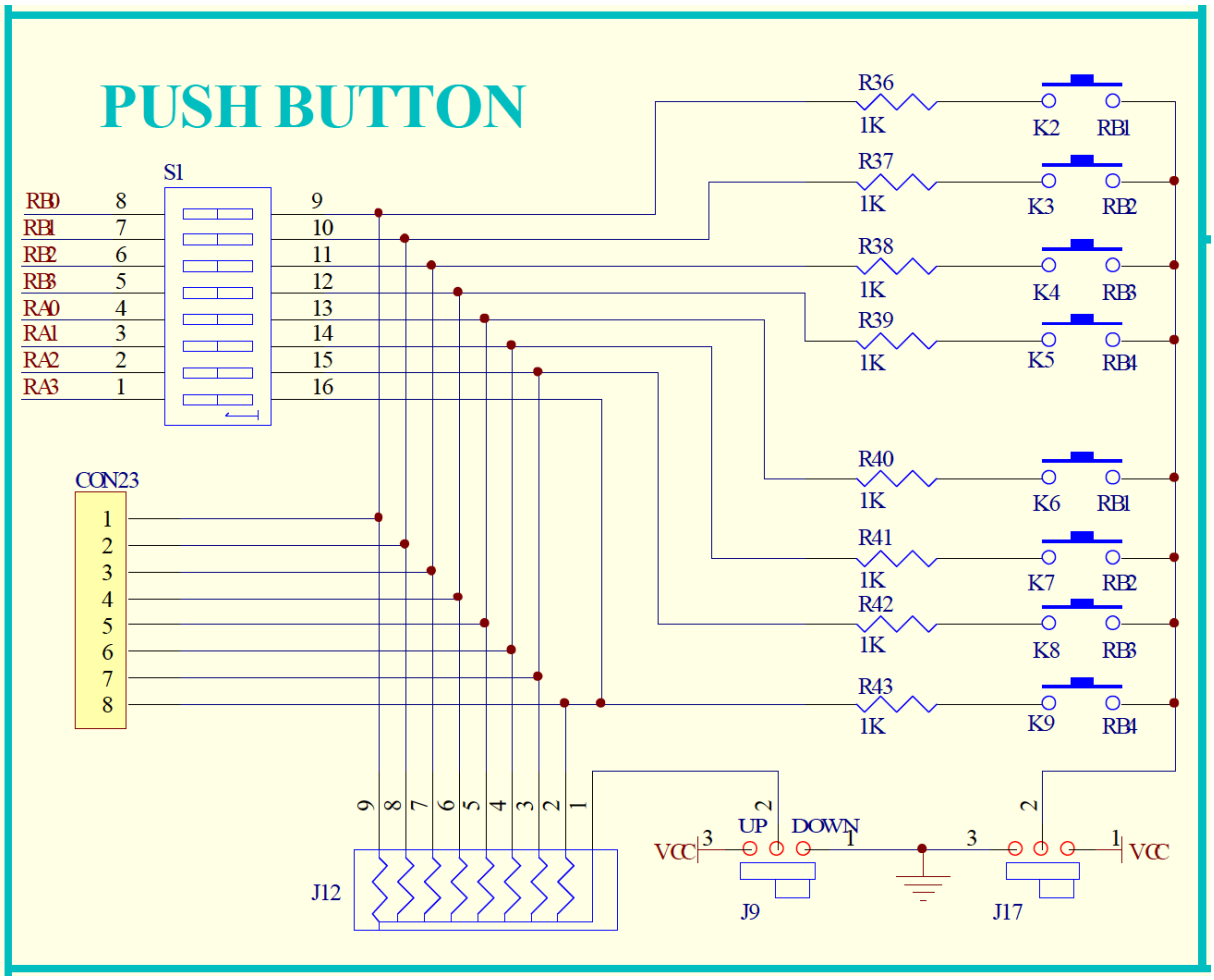
Laboratory 04 – Buttons

If you have not completed your previous lab, carry on with that and make sure you understand all the codes.

Task 1: Write a driver to detect the events of buttons being pressed.

Resources you will need (all on Canvas site):

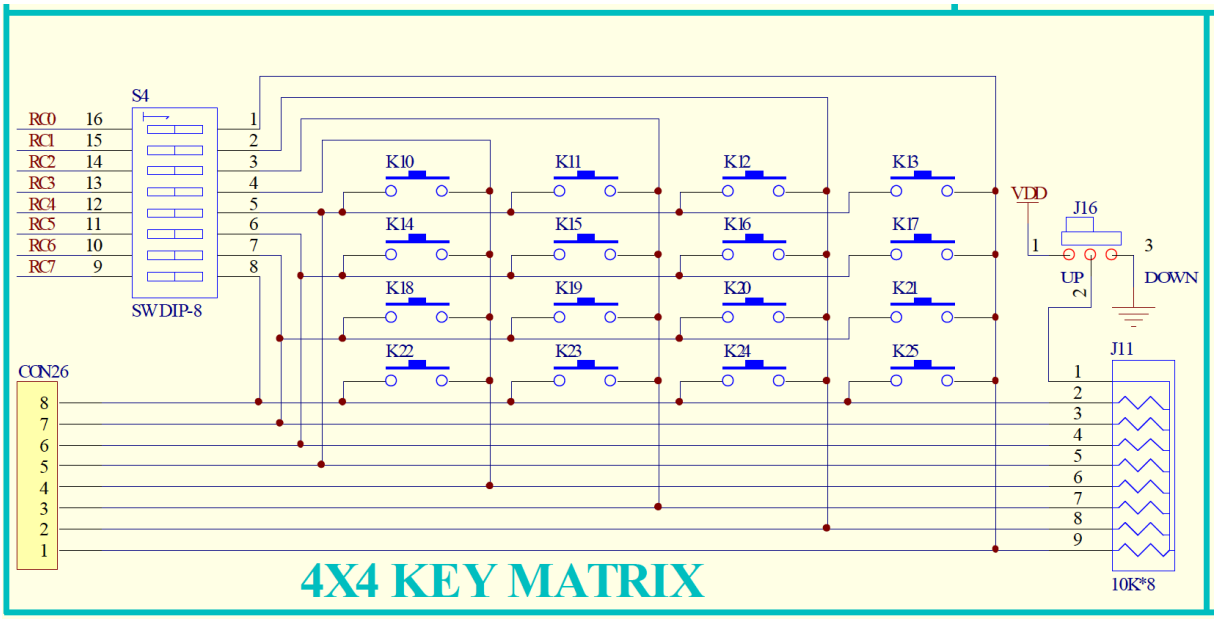
- PIC datasheet
- QL200_SCH.pdf



Tips:

- Think carefully what will be input and output (design signature of the function), make a clear interface to the function and you can call it easily when needed.
- Check the Jumper J9 and J17, so you know whether you should listen to high or low.
- Try to use bit shifting and loops to detect the events smartly.
- Reuse the headers and code structures from previous labs;
- Configure PORTA as digital mode
- Deal with jitters when buttons are pressed.

Task 2: write a driver to detect the key matrix events



Resources you will need (all on Canvas site):

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Tips:

- PORTC needs to be configures so 4 pins are input and 4 pins are output mode
- define the key positions and map it to the input pin event