1. INTRODUCTION

1.1 Introduction

Introduction to your project and your project background as a whole but in brief.

1.2 Problem statement(s)

- Description of problems that directly influence the motives of the project. (Example, explanation of problems of ABC & Co. record keeping)
- Applicable for project improving or solving a specific case.
- Project that is of new creation, re-creation, individual initiative or not specifically involves any case to deal with, the problems can be included in the preamble paragraphs.

1.3 Objective

- Can be in point form format (use bullets) together with a brief explanation.
- Maps the objectives with the problems stated in the previous section.

1.4 Scope

- Describes every scope involved in your project and give reason(s) for the involvement. Examples: (e.g children education), specific users (e.g children between 5 and 8), other specific entities, specific platform (e.g network, OS) etc.
- Can be in point form format (use bullets) together with a brief explanation.

1.5 Project Significance

- Describes who/what may benefits from the project and how? You can infer it back to your objectives (if applicable).

1.6 Expected Output

- Describes what do you expected from your project.

1.7 Conclusion

- Give a summary of this chapter and next activities to be developed.

2. LITERATURE REVIEW

2.1 Introduction

- Preview to the literature review.

2.2 Facts and findings (based on topic)

2.2.1 Domain

- Identify domain related with your project with explanations.

2.2.2 Existing System

- Identify domain related with your project with explanations.
- Discuss and state your approach and related or past research, references, case study and other finding that relate to your project title. Examples: readings 1 and 3, experiments you get 3 and 4, case study 5 and 6 etc.
- Tagged the source if you refer the approach from published materials.
- Support the approach with statements (from published materials) to justify you fact findings are sound.
- Identify hardware and software used.

2.2.3 Technique

- State other approaches than what you use, that you think also applicable and related and give reason to justify why not.

3. PROJECT METHODOLOGY

3.1 Project Methodology

- Describe the selected approach or methodology used in your project (Examples: SSADM/SDLC/OOAD, Instructional design, Database life cycle and relevant methodology).
- Describe the activities that you may do in every stage and relate with your project.
- Include statements (from published materials) that support the approach you apply.

3.2 Project Requirements

3.2.1 Software Requirement

- List software requirements in point form. Examples: MS Visual Basic Professional v.6.x, Apache Tomcat and the related for developing application software, MS Project 2000 for project management etc.

3.2.2 Hardware Requirement

- List hardware requirements in point form. Examples: PCs, server, devices and storage.

3.2.3 Other Requirements

- State other requirements to be used in your project such as you need special lab for project development, photo copy facility, discussion room and etc.

3.3 Project Schedule and Milestones

- Explain your actions plan prior to the end of the project. Apply from what you have learnt from project management.
- List and describe stage by stage of your activities in form of a table. For example:

Milestones	Expected Documents	Dates
1. Problems identification and analysis	1. Flow chart of the current system, 2. Flow chart of the proposed system, 3. DFD of the proposed system, 4. Requirement of the proposed system (Functional, non-functional and devices)	3-Oct-2016
2. Conceptual design of the proposed system	1. A complete ERD	10-Oct-2016
…	…	…

- Attach your project time line or Gantt chart (in 1 page view) illustrating the milestones and the project tasks identified above.

3.4 Conclusion

- Summarize the chapter and explain the next activities to be developed.

4. SYSTEM ANALYSIS AND DESIGN

4.1 Introduction

- Preview to the analysis phase and how it would be developed. Defines the results of the analysis of the preliminary design and the result of the detailed design.

4.2 Problem Analysis

- Investigate and describe current system scenario/situation. Reiterate the data flow diagram or activity diagram from your reference(s), showing how the current system(s) or business(s) runs.
- Use appropriate diagram to visualize the system flow such as sequence diagram (if use OOAD with UML) and DFD (if use SSADM).
- For simulation based project, analyse the real graph given by company.
- Explain in detail the problems statement as mentioned in Chapter 1.

4.3 Requirement analysis

4.3.1 Data Requirement

- What data should the system input and output, and what data should the system store internally.
- It can be illustrated by using Data Model or Data Dictionary.

4.3.2 Functional Requirement (Process Model)

- Specify the functions of the system, how it records, compute, transforms, and transmits data.
- It can be illustrated by using DFD, Context diagram or Use case.

4.3.3 Non-functional Requirement

- Specify how well the system performs its intended functions. *E.g. Quality requirement, Performance-how many computer resources should it use, how accurate should the result be, how much data should it be able to store?*

4.3.4 Other Requirement

- Describe each of software, hardware and requirements that will be used (justification of usage).

4.4 High-Level Design

- Describe high-level view of your system's structure or system's interior.

4.4.1 System Architecture

- Define architecture view of your system. The architecture view can be presented in layer, framework, tier or patent (for OOAD).
- Describe the static view and dynamic view of your application (for OOAD - use interaction diagram, high-level class diagram).
- For those use SSADM: use any appropriate diagram to view your system.

4.4.2 User Interface Design

- Refine your user interface design.

(i) Input Design

- Define and refine the screens (e.g. types of inputs such as text, numbers, selection box etc.) used to enter information, as well as any forms on which users write or type information.
- Define and refine validation rule for each of input field.

(ii) Output Design

- Define and refine the types of outputs including detail reports, summary reports, turnaround documents and graphs. Classify your output in term of periodically or adhoc basis. For example daily, monthly, yearly etc.

4.4.3 Database Design

a) Conceptual Database Design
   - Introduce briefly to the logical data model (LDM) or entity relationship diagram (ERD) and what they have to do with your database design.
   - State clearly in the diagrams participation constraints and the relationship cardinality using suitable notations.
   - Define, refine and construct the entity relationship (ER) diagrams in details with explanation in text on what basis (business rules) you apply for every entity relationship you have defined in the diagram.

b) Logical Database Design
   - Data dictionary and normalization

4.5 Detailed Design

- Specification and diagrams may be further elaborated. Emphasis should be on the logic of the design and the approach to satisfying the requirements - How will the system function?

4.5.1 Software Design

- For those use SSADM/SDLC: Describe in detail of every functions according to your DFD in format of program specification. The program specification includes information of program description, file input/output, pseudo code and attach sample screens.
- For those use OOAD/UML: Describe in detail of every classes. Examples: class name, responsibility, attributes methods/operations. Describe every methods/operations such as its responsibility, input/output parameter, pre/post condition and algorithm {should be bias to language chosen for your software development (e.g. in English like of Java code).

4.5.2 Physical Database Design

- Translate logical to target DBMS (use DDL/DCL) - base tables, design for other business rules (constraint- validation for fields, records), file organization and indexes.

4.6 Conclusion

- Summarize the chapter and explain the next activities to be developed.

5 CONCLUSION

5.1 Observation on Weaknesses and Strengths

- State the weaknesses and strength of your project.
- You also may state other's responses regarding project topics.

5.2 Propositions for Improvement

- Present your suggestions on how your system can be improved better.
- Elaborate each of your suggestions in paragraph.

5.3 Project Contribution

- State your project contribution to the college/faculty/company/individual.
- State where to find the user manual - e.g. Appendix XX

5.4 Conclusion

- State whether you think your project meets your set objectives conclusively.
- Concluding phrases to conclude the project.

REFERENCES

- A list of references used in the project thesis such as journals, articles, books and etc. as directly quoted in the thesis

BIBLIOGRAPHY

- A list of references used in the project thesis such as journals, articles, books and etc. but not directly quoted in the thesis

APPENDICES

- E.g. user guide, user manual, diagram and etc.