**TITLE OF THE FINAL YEAR PROJECT**



In Partial Fulfillment of the Requirements for the degree

Bachelors of Science in Computer Science (BSCS)

**Final Year Project Proposal**

**Prepared by**

**Student Name 1 (Registration Number)**

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**Program of Study: BSCS**

**Supervisor: Supervisor Name**

**Co-Supervisor: Co-Supervisor Name**

**Department of Name of Department**

**ALHAMD ISLAMIC UNIVERSITY**

**Session: 2017-2019**

# DECLARATION

We hereby declare that this project proposal entitled “TITLE” submitted to the “DEPARTMENT NAME”, is a record of an original work done by us under the guidance of Supervisor “NAME” and that no part has been plagiarized without citations. Also, this project work is submitted in the partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science.

**Team Member Signature**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Supervisor Name Signature**

Supervisor Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# PLAGIARISM UNDERTAKING

We declare that research project work presented in the report/thesis titled:

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Is solely our research work with no significant contribution from any other person. Small contribution/help wherever taken has been duly acknowledge and that complete proposal/thesis has been written by me.

We understand the zero tolerance policy of the HEC and Alhamd Islamic University towards plagiarism. Therefore, we as Authors of the above titled report/thesis declare that no portion of our report/thesis has been plagiarized and any material used as reference is properly referred/cited.

We undertake that if we are found guilty of any formal plagiarism in the above titled report/thesis even after award of BS degree and that HEC and the University has the right to publish our names of the HEC/University Website on which names of students are placed who submitted plagiarized report/thesis.

Department: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Program & Session: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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# List of Tables

This page should list all the tables found in the thesis. The page number of the table must also be included. The table numbers should be arranged according to the chapters.

# List of Figures

Diagrams, photographs, drawings, graphs, charts and maps are included as figures. The list should be written similar as the List of Tables

# List of Abbreviations

List of abbreviations should be tied closely in the body of the report, and should not be included if there are less than five abbreviations in the document.

# CHAPTER 1

# INTRODUCTION

Introduction is mostly written for non-specialists so that they can get an overview of the project without technical details. It should provide a brief overview of the project aims and structure of the solution. It should also specify what unmet need or problem the FYP caters for and who needs it.

At the end of chapter, provide a summary of the report organization, chapter outlining what has been covered in this chapter and explain what comes in the following chapters.

This chapter of your FYP documentation provides a background of the project, states, i what the documentation is about and how it has been structured. This could contain additional portions and sections such as Overview, Background, Problem Statement, Objectives, Justification and Project Timeline.

## 1.1 OVERVIEW

## 1.2 BACKGROUND OF THE STUDY

The researcher has to provide the background of the topic and linked it with global, regional and local scenarios.

## 1.3 PROBLEM STATEMENT/IDENTIFICATION

The researcher has to be specific in identifying the problem/issue selected for the research. The researcher needs to stick to his problem identifying the secondary effects concerned with his research problem.

## 

## 1.4 SIGNIFICANCE / JUSTIFICATION OF THE STUDY

The documentation of the significance of the study should among other things address the following questions:

1. What are the specific, significant, unique/major contributions that the research work will make to the area/body of knowledge?
2. What will be the practical implications/use of the results/outcome?
3. How will the results/outcome of the study be implemented, including a statement on its possible impact and on what innovations will come about through its implementation (if any)?
4. What areas/directions of further/subsequent research work are likely to arise from the expected outcome/findings or results of the research study?
5. What will be improved or changed as a result of the research work?

## 1.5 OBJECTIVES OF THE STUDY/RESEARCH QUESTIONS

The objectives/questions of the study indicate the major aspects of the study to be undertaken. The objectives of the study to be achieved should be clearly mentioned and should be itemized.

## 

## 1.6 JUSTIFICATION AND PROJECT TIMELINE

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# CHAPTER 2

# LITERATURE REVIEW

Provide an overview to the projects background knowledge without too much in detail (stick to the scope of the project). The background can refer to previous work referenced from journals, articles, newspapers, or any academic literature providing evidence that the proposed problem is significant and real problem worth solving.

If available, provide closely related work done within the project scope and the challenges or defects identified which can be considered as part of the new solution. Describe why you worked on this project in light of the literature review?

