CSCE 587 Microprocessor Design and Synthesis

Homework 4 –RAM, Tile Graphics and Sprite Generation

Assignment (150):

Perform the following tasks and submit homework to <u>doug@sidechannel.net</u>. Zip all files into a single file named <lastname>-hw04.zip. Strive to keep final zip file as small as possible. (Don't send multi-MB pics – shrink/reduce size to something reasonable.)

- 1. (50) Read chapter 14 on different RAM styles (synchronous vs asynchronous, tristate, etc.) and recreate the animation for the "RAM Text Display" example.
- 2. (50) Read chapter 17 and recreate the "Sprite Bitmaps" example with a car positioned near the center of the screen.
- 3. (50) Read chapter 18 and recreate the "Sprite Rendering" example that uses the FSM-based renderer module. Use the key buttons to move the car around the screen.

Notes:

• I've supplied my projects for both the digits and bouncing ball. Please use them as starting points for the problems above.