# University of California at Berkeley College of Engineering Department of Electrical Engineering and Computer Sciences Computer Science Division

CS 150
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Project Info.

### Final Project Demonstration and Report

This document has information that you will need to know to receive credit for your project.

#### 1 Demonstration

Project demonstrations and final checkoffs will take place the last week of classes (5/1-5/4), during normal lab periods. You must demonstrate your project during your normally scheduled lab section. There will be no make-up time for demonstrations except in the case of medical emergencies.

Both project partners must be present for the final checkoff. Come prepared to answer questions about your design; how it works, and why you made the design decisions that you did. You will be asked to compile your design in our presence and leave us with an electronic copy of your design files and the configuration files that you will use for the demonstration.

It is very important that you have something working at the demonstration. If you decide to make last minute changes before the demonstration, be certain to save away a copy of a working version of your project. That way, if something goes wrong at the last moment, you will still have something to show. And remember, a working project that does not meet all the specs is worth more that a project that meets all the specs but doesn't work! Also, any feature or funcionality that you would like to receive credit for, you must demonstrate, even if this means presenting multiple configuration files.

# 2 Final Report

A short final report is due before noon on Monday 5/8. The report can be no more than 10 pages of text and 10 pages of figures. Better reports mix the text and figures together.

Here is a suggested outline and page breakdown for your report. You do not need to strictly follow this outline, it is here just to give you an idea of what we will be looking for.

- 1. Project Functional Description and Design Requirements. Describe the "user-level" operation of the synthesizer. ( $\approx 1 \text{ page}$ )
- 2. Theory of Operation. Describe how the hardware achieves the functional requirements. What is the main algorithm? ( $\approx 1 \text{ page}$ )

- 3. High-level organization. How is your project broken down into pieces. Block diagram level-description. ( $\approx 1$  page)
- 4. Detailed Description of Sub-pieces. Describe how your circuits work. Concentrate here on novel or non-standard circuits. (≈ 2 pages)
- 5. Status and Results. What is working and what is not? ( $\approx 1$  page)
- 6. Division of Labor. This section is mandatory. How did you organize yourselves as a team. Exactly who did what?  $\approx 0.5$  pages)
- 7. Conclusions. What have you learned from this experience? How would you do it different next time?  $\approx 2$  pages)
- 8. Appendices. Any material too bulky for inclusion within the main text. For instance, more complete schematic diagrams or state transition diagrams.

When we grade you report, we will grade for clarity, organization, and grammar. Make sure to proofread and correct mistakes before turning it in.

## 3 Project Grading

Most of the project points are based on functionality (meeting the specification) and organization. We will base these points on the final checkoff and demonstration along with what you present in the report. Therefore the final report is very important, because it helps us assign functionality and organization points. It is also graded as a design document based on clearity and organization (this part is the 10% shown in the table below).

Design (Functionality and Organization): 80%

Checkpoints: 10%

Report: 10%

Extra (at most): 20%

No extra credit will be given to projects not meeting the minimal requirements.

#### 4 Kit Turn-in

Your last job will be to disassemble you project and return the parts along with the rest of your lab kit. You must remove the wire wrap wires and wrap-ids from your FPGA board before you turn it in. Do this carefully!

Return you lab kit to 204B Cory on Thursday 5/11 8-5 or Friday morning 5/12 8-noon.

# 5 Important Dates

 $M{-}Th$ 5/1-5/4Final Project Demonstration. 5/4Last Lecture. Fri 5/8 (noon) Project Report Due Mon. 5/11 8-5Thur Turn-in Lab Kits. 5/12 8-noon Fri  $_{\mathrm{same}}$ 5/12Final Exam. Wed Fri 5/17Graded Exam Available 5/19Final Grades Posted Mon