**[Personal GPA Tracker]**

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| A Project Report Presented to  CMPE-131  Fall, 2024 |
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| --- |
| By |
| [your names] |
| [date] |

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**ABSTRACT**

**[Topic]**

By [Your Names]

[Your Project Abstract Is Presented Here]

**Acknowledgements**

Table of Contents

**Chapter 1 Introduction**

* 1. Project goals and objectives
  2. Problem and motivation
  3. Project application and impact
  4. Project results and deliverables
  5. Market research
  6. Project report structure

**Chapter 2 Project Background and Related Work**

* 1. Background and used technologies

2.2 State-of-the-art technologies

* 1. Literature survey

**Chapter 3 System Requirements and Analysis**

3.1 Domain and business requirements

3.2 Customer-oriented requirements

3.3 System function requirements

3.4 System behavior requirements

3.5 System performance and non-function requirements

3.6 System context and interface requirements

3.7 Technology and resource requirements

**Chapter 4 System Design**

4.1. System architecture design

4.2. System data and database design *(for software project only)*

4.3. System interface and connectivity design

* 1. System user interface design *(for software project only)*
  2. System component API and logic design *(for software project only)*

4.6 System design problems, solutions, and patterns

**Chapter 5 System Implementation**

5.1. System implementation summary

5.2. System implementation issues and resolutions

5.3. Used technologies and tools

**Chapter 6 System Testing and Experiment**

6.1 Testing and experiment scope

6.2 Testing and experiment approaches

6.3. Testing report (or case study results)

**Chapter 7 Conclusion and Future Work**

7.1 Project summary

7.2 Future work

**References**

**[1] …**

**…**

**Appendix**

Appendix 1 [Title] (for example, your selected hardware/software standard)

Appendix 2 [Title] (for example, your detailed algorithms for your solutions)

List of Figures

Figure 1. Figure Title Page No.

Figure 2. Figure Title Page No.

…

Figure M. Figure Title---------------------------------------------------------------------- Page No.

List of Tables

Table 1. Table Title Page No.

Table 2. Table Title Page No.

…

Table N. Table Title Page No.

# Introduction

* 1. **Project goals and objectives**[Describe what are the goals and objectives of the project. In other words, what is your project? In addition, it covers the context in which the project is placed.]
  2. **Problem and motivation**[Describe the problem, motivation, and needs of your project. Why is your project important? You need to address the problem and the need of your project. In addition, you must identify your expected academic/technical contributions.]

**1.3 Project application and impact**

[Describe your the application of your project results, and its impacts to academic, industry, and society.]

**1.4 Project results and expected deliverables**

[Describe your project results (such as a system/component/tool) and project deliverables (such as report, prototype, code, etc.).]

**1.5** **Market research**

[Describe the product profiles of major companies and their market shares. This section must include textual description accompanied with figures and/or tables.]

1.6 Project report Structure

# Chapter 2 Background and Related Work

* 1. **Background and used technologies**

[Provide the necessary background of this project, including concepts, knowledge, and technologies.]

* 1. **State-of-the-art**

[Present the summary of existing and related products in the market. Please provide your summary in a well-classified format.]

* 1. **Literature survey**

[Present your literature survey of existing research results and related research projects with sufficient citations and references]

# Chapter 3 System Requirements and Analysis

**3.1.** **Domain and business Requirements**

[Specify the domain and business requirements of your software system. Use UML 2 activity diagram to draw process summary diagram and a set of process decomposition diagrams. Draw a domain class diagram of business classes with attributes; draw a set of state machine diagrams for key business classes.]

**3.2. Customer-oriented requirements**

[Specify the expected user groups and their related use cases. This section must include textual description accompanied with tables.]

**3.3. System (or component) function requirements**

[Specify the **functional requirements** by defining high-level functional features (or functional components), including a set of inputs, the behavior, and outputs.

This section must include textual description accompanied with tables.]

**3.4. System performance and non-function requirements**

[List an organized set of statements that placed on the system, e.g., performance, capacity, availability, compliance to standards, security, etc. This section must include textual description accompanied with tables.]

* 1. **System behavior requirements**

[Specify system-level behaviors using UML state diagrams. This section must include textual description accompanied with tables.]

* 1. **Context and interface requirements**

[Specify the context environments supporting your development, testing, and deployment of your project results. You also need to describe the system interface requirements. This includes preliminary user interface structure and design. This section must include textual description accompanied with tables.]

* 1. **Technology and resource requirements**

[Specify your required technologies and resources for your project.]

# Chapter 4 System Design

**4.1 System architecture design**

[Present software system architecture, which presents involved components and their relations and connectivity.]

* 1. **System data and database design** *(for software project only)*

[Present your software database and data design to present the detailed data modeling about data attributes and relationships. You can use ERD (or UML notation) to present the required system database.]

* 1. **System interface and connectivity design**

[Document two types of system interface design: a) the external interfaces to third-party systems/components, and system user interfaces, b) your developed connectivity protocols.]

* 1. **System user interface design** *(for software project only)*

[Present the preliminary system-and-user interface design, including graphic user interface structure, operation flow, and layouts.]

* 1. **System component API and logic design***(for software project only)*

[Present software component API and logic design. This section must include textual description accompanied with diagrams]

* 1. **Design problems, solutions, and patterns**

[Present your design trade-off decisions and solutions selections to deal with certain design problems to cope with the given system constraints in requirements and design, and even environment.]

# Chapter 5 System Implementation

**5.1. System implementation summary**

[This section specifies the implementation status and summary.]

**5.2. System implementation issues and resolutions**

[This section specifies the system implementation problems and resolutions.]

**5.3. Used technologies and tools**

[This section specifies the selected hardware/software tools for use. Please specify why you select these tools, and where and how these tools will be used.]**Chapter 6 System Testing and Experiment**

**6.1 Testing and experiment scope**

[Describe an overview of your test process and experiment scope, including its test processes, test focuses and objectives, and selected test criteria at the component and system levels. This section must include textual description accompanied with figures and/or tables.]

**6.2 Testing and experiment approaches**

[Describe the selected test plan, including test methods, and selected test criteria. This section must include textual description accompanied with figures and/or tables.]

**6.3 Testing and experiment**

[Provide your system testing report (such as test/test scripts summary, bug report analysis, and a case study (or experimental results) report if there is any.]

**Chapter 7 Conclusion and Future Work**

**7.1 Project summary**

[This section summaries your project, including status, results, and experience and lessons.]

**7.2 Future work**

[This section discusses the future direction and work for this project.]

References

[List published books, technical papers, white papers used or references in your project report, such as literature survey and state-of-the-art sections. List them in a **standard** format of a bibliography.]

Appendices (Optional)

Appendix A – Appendix Title

Appendix B – Appendix Title

[Typical example: you can include a specific interface details here.]