Object Oriented Design and Development (CS-4223) Report Contents Instructions

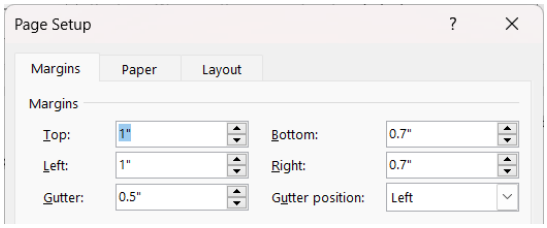
2023-2024 Academic Year

Faculty of Information Science

University of Computer Studies (Magway)

1. Cover Page

- **Project Title**
- Name of the Organization/Institution
- Course/Subject Name
- Team Members (if applicable)
- Supervisor Name
- Date



Paper Type – A4

Title – 16

Sub- Title – 14

Body -12

2. Abstract

- Provide a brief summary of the entire project (1–2 paragraphs).
- Include the purpose of the project, methodology, and key outcomes.

3. Table of Contents

- List all sections and sub-sections with page numbers.

4. Chapter 1 INTRODUCTION

- **Introduction**: Introduction of the project. Why is this project important?
- **Problem Statement**: What problem are you addressing?
- **Objectives**: Clearly define what the project aims to achieve.
- **Scope**: Mention the boundaries of your project (what is included/excluded). (Main Function and Main Results of Project)
  - **Team Member activity and Responsibility (show with table)**

No	Name	Responsibility

  - **Gantt Chart**

5. Chapter 2 REQUIREMENT ANALYSIS

- **Functional Requirements**: The main functionalities of the system.
- **Non-Functional Requirements**: System performance, security, usability, etc.
- **Use Cases**: Diagrams and descriptions of primary user interactions.
  - **Text Description** (Reference can be taken in Ch3, pg-14)
- **Assumptions and Constraints**: Any assumptions or limitations related to the project.

- **Business Rules can be added in this section (Reference can be taken in ch3, pg-16)**

6. Chapter 3 SYSTEM DESIGN

- **Overview of System Architecture**: Briefly describe how the system is structured. System Flow Diagram
  - **Text Description for the whole system briefly**
- **Class Diagrams**: Show the relationships between the classes you designed.
  - **Text Description (can be taken in Ch3, pg-34 &35)**
- **Object Interaction Diagrams**: Sequence and/or collaboration diagrams for main functions
  - **Diagram for specific Main Function**
- **Design Patterns**: Specify any design patterns used and why. (which Software Design Pattern is applied in your Project? Explain reason)
  - For Example: Describe with text and screen shoot(code) where the Singleton Pattern or MVC or Factory is used in these system

Chapter 4 Database Design (CS-4225 Advance Database Design Contents are shown in page 4)

7. Chapter 5 SYSTEM DESIGN AND DEVELOPMENT

- **Tools Development Environment**: Describe the tools and technologies used (IDEs, programming languages, frameworks, etc.).
  - **Front end tools and Requirements**
  - **Back-end tools and Requirements**
- **Code Structure**: Give an overview of how the project is organized (folders, modules, etc.).
  - **Key Classes/Methods**: Explain important classes and methods (with code snippets if needed).
  - **Design Justification**: Justify your object-oriented design choices (e.g., why you used inheritance, interfaces, etc.).
- **System Implementation** explained with Screen-shoot

Optional

9. Challenges Faced

- Describe the challenges you encountered during development.
- Explain how you overcame these challenges (or reasons why they couldn't be fully addressed).

No	Challenges	Solution

10. Chapter 5 CONCLUSION

- **Conclusion:** Recap the outcome of the project.
- **Future Work**: Suggest improvements or future extensions for the project.
- **Lessons Learned**: What you learned from this project in terms of OODD.

11. References

- List all the references used (books, research papers, online resources).

12. Appendices (Optional)

- **Appendix A: Code Samples**: Any lengthy code snippets or additional documentation.
- **Appendix B: Diagrams/Charts**: Detailed diagrams that were not included in the main body of the report.

Note: Your report covers for these phases of –

CS-4225 (Advanced Database System) Project – 30%

(Web Database Application Development – Interview/Presentation + Report + Program) 3

Developing a web-based database application involves several key steps and considerations to ensure efficient data management and a smooth user experience. Here's a high-level overview of the process:

I. Planning Phase

1. **Define Project Goals**: Establish the key objectives of the project.
2. **Identify Stakeholders**: List all key stakeholders involved.
3. **Determine Final Deadline**: Set the final deadline for the project completion.
4. **List Tasks**: Break down tasks to ensure all aspects are covered.
5. **Assign Responsibilities**: Allocate each task to a team member.
6. **Set Deadlines**: Set due dates for each task.
7. **Organize Project Schedule**: Use a tool (e.g., Gantt Chart) to create and share the schedule.

II. Requirement and Design Phase

1. **Define Application Requirements**: Determine the purpose, data, and user interactions.
2. **Design the Database Schema**: Create an entity-relationship (ER) model, including relational design, constraints, and indices.
3. **Select a Database System**: Choose an appropriate database system (e.g., MySQL, PostgreSQL, MongoDB) based on the data structure and scalability needs.
4. **Develop the Backend**: Implement server-side logic, set up the web server, define APIs, and handle business logic.

III. Development and Testing Phase

1. **Create the Frontend**: Build the user interface using HTML, CSS, JavaScript, or other technologies.
2. **Test the Application**: Conduct comprehensive testing for functionality, usability, security, and performance.
3. **Implement the Application**: Ensure the application is accessible, available, and usable for end-users.