Simple CPU Project Demo Handout + Memory Table Fill Out

1. Block Diagram with all components and connections labeled.
2. Complete Case Statements in Control Unit to assign the current state.
3. Complete the output for each state in the Control Unit.
4. Complete Simple CPU Port Mapping
5. Pin Outputs
    a. Show the output on LEDs.
        i. aOut (Accumulator Output) to fill in the table.
        ii. Set the clk to a push button to increment each instruction from memory
    b. Provide Waveform simulation of all inputs shown in the screenshot demo at the end of the in-depth handout (note: your result will be different since the RAM memory contents are different).
    c. **IF outputs (Accumulator) are shown on 7-Segment Displays +5 Bonus Points**
6. Turn in Final Report (one per group)

Simple CPU's Function:

Memory Data					
RAM	**Binary**	**OpCode**	**Address**	**Value**	**Accumulator**
0	00000101	000 – loadA	00101 – 5	6	6
1	00100011	001 – addA	00011 – 3	7	13
2	01000111	010 – storeA	00111 – 7	13	--
3	00000111	000 – loadA	00111 – 7	13	13
4	00101000	001 – addA	01000 – 8	1	14
5	00000110	000 – loadA	00110 – 6		
6	00010100	000 – loadA	10100 – 20		
7	00001101	000 – loadA	01101 – 13		
8	00000001	000 – loadA	00001 – 1		