# CHAPTER 3

# RESEARCH METHODOLOGY

The methods, approaches, tools, techniques, algorithms, or other aspects of the solution are sufficiently discussed with sufficient details and supporting figures.

The Methodology section is very important because it documents how you plan to tackle your research problem. Describe the research that whether it is Exploratory, Descriptive, Causal or a Case study or other method.

To solve actual problems in a company setting, software engineer or a team of engineers must incorporate a development strategy that encompasses the process, methods and tools layers and the generic phase. This strategy is often referred to as a process Model or a software engineering paradigm. A process model of software engineering is chosen based on the nature of the project and application, the methods and tools to be used and the controls and deliverables that are required. A software process model has predefined steps, accomplishing those steps untimely results in software. So, the software process model is followed step-by-step to develop software. There are many software process models like:

* Waterfall Model
* The Prototyping Model
* The RAD Model
* Incremental Model

# CHAPTER 4

# SYSTEM DESIGN AND ARCHTECTURE

In this chapter of FYP theis report process, the available system designing components have been utilized. A systematic design is critical for a reliable computer system.

## 4.1 SYSTEM ARCHIECTURE

This section should provide a high-level overview of how the functionality and responsibilities of the system were partitioned and then assigned to subsystems or components.

The main purpose here is to gain a general understanding of how and why the system was decomposed, and how the individual parts work together to provide the desired functionality. At the top-most level, describe the major responsibilities that the software must undertake and the various roles that the system (or portions of the system) must play. Describe how the system was broken down into its components/subsystems (identifying each top-level component/subsystem and the roles/responsibilities assigned to it). Describe how the higher-level components collaborate with each other in order to achieve the required results. Don't forget to provide some sort of rationale for choosing this particular decomposition of the system.

The system design in this documentation is designed to cater the working environment. The system designing is divided into the following parts below.

* Flowcharts
* Data Flow Diagrams (DFDs)
* Normalized Tables
* Data Dictionary
* Low Level Design
* High Level Design
* Entity Relationship Diagram (ER-Diagram)
* Input and Out Screen Layouts

Depending on your methodology this chapter would contain different materials. However, structuring it as three subsections can be a good idea.

* Software Design
* User Interface Design
* Database Design
* Implementation

1. **Introduction:** Briefly introduce your project idea.
2. **Objective**

Write down your project objective in a very precise and concise manner. Ideally your statement should not exceed 2-3 lines. For example, "To design a real-time fault-tolerant embedded system for automated gas stations with distributed system architecture".

1. **Problem Description**

A proposal document should address three primary questions in relation to the project objective: What, Why, and How. This section should describe What and Why of your project. Describe the above mentioned problem in a bit detail. For example, considering the same project, describe what are the benefits and features of automated gas stations, what problems arise when we move from manual to automated systems, what issues should be kept in mind while designing such systems and why such systems should be fault tolerant. Be specific. You are not expected to write more than 250 words.

1. **Methodology**

This section would address the ‘How’ part. Briefly write down your intended approach towards tackling above problems. Name any algorithm or third party library you would use, any particular technique you are going to follow etc.

1. **Project Scope**

An FYP should be defined in terms of its scope. Things you are going to do are almost defined in earlier sections. Here you would outline your project’s scope by declaring what design/development/research aspects you are not going to consider in due course. State any assumption that might dictate your system evolution. For example, in automated gas station project, we are assuming a distributed environment. Remember, never fall into technicalities. What communication media we would be using is irrelevant while defining the project scope.

1. **Feasibility Study**

With above defined scope, would you be able to meet your project schedule? Do mention following aspects:

i. Risks Involved: Identify the risks involved, and how you would be able to cater?

ii. Resource Requirement: What computing or any other resource you would need?

1. **Solution Application Areas**

Is your project of some real value? Which industry or application domain you are targeting? How that target domain may benefit from your solution?

1. **Tools/Technology**

Mention all the HW/SW tools/technologies required for the project.

1. **Expertise of the Team Members**

Are all team members pre-equipped with the level of knowledge needed for the successful completion of this project? Have you people studied the relevant course by now? Is this project of equal interest to all team members?

