**DESIGN PROJECT**

**PHASE REPORT**

**Course Name (Code) : Design Project (802499-3)**

**PROJECT TITLE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Group#:\_\_\_\_\_\_\_

Team Names:

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, I.D. #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, I.D. #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, I.D. #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, I.D. #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, I.D. #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date of Submission: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (month/date/year, e.g., November 9, 2017)

Submitted to:

Name(s) of Project Advisor(s) or Sponsor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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***ABSTRACT***

Start typing here.

***Key words: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

**Associated Engineering Standard(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Multiple Realistic Constraints: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**INTRODUCTION**

Start typing first paragraph here. Write at least two paragraphs. Do not change the font or size and indent each paragraph as indicated. The font color must be black. ***Write the objectives of this phase of the project and the goals you would like to achieve by implementing this phase of the project. Explain how this part of the project will integrate with the complete project.***

Start typing second paragraph here.

**CHAPTER-1**

**PROJECT PHASE**

1. **Background /Literature Review, Theory, and Identification of Problem**

Start typing first paragraph here. Write at least two paragraphs. Do not change the font or size and indent each paragraph as indicated. The font color must be **black**.

***Discuss about the research performed by the team and write the theory related to the topic. Discuss how you identified the problem and what evidence or statistics you gathered to indicate the importance of solving the problem. You may need to write 1-2 paragraphs in this section.***

1. **Description of the Part (Phase) of the Project**

Start typing first paragraph here. Do not change the font or size and indent each paragraph as indicated. The font color must be black. ***Write at least two paragraphs***.

Start typing second paragraph here.

1. **System Block Diagram with Explanation of the Part (Phase) of the Project**

Start typing first paragraph here. Do not change the font or size and indent each paragraph as indicated. The font color must be black. ***Draw the system block diagram of the phase of the project. Write at least two paragraphs to explain the system block diagram.***

Start typing second paragraph here.

1. **Flow Chart for the Algorithm Developed or Steps for the Application Software used if applicable**

Start typing first paragraph here. Draw the Flow Chart of the Algorithm developed for the phase of the project.

***Insert Flow Chart / functional block diagram. Write at least two paragraphs as an explanation.***

Do not change the font or size and indent each paragraph as indicated. The font color must be **black**.

Start typing second paragraph here.

1. **Source Code for the Programming if applicable**

Start typing first paragraph here. The font color must be black.

***Describe the source code written for the phase of the project and insert the relevant source code.***

***If you did not develop the Algorithm, then indicate it by writing that you did not develop the algorithm and instead you used application software.*** ***Indicate that you have described the Application Software in the next sub-section and copied the source code written by you for your application software.***

1. **Data gathered, Description of the Application Software, and Code written by students if applicable**

Start typing first paragraph here. The font color must be black.

***Describe the source code written for the phase of the project and insert the relevant source code.*** ***Indicate if you have not used application software and instead you developed an algorithm as described in the previous sub-section.***

**CHAPTER-2**

**ESTIMATED BUDGET**

Start typing first paragraph here ***describing what is involved in the estimated budget of a project.***

Start typing second paragraph here

1. **Bill of Material: Name of Parts (Components used), Quantity, and the Price of the components if applicable**

**Bill of Material (BoM) if applicable**

Start typing here. ***Write a few sentences to explain the following Tables for the BoM.***

**Table # \_\_\_: Bill of Material for Phase of the Design Project Involving Hardware**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.#** | **Part Description** | **Part Number** | **Quantity** | **Unit Price** | **Total Price** |
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|  |  |  |  |  |  |
| **Total Cost** | | | | |  |

1. **Cost in Terms of Design Time**

Start typing here. ***Write a few sentences to explain the following Tables for the cost involved in terms of time spent on designing this phase of the project or cost of the algorithm developed for this phase of the project.***

