Project Guidelines for CS Students

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Getting Started

A group of two to four students works under supervision on a chosen topic. The main purpose of the project is to expose the student to a large problem whose solution involves both teamwork and organized thought. The project course gives students a chance to become familiar with a part of Computer Science that they find interesting and the opportunity to gain industry standard experience.

There are three steps involved in getting started on a project:

1. The first step is to form a group of two to four students with broadly similar interests. As you will be working with your team member for two terms, select people you can get along with.

2. Each group then looks for a topic in its area of interest. You may consult the list of project proposals, available on web site, contact any professor of our department, and contact any external company to find an external supervisor, or come with your own ideas and look for a supervisor.

A new project may continue an older topic, or repeat it again with significant improvements. A supervisor should help you with the final choice of a project topic. Many projects arise in an application area and these usually come from discussions between a group and a faculty or a staff member of another department.

3. Now that you have a topic and a supervisor you must complete a Record of Proposed Project Form (i.e. Project log report).

The Supervisor's Role

The supervisor plays four roles

1. Role of a manager. You should set up a schedule for your project in consultation with your supervisor and establish a number of milestones. Any problems with timing should be immediately discussed with your supervisor.

2. Your supervisor should also be viewed as the **consumer** of the system produced by the project. Any major changes or decisions in the project should be discussed with your supervisor.

3. Role of a **consultant**. Students should feel free to approach their supervisor with any problems they are having with their project. Your supervisor need not and indeed, may not solve the problem, but might suggest a new approach to its solution.

4. Finally, when the project is complete, the supervisor participates in its evaluation. You are responsible for completing your project, not your supervisor. ***Supervisors volunteer their time to help you, so treat them with respect.***

The Project write up

The suggested format for a project write-up is outlined below.

- Title-page is not numbered.
- Abstract of one page should summarize the main points of your work. This page is to be numbered **ii**.
- Table of Contents, Diagrams, and Tables contains this material should be numbered starting **iii**.

- **Chapter 1.** The page numbering starts at Page 1. The chapter should give the analysis of the project, i.e. the reason why the problem arose in the first place (motivation), what are the issues involved and the setting of the problem (environment).

- **Chapter 2**. Include literature review which shows that you have an in-depth grasp of your subject and that you understand where your own research fits into and adds to an existing body of agreed knowledge.

  - It **surveys** the literature in your chosen area of study
  - It **synthesizes** the information in that literature into a summary
  - It **critically analyses** the information gathered by identifying gaps in current knowledge; by showing limitations of theories and points of view; and by formulating areas for further research and reviewing areas of controversy
  - It **presents** the literature in an organized way

- **Chapter 3** discusses the implementation of the algorithms used in the project. Only high-level descriptions are needed. If it turns out to be necessary to introduce details, then a top-down approach should be used in the exposition that gives the reader an understanding of their significance and motivates interest. More detailed specifications should be relegated to Appendix. (project methodology)

  - It should provide an expanded version of how the project was tackled and a description of what was done to solve the problems arising in the project

- **Chapter 4.** This verification chapter analyses and summaries the results obtained. Concluding remarks should clearly state what goals were met, where compromises had to

be made, and what was left out of the proposals made at the time the Project Proposal was submitted. Finally, suggestions for future work and improvements that could be made in the project are also important.

- **Bibliography** contains a list of articles, reports, theses, and books consulted during the project work. The titles of books should be in italics. Titles of magazine or journal articles should not be italicized, but should be placed in double quotation marks.

Style and Format

The format of your thesis should look like as follows:

- Title page
- Acknowledgement
- Abstract
- Table of contents
- List of figures
- List of tables
- List of Abbreviation
- Chapter1: Introduction
- Chapter2: Literature Review
- Chapter3: Methodology (Method)
- Chapter4: Results and conclusions
- Appendix 1
- Appendix 2
- Bibliography (for the References , follow IIIE Reference format)

Font

- Any legible font is acceptable (Times New Roma is preferred); however, script, italics, or ornamental fonts should not be used. The same fonts must be used throughout except for appendix material or legends or charts.
- A font size of 12 is preferred. Smaller fonts (8-10) may be used for tables and graphs when necessary.
- The same font and font size you use for your text should be used for all page numbers.

Page Numbering

Page numbers should be centered, one inch from the bottom of each page.

Spacing

- All of the pages in the report must be double spaced with the following exceptions:
- Titles longer than one line in the Table of Contents, List of Figures, List of Tables, and in the texts are single spaced.
- Subheadings within the texts are single spaced if longer than one line in length.
- Block quotation may be single or double spaced.

Margins

Throughout the text the following margins should be used:

- $1" - 1^{1/2}"$ margin on the left side of the page to allow for binding.
- 1" margin on the top of the page – except for the first page of each new chapter, which needs to have a 2" top margin.
- 1" bottom margin and right margin.
- These margins apply to all parts of the document.

Chapter heading

- The chapter heading and title are all capital letters and centered on the page.
- Single space chapter if they are longer than one line.
- Subheadings should be mixed case and maintain a consistent position and style throughout the report.

Figures

- Each figure must be numbered and have a description or caption.
- Figures should appear as close as possible to the part of the text relating to them.
- Figures are numbered consecutively in the order in which they are first mentioned in the text.
- Place the figure number and description below the figure.
- If the figure is too large for the space on the page, use horizontal (landscape) printing. Place the top of the figure along the left margin.

Tables

- A consistent format should be used for all tables in the document.
- Tables are numbered consecutively in the order in which they are mentioned in the text.
- Place table numbers and title at the top of the table.
- Use the same font on the tables as was used in the text.
- If the table is too wide for the margins. The table can be oriented horizontally (landscape) on the page.

Title Page

- A 2" top margin is required.1
- A 1 ½" left margin is required to allow for binding.
- All of the text on the page is centered.
- This page is counted, but not numbered.
- Single space two or more-line titles.
- Title is in all capital letters.
- Your name may be listed either using your middle name or your middle initial (E.g., Ram Bahadur Thapa or Ram B. Thapa).

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