper, E., Stacks, G., Hoffman, D., DeNiro, R., Cruz, P., et al. (2001). Writing labs and the Hollywood connection. *Journal of Film and Writing*, 44(3), 213-245.  
Organization as Author: Name of Organization. (year)

Example:

American Psychological Association. (2003).

Unknown Author:

Example:

Merriam-Webster's collegiate dictionary (10th ed.).(1993). Springfield, MA: Merriam-Webster.

NOTE: When your essay includes parenthetical citations of sources with no author named, use a shortened version of the source's title instead of an author's name. Use quotation marks and italics as appropriate. For example, parenthetical citations of the two sources above would appear as follows: (Merriam-Webster's, 1993) and ("New Drug," 1993).

Two or More Works by the Same Author: Use the author's name for all entries and list the entries by the year (earliest comes first).

Example:

Berndt, T.J. (1981).; Berndt, T.J. (1999).

When an author appears both as a sole author and, in another citation, as the first author of a group, list the one-author entries first.

Example:

Berndt, T. J. (1999). Friends' influence on students' adjustment to school. *Educational Psychologist*, 34, 15-28. Berndt, T. J., & Keefe, K. (1995). Friends' influence on adolescents' adjustment to school. *Child Development*, 66, 1312-1329.

References that have the same first author and different second and/or third authors are arranged alphabetically by the last name of the second author, or the last name of the third if the first and second authors are the same.

Example:

Wegener, D. T., Kerr, N. L., Fleming, M. A., & Petty, R. E. (2000). Flexible corrections of juror judgments: Implications for jury instructions. *Psychology, Public Policy, & Law*, 6, 629-654.

Wegener, D. T., Petty, R. E., & Klein, D. J. (1994). Effects of mood on high elaboration attitude change: The mediating role of likelihood judgments. *European Journal of Social Psychology*, 24, 25-43.

Two or More Works by the Same Author in the Same Year: If you are using more than one reference by the same author (or the same group of authors listed in the same order) published in the same year, organize them in the reference list alphabetically by the title of the article or chapter. Then assign letter suffixes to the year. Refer to these sources in your essay as they appear in your reference list, e.g.: "Berndt (1981a) makes similar claims..."

Example:

Berndt, T. J. (1981a). Age changes and changes over time in prosocial intentions and behavior between friends. *Developmental Psychology*, 17, 408-416.

Berndt, T. J. (1981b). Effects of friendship on prosocial intentions and behavior. *Child Development*, 52, 636-643.

Article in Journal Paginated by Volume: Journals that are paginated by volume begin with page one in issue one, and continue numbering issue two where issue one ended, etc.

Example:

Harlow, H. F. (1983). Fundamentals for preparing psychology journal articles. *Journal of Comparative and Physiological Psychology*, 55, 893-896.

Article in Journal Paginated by Issue: Journals paginated by issue begin with page one every issue; therefore, the issue number gets indicated in parentheses after the volume. The parentheses and issue number are not italicized or underlined.

Example:

Scruton, R. (1996). The eclipse of listening. *The New Criterion*, 15(30), 5-13.

Article in a Magazine

Example:

Henry, W. A., III. (1990, April 9). Making the grade in today's schools. *Time*, 135, 28-31.

Article in a Newspaper: Unlike other periodicals, p. or pp. precedes page numbers for a newspaper reference in APA style. Single pages take p., e.g., p. B2; multiple pages take pp., e.g., pp. B2, B4 or pp. C1, C3-C4.

Example:

Schultz, S. (2005, December 28). Calls made to strengthen state energy policies. *The Country Today*, pp. 1A, 2A.

Note: Because of issues with HTML coding, the listings below using brackets contain spaces that are not to be used with your listings. Use a space as normal before the brackets, but do not include a space following the bracket.

### A Translation

#### Example:

Laplace, P. S. (1951). A philosophical essay on probabilities. (F. W. Truscott & F. L. Emory, Trans.). New York: Dover. (Original work published 1814).

Note: When you cite a republished work, like the one above, work in your text, it should appear with both dates: Laplace (1814/1951).

### Edition Other Than the First

#### Example:

Helfer, M. E., Keme, R. S., & Drugman, R. D. (1997). The battered child (5th ed.). Chicago: University of Chicago Press.

Article or Chapter in an Edited Book: When you list the pages of the chapter or essay in parentheses after the book title, use "pp." before the numbers: (pp. 1-21). This abbreviation, however, does not appear before the page numbers in periodical references, except for newspapers.

#### Example:

O'Neil, J. M., & Egan, J. (1992). Men's and women's gender role journeys: Metaphor for healing, transition, and transformation. In B. R. Wainrib (Ed.), Gender issues across the life cycle (pp. 107-123). New York: Springer.

### Government Document

#### Example:

National Institute of Mental Health. (1990). Clinical training in serious mental illness (DHHS Publication No. ADM 90-1679). Washington, DC: U.S. Government Printing Office.

### Report From a Private Organization

#### Example:

American Psychiatric Association. (2000). Practice guidelines for the treatment of patients with eating disorders (2nd ed.). Washington, D.C.: Author.

## Conference Proceedings

### Example:

Schnase, J.L., & Cunnius, E.L. (Eds.). (1995). Proceedings from CSCL '95: The First International Conference on Computer Support for Collaborative Learning. Mahwah, NJ: Erlbaum.

Electronic Sources- Article From an Online Periodical: Online articles follow the same guidelines for printed articles. Include all information the online host makes available, including an issue number in parentheses.

### Example:

Bernstein, M. (2002). 10 tips on writing the living Web. A List Apart: For People Who Make Websites, 149. Retrieved from <http://www.alistapart.com/articles/writeliving>

## Newspaper Article

### Example:

Parker-Pope, T. (2008, May 6). Psychiatry handbook linked to drug industry. The New York Times. Retrieved from <http://www.nytimes.com>

Online Lecture Notes and Presentation Slides: When citing online lecture notes, be sure to provide the file format in brackets after the lecture title (e.g. PowerPoint slides, Word document).

### Example:

Roberts, K. F. (1998). Federal regulations of chemicals in the environment [PowerPoint slides]. Retrieved from <http://siri.uvm.edu/ppt/40hrenv/index.html>

Curriculum Vitae of  
<GIVEN NAME MI. FAMILY NAME>  
<complete address>  
<email address>  
contact number either cellular phone or landline or both

EDUCATIONAL BACKGROUND

Level	Inclusive Dates	Name of school/ Institution
Tertiary	month year	
Vocational/Technical	month year	
High School	month year	
Elementary	month year	

PROFESSIONAL OR VOLUNTEER EXPERIENCE

Inclusive Dates	Nature of Experience/ Job Title	Name and Address of Company or Organization
month year		
month year		
month year		
month year		

Listed in reverse chronological order (most recent first).

AFFILIATIONS

Inclusive Dates	Name of Organization	Position
month year		
month year		
month year		
month year		

Listed in reverse chronological order (most recent first).

SKILLS

SKILLS	Level of Competency	Date Acquired
		month year
		month year
		month year

TRAININGS, SEMINARS, OR WORKSHOPS ATTENDED

Inclusive Dates	Title of Training, Seminar, or Workshop
month year	
month year	
month year	
month year	

Listed in reverse chronological order (most recent first).