Working Principle of Dot Matrix Module:

We are using four 8x8 display dot matrix .We want a resolution of 16x16 dot matrix using these four dot matrix . We connected row so that it gives the resolution of 16 row by wiring and 16 column by wiring.

Now to connect these 16 rows and 16 columns we need 32 pins. So to reduce number of pins we used a 4 to 16 decoder (74HC154en) .So 16 columns will be connected through the decoder sixteen output pin. 16 pins of rows will be connected to the PORTD and PORTB. Input of the rows will be 5v but input of the column will be 0v to enlighten a specific point. As we can enlighten only one point at time. So we must have to use multiplexing to show any structure. Multiplexing is the process of showing only one point at a time but so fastly that our eyes can’t differentiate the time interval so we will see this like a complete view. So using multiplexing we can do our task.