IOT Based Water Monitoring System

Session: BSc. Spring 2024

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Submitted By

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Certification

This is to certify that [**Name of Student**], [**Roll no of Student**] and [**Name of Student**], [**Roll no of Student**] have successfully completed the final project [**Title of the Final Project**], at the [**Name of University**], to fulfill the partial requirement of the degree [**Name of degree**].

External Examiner

[Name of Examiner]

[Designation]

Project Supervisor

[Name of Supervisor]

[Designation]

Chairman

Department of [Name of Department], [Name of University]

Abstract

An abstract is a 150- to 250-word paragraph that provides readers with a quick overview of your essay or report and its organization. It should express your thesis/project and your key points; it should also suggest any implications or applications of the research you discuss in the project.

The abstract should begin with a brief but precise statement of the problem or issue, followed by a description of the research method and design, the major findings, and the conclusions reached.

The abstract should contain the most important key words referring to method and content. These facilitate access to the abstract by computer search and enable a reader to decide whether to read the entire dissertation.

Keywords: method; thesis; computer

Undertaking

I certify that the project **[Name of Project]** is our own work. The work has not, in whole or in part, been presented elsewhere for assessment. Where material has been used from other sources it has been properly acknowledged/ referred.

[Name of Student]

[Roll-No]

[Name of Student]

[Roll-No]

Acknowledgement

We truly acknowledge the cooperation and help make by [**Name of Acknowledger], Designation** of [**Address of Organization].** He has been a constant source of guidance throughout the course of this project. We would also like to thank [**Name of Acknowledger**] from [**Designation**], [**Address of Organization**] for his help and guidance throughout this project.

We are also thankful to our friends and families whose silent support led us to complete our project.

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Acronyms

AWS   Amazon Web Services

S3   Simple Storage System

GCP   Google Cloud Platform

List of Equations

Chapter 1

1.1   Introduction

1.2   Statement of the problem

1.3   Goals

1.4   Motivation

1.5   Assumption and Dependencies

1.6   Methods

1.7   Report Overview

Chapter 2

2.1 Heading

Headings and subheadings provide structure to a document. They signal what each section is about and allow for easy navigation of the document. Use a hierarchical structure for headings and sub-headings.

Figure 1: Computer System

2.1.1 Heading

2.1.2 Heading

Chapter 3

3.1 Heading

3.1.1 Mathematical Equation

$$(1 + x)^n = 1 + \frac{nx}{1!} + \frac{n(n-1)x^2}{2!} + \cdots$$

Equation 1: Expansion of sum

3.1.2 Heading

Figure 2: Computer System

Chapter 4

4.1 Proposed Solution

Your proposed solution should relate the current situation to a desired result and describe the benefits that will accrue when the desired result is achieved. So, begin your proposed solution by briefly describing this desired result.

Activity	Optimistic (a)	Most Likely (m)	Pessimistic (b)	Expected (Te)
A	21	23	25	23
B	0.5	1	1.5	1
B	0.5	1	1.5	1

Table 1:PERT Activity Time estimate table

Chapter 5

5.1   Discussion

When you are ready to write your discussion, you have already introduced the purpose of your study and provided an in-depth description of the methodology. The discussion informs readers about the larger implications of your study based on the results. A successful discussion section puts your findings in context. It should include:

1. The results of your research,
2. A discussion of related research, and
3. A comparison between your results and initial hypothesis.

Chapter 6

6.1 Summary and Future work

A summary of a thesis/project is like an abstract of a research paper. Basically, the purpose of the summary is to give the reader an overview of the main points of your thesis/project. Generally, the summary is about 200-350 words. The summary should include the following points:

1. What is the thesis about?
2. What is the purpose of the project/thesis?
3. What were the methods used to research the information?
4. What are the results, conclusions, and recommendations that the thesis presents?

The future work section is a place for you to explain to your readers where you think the results can lead you. What do you think are the next steps to take? What other questions do your results raise? Do you think certain paths seem to be more promising than others?

Chapter 7

7.1 Conclusion

Conclusions are the last section people read in your paper, and therefore it is what they leave remembering. You need to make sure they walk away thinking about your paper/project just the way you want them to. Your conclusions need to do three main things:

1. Recap what you did. In about one paragraph recap what your research question was and how you tackled it.

2. Highlight the big accomplishments. Spend another paragraph explaining the highlights of your results. These are the main results you want the reader to remember after they put down the paper, so ignore any small details.

3. Conclude. Finally, finish off with a sentence or two that wraps up your paper. I find this can often be the hardest part to write. You want the paper to feel finished after they read these. One way to do this, is to try and tie your research to the "real world." Can you somehow relate how your research is important outside of academia? Or, if your results leave you with a big question, finish with that. Put it out there for the reader to think about to.

References

References are to be placed in square brackets and interlaced in the text. For example, "A comprehensive detail of how to prevent accidents and losses caused by technology can be found in the literature [1]. A project report / thesis cannot be accepted without proper references. The references shall be quoted in the following format:

The articles from journals, books, and magazines are written as:

[1]   Abe, M., S. Nakamura, K. Shikano, and H. Kuwabara. Voice conversion through vector quantization. Journal of the Acoustical Society of Japan, April 1990, E-11 pp 71-76.

[2]   Hermansky, H. Perceptual linear predictive (PLP) analysis for speech. Journal of the Acoustical Society of America, January 1990, pp 1738-1752.

The books are written as:

[1]   Nancy G. Leveson, Safeware System Safety and Computers, A guide to preventing accidents and losses caused by technology, Addison-Wesley Publishing Company, Inc. America, 1995.

[2]   Richard R. Brooks, S. S. Iyengar, Multi-Sensor FusionFundamentals and Applications with Software, The Prentice-Hall Inc. London, 1998.

The Internet links shall be complete URLs to the final article.

[1]   http://www.pu.edu.pk/ucit/projects/seminars.html

General Guidelines for Writing Project's Thesis

For convenient upload on PEC's e-Library

Page Setup

Page Size:	A4
Top margin:	1.00 inch or 2.54 cm
Bottom margin:	1.00 inch or 2.54 cm
Left margin:	1.00 inch or 2.54 cm
Right margin:	
	1.00 inch or 2.54 cm

Fonts and Styles:

Use a standard font such as Times New Roman, Arial, or Calibri

Font size should be 12 points for the main text. Use consistent font sizes and styles (bold, italics) for headings, subheadings, and content.

Footer:

Each page shall have a footnote "Page number, right align".

Header:

Each page shall have a header "Project/Thesis Title".

Chapter Startup:

Each chapter shall be numbered as Chapter 1, Chapter 2, etc.

Paragraph Formatting:

Single-spaced, Line entered paragraph, left align or justified.

Line Spacing:

1.5 spacing is required for the text. Only footnotes, long quotations, bibliography entries (double space between entries), table captions, and similar special material may be single spaced.

Maintain consistent spacing between paragraphs

Images, Figures, Hyperlink:

Ensure that images, figures, and hyperlink are of high quality and are properly labeled.

Tables and Equations:

Format tables with clear column and row headings.

Provide captions for each Table.

Label equations and provide clear explanations.

Citations and References:

Follow a standardized citation style (e.g., APA, MLA, PEC etc.) for references.

Include a separate references section at the end of the document.

File Naming Convention:

Submitted files be named with a clear and concise title that reflects the content of the paper or thesis.