Problem 1. Build a Two 4 bits 2’s complement binary number adder. Use question 9 and 10 in lab 2 to test the adder (i.e. 0101+0110, 1111+0001, 0101+110). Test with different binary number without error. Please label all objects.

0110

Input: Output:

0101

Two 4 bits Binary Number Adder

Problem 2. Build a Two 16 bits 2’s complement binary number adder. Use question 9 and 10 in lab 2 to test the adder (i.e. 0101+0110, 1111+0001, 0101+110). Test with different binary number without error. Please label all objects.

0110

Input: Output:

0101

Two 16 bits Binary Number Adder

Problem 3. Build a 8-Bits-Register with one 8-bits binary number input pin, one Write-Enable (WE) input pin, one Button click to enable the clock, one 8-bits output pins, and a LED Matrix to display the bits pattern. Test with different binary number without error (all green). Please label all objects. Submit both projects in a .circ file. Submit s

Reset Button

Enable

101

0101

01010110

01010111

Input Output

Register