LAB Assignment #7 for ECE 443

Assigned: Wed., Oct. 27, 2010
Due: Wed., Nov. 10, 2010

Description: Adding a state machine to the VGA code that causes the ball to track to the paddle like a guided missle

Add a score component to the VGA code.
- IDLE: make this state active after reset. Also, when the ball is headed to the left (away from the paddle), return to the 'idle' state within the state machine. When the ball reaches the wall, enter 'start' state.
- START: Compute initial direction toward paddle, goto 'track' state.
- TRACK: Stay in the track state, updating direction of ball constantly so that it tracks the possibly moving paddle. Goto to 'score' state if ball reaches paddle. If ball passes paddle, goto 'idle' state.
- SCORE: Add one to machine score, goto 'idle'

Laboratory Report Requirements:

No laboratory writeup required: Prepare to demo your code in class using a monitor that I will bring.