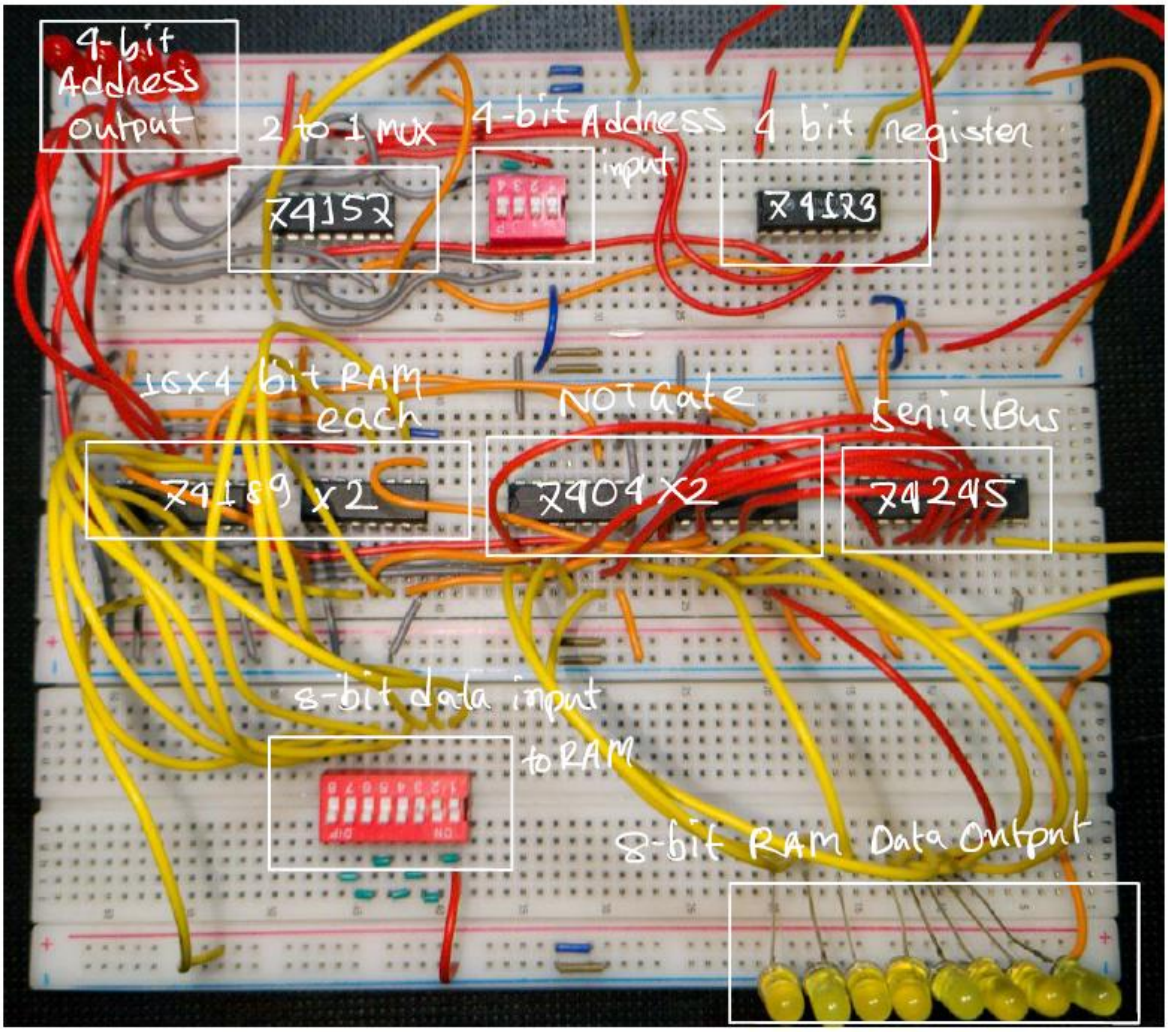
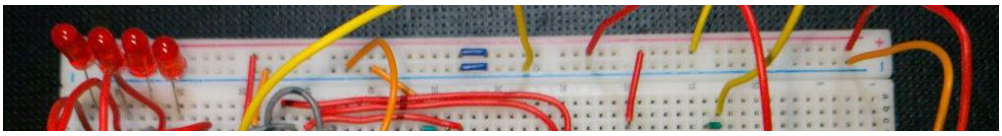
Hardware Implementation:



Description:



For controlling the leds , a 4 bit address input is also used .

For supplying power to the leds , a 5V dc supply is used . After passing from switches , the signal is being encoded from this 2 to 1 multiplexer (IC 74153) .

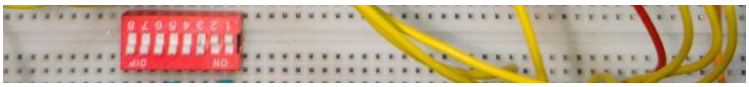
The encoded signal is being stored in register (IC 74173) .

*As our motive is to make a 16 * 8 bit RAM Module , we have to make this data 8 bit memory address . For this , we will use two 16 * 4 bit RAM .*

Two not gates (IC 7404) is also used for addressing decoding abd controlling signal generation .

As serial bus (IC 74245) is suitable for faster memory access , it is also used .

Which of the 8 bits will go to output will be determined by this 8 bit data input to RAM .



At the output , we will use 8 led as a indicator of 8 bit RAM data output .