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EE 421: Digital Electronics

LED Blink

For the LED blink project I used the code from the assignment and implemented the 32 bit clock (figure 1). I then set different bits of the clock to correspond to different LED's, the last bit blinking at 50MHz (every 85 seconds) and the 25th bit blinking about every 1.3 seconds. The register transfer level (RTL) diagram is shown in figure 2, the DE1 LED port map is shown in figure 3, and the simulation result is shown in figure 4.

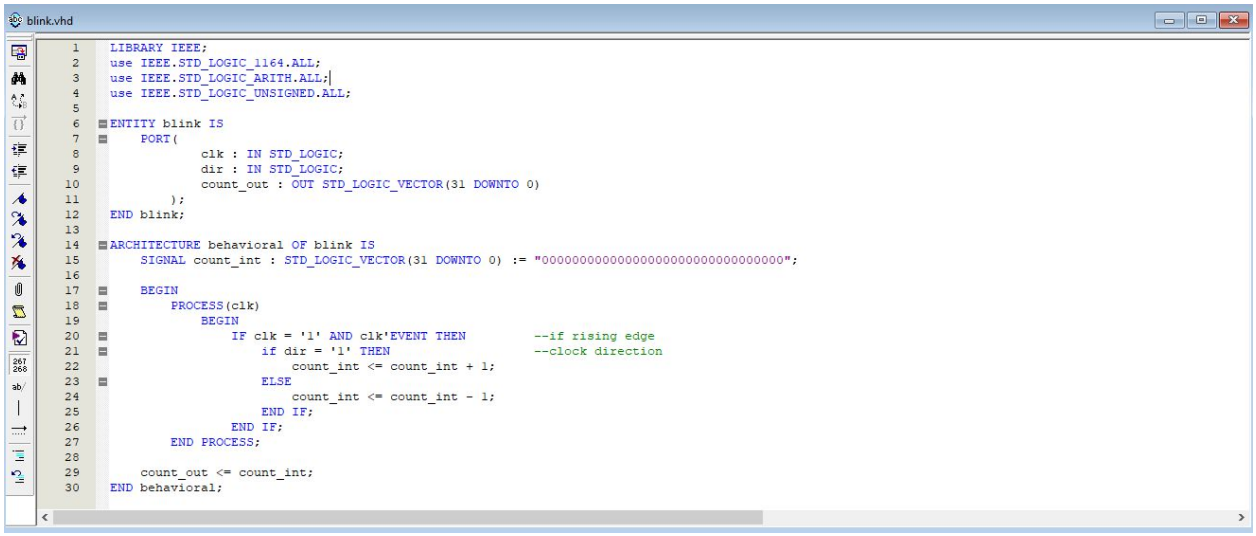

Figure 1: VHDL LED Blink Code

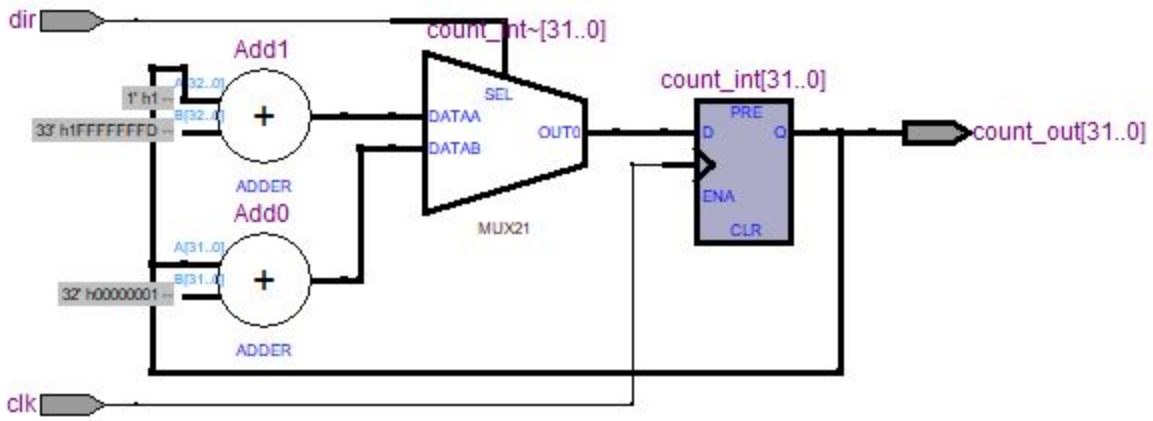

Figure 2: RTL of the Counter Circuit

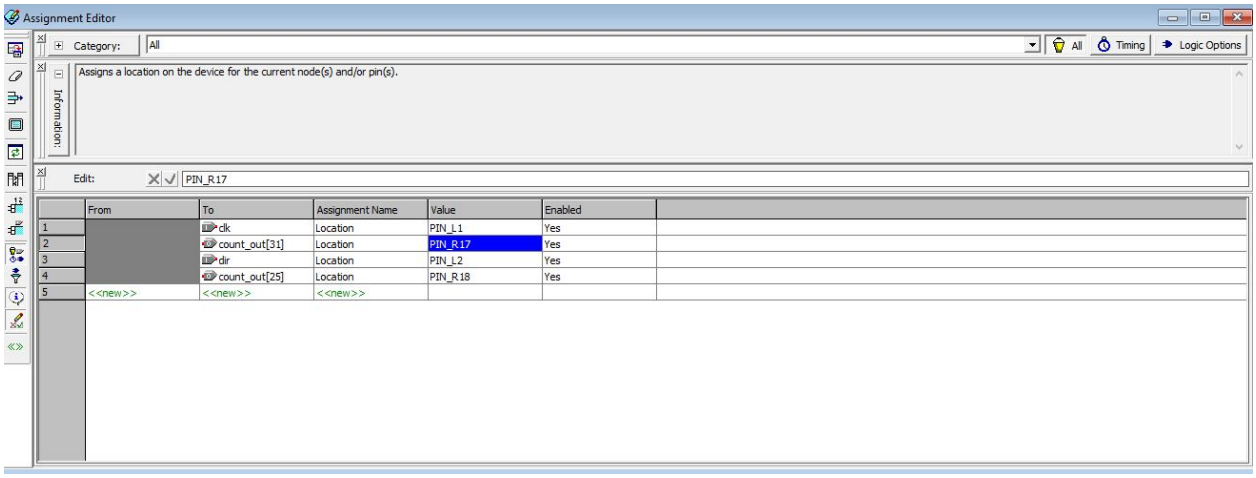

Figure 3: The DE1 LED Port Map

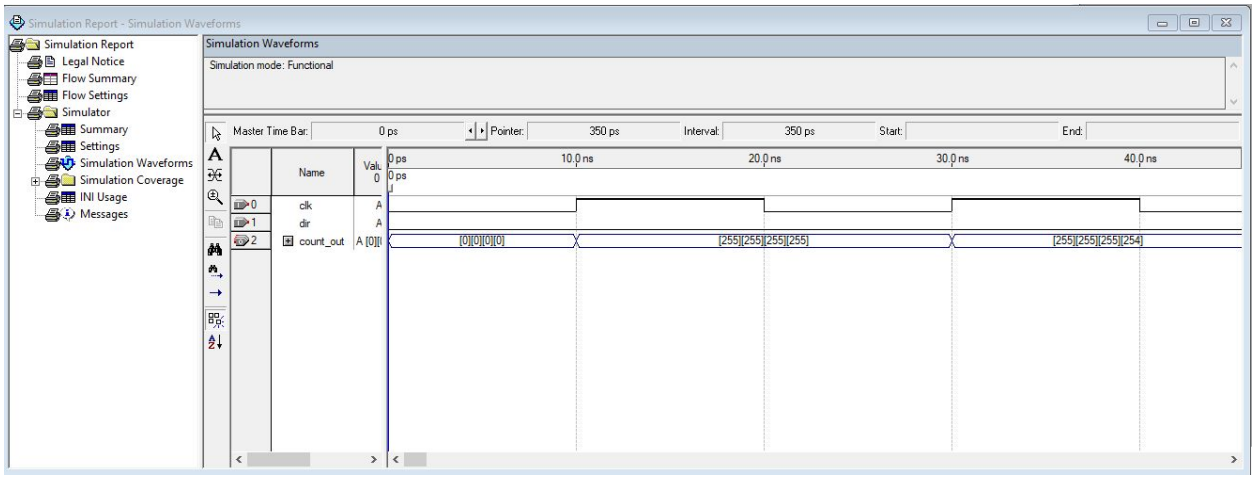

Figure 4: Simulation Results