ECE2372 Modern Digital System Design Project #2

Due Time: Class time 5/2/2019

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1. Please purchase the digital design kit from the IEEE Office in the basement of EE building. The price is 25$.**IEEE office only accepts cards, no cash purchase is accepted.**

Note: It is not mandatory that you have to buy from IEEE office. You can purchase from any other stores/website also.

2. Watch the video tutorial prepared by Dr. Changhzi Li at:

http://youtu.be/KuIRDWoK6nA?list=PL1240C8DB435DC607

Note:

(a) At the end of the video tutorial, the instructor mentioned this project as 'Project #3'. Actually it should be 'Project #2', which is this project.

3. Complete the following task, keep your design on your breadboard, and bring it to class for grading.

Task (10 points):

(1) Implement a Full Adder circuit using AND,OR and Exclusive OR gates from the digital kit;
(2) Use the LED to display output, so that if any line is logic HIGH, the LED will be turned on;
(3) Use 10-pole dip switch for the input and selection, so that the switch can control HIGH/LOW states for the three inputs.
(4) When checking the project, you have to demonstrate correct output when 000, 001, 010, 011, 100,101,110,111 are used as the input pins.

Note:

(1) Remember to use a resistor to protect the LED as explained in the video tutorial;
(2) For the regulator, you can add input and output capacitors as shown on the datasheet to make its performance better.