|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Number and Name** | | |  | | | | |
| **Semester and Year** |  | | | | | | |
| **Name of Student** |  | | | UQU ID No. | | |  |
| **Date of Report Submitted** | |  | | | Grade | **100 points /10 = 10** | |

TITLE OF LAB REPORT**(10 points)**

**ABSTRACT(20 points)**

Place your abstract here. This is a stand-alone summary of the report. Abstracts are commonly encountered in electronic library databases. The primary function of the abstract is to allow the reader to obtain an understanding of what the report is about and what was accomplished.

*\*Tips*

The abstract should answer the following questions:

* What is the objective of the lab?
* Why is this objective significant?
* What type of work is performed to achieve the objective?
* What are the major results of the work achieved?
* What conclusions can be made from these results?

The abstract should never be more than one page long and should not include any references to the body of the report.

*Tips: From this abstract, the reader can make an informed decision as to whether or not the report applies to what they are researching or what they are interested in. The reader can then decide whether or not to devote more time to reading the full report.*

**OBJECTIVE AND INTRODUCTION (15 points)**

Place your objective and introduction here. State the objective clearly in a complete sentence. A few explanatory sentences may be included, if needed.

The objective should answer the question: What is the lab objective designed to determine?

The introduction must start in a separate paragraph; it provides explanation of the engineering problem. It explains the significance as well as any significant background information of the problem.

**THEORY AND EXPERIMENTAL METHODS (20 points)**

Place your architecture and experimental methods here. The theory should explain all equations, theoretical principles, and assumptions that are used in the experiment and the analysis. The primary purpose of the theory section is to show how the raw data is manipulated to become results. Relevant equations used are to be presented and described to illustrate their basis and origin. This section should include block diagrams where needed. Define all variables used in the equations. Write equations using an equation writer in a word processor. Ensure that your work does resemble the work described in the report.

The experimental methods should give a detailed description in your own words of how YOU accomplished the experimentation.

\**Tips* This should include equipment used in the experiment as well as how it was used. The description should have sufficient detail so that another experimenter could duplicate your efforts. For our case, how did you simulated your processor, how did you derive your test cases, and how did you decide that your processor was functioning correctly?

Use sketches, diagrams or photos, to describe the experimental set-up. Label the main components. Provide dimensions and material of test cases where applicable.

*Tips: Any information copied directly or verbatim from Lab manuals or other references should be stated within quotes and referred, otherwise, it is considered plagiarism.*

**RESULTS AND DISCUSSION (20 points)**

Place your results and discussion here. This is the most important part of the report. Summarize your results in the introductory sentence. Relate your results to your objective. Present the results in the easiest way for your reader to understand graphs, tables, figures, etc. Spreadsheets are often an ideal tool for organizing the data, analyzing the data, and generating graphs and tables. All tables and figures should be accompanied by comments or discussions in the text of report; use a numbering system for identification of each one. All figures and tables must have numbers and captions. While the table captions should be placed over the table, figure captions should be placed below the figure.

Explain the results of the experiment, comment on the results you obtained, compare obtained results with expected results, give probable reasons for discrepancies from the correct results, answer any questions outlined in the instructions and solve any problems that may have been presented. Tell why things happened, not only that they did happen. Implementation errors should be discussed here.

**CONCLUSIONS (5 points)**

Place your conclusions here. State your discoveries, judgments and opinions from the results of this experiment. Make recommendations for further study. Suggest ways to improve the results of this experiment.

\**Tips*

*Tips: Consider that in the real world, after graduation, upper management is very likely to read only your RESULTS and CONCLUSIONS. Beyond that, the chances are that only your figures will be skimmed. Make the most of these sections.*

**REFERENCES(10 points)**

Place your references here. Itemize any books, publication or websites that you referenced in compiling your report. Provide authors, publisher, date of publication, page number, etc. \**Tips*

*Tips: Follow the standard format for typing a reference:*

[1] Little, P., and Cardenas, M., “Use of Studio Methods in the Introductory Engineering Design Curriculum,” *Journal of Engineering Education*, Vol. 90, No. 3, 2001, pp. 309-318.

[2] Nunally, J., *Psychometric Theory*, 2nd ed., New York, N.Y.: McGraw-Hill, 1978.

[3] Lister, B., “Next Generation Studio: A New Model for Interactive Learning,”

**APPENDICES**

**In this section, you may attach anything relevant supporting your report. Examples are given here but are not limited to the listing items.**

**A. Data Tables**

Place any data tables here. Data tables are for the convenience of the extremely interested reader. These tables may contain any additional comparisons or calculations that you have prepared. RESULTS may contain only summaries of your work. Data Tables are the place to show everything that you did.

**B. Sample Calculations**

Place your sample calculations here. Demonstrate how you performed the calculations made in the experiment. Include tabular results of computations where such are made. Show the generic calculations to support all your work. Provide any computer or calculator program listings, along with sample input and output. Use equation writer in Microsoft Word or neatly write the equations by hand. An example of what can go here is the state machine conclusion of the control unit.