1. **Milestones**

Mention all major tasks/sub-tasks to be accomplished. You would use these milestones while defining the project timeline.

# REFERENCES

The title of references should be center aligned, bold face, 12pt time new Roman. This section should include all relevant references cited in the document. Only references cited in the text are to be included in the reference list. The students should use APA 6th manual for citation. Following are some examples provided on how to cite a study using APA 6th manual in text and references section. Furthermore, any source not mentioned below please refer to APA 6th manual for help.

**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.

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.

Scruton, R. (1996). The eclipse of listening. *The New Criterion*, 15(3), 5-13.

**Article in a Magazine:**

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.

Schultz, S. (2005, December 28). Calls made to strengthen state energy policies. *The Country*

*Today*, pp. 1A, 2A.

**Examples:**

Abratt, R., & Russell, J. (1999). Relationship marketing in private banking in South Africa, *The International Journal of Bank Marketing*, 17(1), 5-19.

Efron, B. (1979). Bootstrap Methods: another look at the Jackknife, *Annals of Statistics*, 7, 1-26.

Furer, O., Ching-Liu, B.S. & Sudharshan, D. (2002). The relationship between culture and service quality perceptions, *Journal of Service Research*, 2 (4), 355-370.

# APPENDICES

The title of appendices should be center aligned, bold face, 12pt time new Roman. This section should include all relevant materials which support the document written. Appendices should be assigned alphabets, like Appendix-A. Appendix-A.1. Appendix-B.2 etc. All included appendices should be coated in the text body of synopsis.

**Appendix A: User Manual**

Appendices are provided to give supplementary information, which is included in the main text may serve as a distraction and cloud the central theme.

• Appendices should be numbered using alphabets, e.g. Appendix A, Appendix B, etc.

• Tables and References appearing in appendices should be numbered and referred to at appropriate places just as in the case of chapters.

• Appendices shall carry the title of the work reported and the same title shall be written in the contents page.

**Instructions: Documents Description and Specification**

1. **Style**

The synopsis documentation should be written clear and concise, and use following specifications.

1. Paper size: A4 (8.27" x 11.69).
2. Font style: Times New Roman.
3. Font Size: 12pt normal for writing in English and 16pt normal for writing in Urdu.
4. All Headings: 12pt bold for writing in English and 16pt bold for writing in Urdu.
5. Line Spacing: 1.5 space.
6. Margins: Left: 1.5 in, Right: 1in, Top: 1 in, Bottom: 1 in.
7. Include a page header, insert page numbers flush right, in page header
8. **Parts of a Synopsis**

BS/MS/M.Phil/Ph.D synopsis/report should consist of following parts:

1. Title Page
2. Certificate of Completion
3. Decleration
4. Acknolwedgment
5. Abstract
6. Table of Contents
7. List of Tables
8. List of Figures
9. List of Abbreviations
10. Main Text Body
11. References
12. Appendices
13. **Tables, Figures and Equation**

All Tables, figures, and equations in the document should be center aligned, and numbered at chapter level. For example, first table in the first chapter should be numbered as “Table 1.1”, and first figure of the first chapter should be numbered as “Figure 1.1”.

Tables, figures, and equations should be placed as close as possible to the text where they are referred or discussed. Each figure, table and equation that is inserted in the document should be discussed in the text, and should be referenced as (for example) “We have summarized our test cases in Table 2.1”.

1. **Captions and Citation**
2. **Caption**

Captions of tables are required to be center aligned, and on the top of the respective table.

Captions of figures are required to be center aligned, and should be below the respective figure.

1. **Citation**

If you are using a figure, or table from some other sources such as published article and book, you should cite it in the footnote of the respective object, and should be listed in the references section.

1. **Plagiarism**
2. **Definition**

Presenting someone else’s idea, work, project, or words as your own. This also includes using someone’s exact words, figures, tables, etc or even modifying them but not providing citation or reference to the actual work.

1. **University and HEC Policy regarding Plagiarism**

Every BS/MS/M.Phil/PhD project/synopsis/thesis should undergoes a plagiarism test. Plagiarism if proved in any time will be grounds for dismissal of your synopsis/thesis and in worst case denial of your degree.