



Princess Sumaya University for Technology
King Hussein School for Computing Sciences

Project Title

Subtitle (if any)

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Project Submitted in partial fulfillment for the degree of Bachelor of Science in
Computer Science

Semester-Year

Declaration of Originality

This document has been written entirely by the undersigned team members of the project. The source of every quoted text is clearly cited and there is no ambiguity in where the quoted text begins and ends. The source of any illustration, image or table that is not the work of the team members is also clearly cited. We are aware that using non-original text or material or paraphrasing or modifying it without proper citation is a violation of the university's regulations and is subject to legal actions.

Names and Signatures of team members:

Acknowledgments

Express your appreciation to whoever helped you during your work or even before!

Summary

Give a complete but concise description of your work. The summary is a brief overview of your motivation, statement of purpose, general methodological approach, major results, discussion and conclusion. The abstract should not exceed one page.

List of Abbreviations

List the abbreviations you have used in your project if there are any and what they stand for.

UML: Unified Modeling Language.

JSP: Java Server Pages.

DLL: Dynamic Link Library.

CMS: Content Management System.

Table of Contents

The table of contents should be automatically generated by going to: *Insert >> Index And Tables>> Table of Contents*. Choose *Classic* as the format of the table and set the number of levels to be 3.

In order for the table of contents to be generated correctly:

- Each chapter title should be formatted using the style “Chapter”.
- Each section title should be formatted using the style “Section”.
- Each subsection title should be formatted using the style “Subsection”.

The table of contents should replace all of the text that is in this page.

Table of Figures

The table of Figures should be automatically generated by going to: *Insert >> Index And Tables>> Table of Figures*. Choose *Classic* as the format of the table and set the tab leader to dots.

In order for the table of figures to be generated correctly, the label of each figure should be formatted using the style “Figure”.

The table of figures should replace all of the text that is in this page.

Table of Tables

The table of tables should be automatically generated by going to: *Insert >> Index And Tables>> Table of Figures*. Choose *Table* as the caption, *Classic* as the format of the table and set the tab leader to dots.

In order for the table of contents to be generated correctly, the label of each table should be formatted using the style “Table”.

The table of tables should replace all of the text that is in this page.

Chapter 1

Introduction

1.1 Overview

Give a general overview of the project, its importance and why you have chosen to work on it. Provide also a discussion of any scientific/technical background that is required to understand what the project is and the motivation behind it.

You can choose to arrange the information into subsections numbered as 1.1.x. The title of each subsection should be the style named “subsection”.

1.2 Problem Statement

In this section provide (at least) the following: 1) A precise description of the problem this project tries to solve, 2) A description of the outcomes of this project (example: a mobile app, a desktop application, etc) and 3) A description of the target audience/customers, how they will use the system and what impact it will have on them.

1.3 Related Work

Discuss in detail systems that are similar to your system. Provide a critical evaluation of these systems and explain how your system compares to them. Clearly mention if your system uses ideas/features from these systems.

1.4 Document Outline

Describe how this documentation is structured and what will be discussed in each of the following chapters.

Chapter 2

Project Plan

2.1 Project Deliverables

List and describe the deliverables of the system. Examples of deliverables include: source code, documentation files, executables, datasets, databases, etc.

2.2 Project Tasks

Subdivide the project into high level tasks and provide a timeline for the completion of each task. Tasks can be:

- Analysis
 - requirement identification (e.g: fact finding methods, outputs, inputs, processes, performance, security levels, scalability, etc.)
 - requirement modeling,
 - development strategy (e.g. hardware, software tools, programming language use, etc.)
 - any other relevant analysis task (e.g. distribute a survey, interview, etc.)
- Design
 - Reports layouts
 - User interfaces
 - Database Design
- Implementation
 - Coding (e.g. develop a web-service)
 - Testing
 - Documentation (e.g. prepare a requirements document),

Format the information you provide into a table that includes the following for each task: a task number, a name and description, a time duration, and what dependencies need to be completed before the task begins.

Provide also charts like Gantt Charts and PERT Charts to illustrate the timeline of the project.

2.3 Roles and Responsibilities

Discuss the roles and responsibilities of each team-member in relation to each of the tasks. Be specific and provide enough details to allow an outsider to judge the workload for each team-member.

2.4 Risk Assessment

For each task, describe any associated risks that may prevent completing them. Indicate how probable the risk is, its impact on the system and how you plan to cope with it if it appears.

2.5 Cost Estimation

Discuss any costs that are required for implementing the project. Costs may include buying hardware, software licenses, or even costs of paperwork (for example).

2.6 Project Management Tools

Describe here any tools you intend to use to manage the development of the system, such as version control software and project management software.

Chapter 3

Requirements Specification

3.1 Stakeholders

A stakeholder is any person or entity that is affected by the system or affects in in any sense. In other words, the stakeholders of the system are any users or entities that have an effect on the system requirements.

Describe each stakeholder, his interaction with the system and the importance of his role. Use tables to simplify the provided information.

3.2 Platform Requirements

Specify the *software* and *hardware* requirements for running the system. Clearly mention which requirements are a must and which are only recommended.

For systems that are made of sub-systems (e.g. a client side and a server side), make sure to list the requirements for each sub-system separately. For example, the client may need a browser to use the system, whereas the server may require different (more demanding) software and hardware requirements in order to respond to the client requests.

3.3 Functional Requirements

Provide a detailed list of all the functional requirements of the system. For each requirement, specify exactly what the input, output, processes and main constraints are. Mark also each requirement as either recommended or essential.

Use a table that contains a numbered list of the requirements and their related information. This will facilitate understanding the requirements and referencing them in the proceeding sections and chapters.

3.4 Non-Functional Requirements

Examples of non-functional requirements include: requirements related to performance, storage limits, code quality, documentation, accessibility, security, reliability, scalability, portability, user interface ease-of-use, etc.

Provide an example for each non-functional requirement in your system

3.5 Other Requirements

Include here any requirements that may not directly fall under any of the sections before. Examples include restrictions on which APIs can be used, data transmission protocols, data storage formats, etc.

Chapter 4

System Design

4.1 Logical Model Design

In this section, provide both a high level and low level design of the system you will develop. You will follow in your design either the structured approach or the Object Oriented approach. Here is a list of the diagrams you need to provide in either case:

Structured Approach:

- Functional Decomposition Diagram (FDD).
- System Context Diagram (Context DFD).
- Data Flow Diagram (DFD-0 and lower level DFDs).
- Data Dictionary.
- In addition to Process Description using structured English, Decision Tables, Decision trees ...

Object Oriented Approach:

- Use Case Diagrams.
- Object Diagrams.
- Package and Class Diagrams.
- Component Diagram.
- Deployment Diagram.
- Activity Diagram.
- Sequence Diagram.
- State Transition Diagram.

In both approaches, you need to describe the design of the data in the system. Use Entity Relationship Diagrams (ERD) and provide the detailed database schema.

Describe also any design choices that are related to the user interface. Describe the different screens (or web-pages), and how the flow moves between them. Use appropriate diagrams like trees to describe the structure of web-pages (for example).

Make sure to organize this chapter into sections and subsections in a manner that is appropriate to the provided information. Make sure also to stick the formatting used in the other chapters.

4.2 Physical Model Design

System Design must include the following:

- Reports Design
- User Interface Design
- Database Design: Database design must be presented in the form of normalized database (third normal form). This includes stored and transmitted data.

References

Use any referencing style/standard and be consistent.