**Table # \_\_\_: Bill of Material for Phase of the Design Project Involving Cost in terms of Design Time**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S.# | Task Performed | Name of Team Member Responsible | # of Hours | Cost per Hour | Total Cost |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Total Cost | | | | | |

1. **Cost in Terms of Algorithm Development /Application Software Usage Time if applicable**

Start typing here. ***Write a few sentences to explain the following Table for the cost involved in terms of time spent on designing this phase of the project.***

**Table # \_\_\_: Bill of Material for Phase of the Design Project Involving Time Spent for Algorithm Development / Application Software Usage**

|  |  |  |
| --- | --- | --- |
| S.# | Name of Team Member | Total Number of Hours Worked |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |

**CHAPTER-3**

**PRACTICAL WORK AND EXPERIMENTATION**

1. **Testing and troubleshooting of Circuits if applicable**

Start typing here. ***Write a few sentences to explain the circuit you are testing***. ***Draw a complete circuit diagram of the circuit designed for this phase of the project and explain what kind of test did you perform to confirm the appropriate functioning of the circuit.*** ***List the Testing and Measurement equipment used during testing and tabulate the results with explanation.***

1. **Debugging of System or Service Methods used if applicable**

Start typing here. ***Write a few sentences to explain the methods of collecting data for the system you are debugging and explain what kind of debugging or service methods you have used to collect data, troubleshoot your system, debug your codes for simulation, and what kind of equipment/tools you have used to perform these tasks. List the functions / module / toolbox used during the debugging and tabulate the results with explanation.***

1. **Resolved and Un-Resolved Problems / Faults and Explanations**

Start typing here. ***Explain with illustrations and writing an appropriate number of paragraphs about the sections of this phase of the project that worked. What kind of problems you faced, e.g., circuit / system failures, unavailability of parts or systems you needed for this phase, and programming errors, etc.? What sections of this phase of the project did not work? What were the reasons? Write a few sentences to explain what kind of problems / faults you faced during testing / debugging and how did you detect and resolve them. List the unresolved problems / faults as well.***

1. **Future Work**

**Actions to be taken to Restore Working Condition of the Part of the Project**

Start typing here. Start typing here. ***Write and illustrate the anomalies (glitches or abnormalities) in this phase of the project. Explain the future action that you will take to restore the working condition of this phase of the project.*** ***If there are no anomalies, then explain how you will integrate this phase of the project with the whole system to implement the complete project successfully.*** ***What sections of this phase of the project did not work? What were the reasons?***

**CHAPTER-4**

**ASSOCIATED ENGINEERING STANDARDS, MULTIPLE REALISTIC CONSTRAINTS, AND SAFETY STANDARDS AND INSTRUCTIONS**

1. **Description of Engineering Standards Associated with the Project**

Start typing here. ***Write one-two paragraphs illustrating the importance of Engineering Standards in Engineering Design Projects***, ***list and briefly describe the important Engineering Standards incorporated in your project,*** ***and describe what is the impact of these standards on the project and on the Customers/Purchasers of the project***.

1. **Multiple Realistic Constraints of the Project**

Start typing here. ***List and briefly describe the important Multiple Realistic Constraints of your project,*** ***and describe what is the impact of these constraints on the project.***

1. **Description of Safety Standards and Safety Instructions**

Start typing here. ***Write a paragraph illustrating what kind of safety standards you considered with this phase of the project. Write what kind of warnings for the user / customer / purchaser are involved in your project by listing safety instructions for the users to use / operate or run the system you have designed.***

**CONCLUSION**

Start typing here. ***Write 1-2 concluding paragraphs in which you reflect on the results of this phase of the project and explain the goals achieved by the implementation of this phase. Write what you learnt from this phase of the project and draw conclusion.***

**REFERENCES**

***List the references in an appropriate format. These sources must be referenced to this list in the entire text of this phase report (e.g. [1]).***



**APPENDICES**

***Insert appendices related to component specifications, data sheets, mathematical analysis, source code, or circuit diagrams or important material downloaded from internet.***