Dot Matrix Display

The problem with the 7 segment display is that it does not allow for complicated characters and it does not support colours. This is where the **dot matrix display** can help us. For each dot, it has two colours (red and green), and the setup allows us to program any character we need.

The drawback to these advantages is that all three ports are needed by the display. The **Port C** controls the **column select**, e.g. 10000000 selects the right-most column while **Port A and B** control the **row select**, e.g. 01111111 selects the top-most row. Port A gives the green LED while port B gives the red LED. Thus, to turn on the top-right green LED we have to use 11111111 on Port A to turn it off, 01111111 on Port B to select the top row’s green LEDs and 10000000 on Port C to select the right-most column.