Georgia Institute of Technology

School of Computer Science

CS3220: Fall, 2015

Project 4: Devices and Bussing

Version 1.1

Due: Monday, November 28th, 2015 at 11:55pm

Project description:

In this assignment, you will extend your pipelined processor with more realistic I/O devices and write an application for your new processor that implements the egg timer from Project 1. The requirements for the egg timer are defined in the device_reqs file.

To get full credit:

- Your processor must support the specified I/O devices
- You must write stopwatch.a32 (including stopwatch.mif) implementing the egg timer from Project 1.

Professor's message: Do not procrastinate.

What to hand in via T-Square:

There are two things you have to submit.

(1) A brief 1-page report (PDF). You should write this report by yourself (**your partner will write his/her own report and submit it**). The report should describe the approach taken, which problems were encountered and how they were fixed, and what the student's own contribution (i.e. which member of the group did what) to the project was. Note that it is fine if the two members of the group worked together (as in, sat together and got something working), and it is OK to say so in the report. **If your report is missing, you will lose 50% of the points that you would otherwise earn**. You should follow the following specific naming format:

DBProc[Student's Full Name].pdf (e.g. DBProcJongsePark.pdf).

(2) Quartus Project that includes Verilog files (ZIP file)

You must submit a zip file containing the entire Quartus project directory that includes your Verilog code. The zip file must include stopwatch.a32 and stopwatch.mif that implements the egg timer. The project directory name and the

zip file name should comply with the following naming formats:

Directory: DBProc[Student's Full Name] (e.g. DBProcJongsePark)
Zip file: DBProc[Student's Full Name].zip (e.g. DBProcJongsePark.zip)

Finally, you should submit the **two** files through t-square. (PDF file + ZIP file)

Rules:

This project is a team project so you should work together with your teammate. The project file you submit should be the same as the one submitted by your teammate but you should write your own report by yourself (your partner will write his/her own report and submit it).