EECS 140: Prelab12

Latches FlipFlops1

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Please answer the following questions and submit to your TA at the start of the lab:

1. What is the purpose of a latch?

The purpose of a latch is to be used as a memory devised, it can store one bit of information as long as the device is powered on. Since it can store a single bit of information, it thus can change that information when a signal is applied to the latch.

2. How many flip-flops are required to implement a 16 bit register?

`n` flip-flips are required to implement a `n`-bit register, thus 16 flip-flops are required to implement a 16-bit register. 16 bits are needed as 2n ==> n = 16

3. What is the purpose of the VHDL ATTRIBUTE statement in the code snippet shown?

The attributes are features of VHDL that will extract additional information about an object (Signal, Variable, or Type).

4. How will we test the functionality of the gated D latch in this lab?

VHDL code can be written for gated D latch along with a test bench to test the functionality of the gated D latch in this lab.