To Create A Non-Sequential Timing Diagram

Setup your circuit using hex keypads. Be sure to label all the input lines (a3 – a0 and b3 – b0) and all the output lines (s3 – s0). (Note: In this circuit, the clock is added in order to produce the timing diagram. If the device you are using requires a clock input then you need not add another clock)

Here in the timing diagram you can see that the value of the input changes.

The timing diagram should be allowed to run until the output value stabilizes.

You should annotate one segment of the waveform after the output stabilizes. From this annotation we can read that 0101 + 0100 = 1001