PROJECT TITLE

by

Name, Last Name

Name, Last Name

Group #

Final Project Report

ECE 414: Computer Organization and Design

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Project directed by

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Asst. Professor of Electrical and Computer Engineering

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ABSTRACT

Every scientific paper should contain an abstract section where you provide the main content of the report, and the problems solved without any details. This section should be addressing to a general audience, which would include people from different backgrounds who have limited knowledge on the subject you are presenting or have deep insight and expertise in the area. The abstract should be in a level where both of these groups of people should be satisfied. Therefore, someone who has no time would be able to skim through the abstract and grasp the main content and the ideas behind the report immediately. One thorough paragraph is sufficient for an abstract.

INTRODUCTION

In the introduction section you should start to give more insight to the problem in hand and be more specific about the issues covered in the report. You should also include some background information to set the stage. You can do this by referring to the literature you researched or works of others in the same field.

DESIGN and RESULTS

As the name states, this is the main part of the report where you actually provide the necessary information. Everything that comes between the introduction and the conclusion is covered under the main body of the report. Following are the main titles that can be included in the main body of your reports. You can add sections to this list where you see a need.

- Problem definition: Use descriptive remarks that reflect how you understood the problem
- Solution approach: Description of the approach you took while attacking the problem.
- Block diagram: Detailed figures showing clearly the inputs/outputs and connections between modules.
- Flowchart (of the program, the algorithm): A detailed descriptive flowchart of the program you wrote. Stick to the rules of ASM flowcharts. You can scan hand-drawn

block diagrams or flowcharts to put into your report; but keep in mind that the figures and labels must all be neatly drawn and written.

- The simulation results you obtained from your verification work. <u>Please remember that simulation results are supposed to prove that the module is working as intended; therefore, a simulation screenshot that shows wrong outputs, just high Z outputs, or insufficient amount of input combinations would be a redundant addition to your report</u>.
- Synthesized circuitry: Provide only the circuits that are crucial to the operation of the overall design. Do not give figures where blocks cannot be distinguished from one another. If there are too many blocks to be seen in a single screenshot, try to make it more understandable by adding labels.
- Necessary discussions regarding the operation of your code and the circuitry it synthesized into. You can make most of these explanations in your code with comments; try to keep it concise in the text.
- Performance metrics: Provide important performance metrics such as timing, power and area in tables for all the submodules and for the overall design.

Use a divide and conquer method until you reach a reasonable sized sub circuit and present the material described above for each one of them as well as the top module of your design. This requirement implies that you should have a hierarchical design rather than a bunch of unrelated code segments.

This concludes the main body of your report. Don't hesitate to include any comments or descriptions where you think it is necessary. The main body of the report is essentially a detailed version of the steps you complete during lab exercises.

CONCLUSION

This is the last section of a formal report. In a conclusion section, you should restate the tasks completed – naming the steps covered for each- and give short results of the work covered. Such as; listing down any errors or problems encountered, significant outputs obtained etc. Then conclude this part by naming what sorts of information you gained and

improvements you achieved by completing this work. You can also include your suggestions for possible improvements in the work that had been completed.

REFERENCES

All the references should follow the same format. A format you can use is as follows:

[1]   O. Tigli, M. Zaghloul, "Fabrication and Characterization of a Surface Acoustic Wave Biosensor in CMOS technology for Cancer Biomarker Detection," *IEEE Transactions on Biomedical Circuits and Systems*, Vol. 4, No.1, pp. 62-73, Feb. 2010.

[2]

[3]