

ECE 428 WEEK 8

- 1) Design R-2R Ladder circuit like in the **Figure-1**. Use it as a Digital Analog Converter (DAC). Generate saw tooth, triangle and square waves by using CCS C in PIC16F877A.

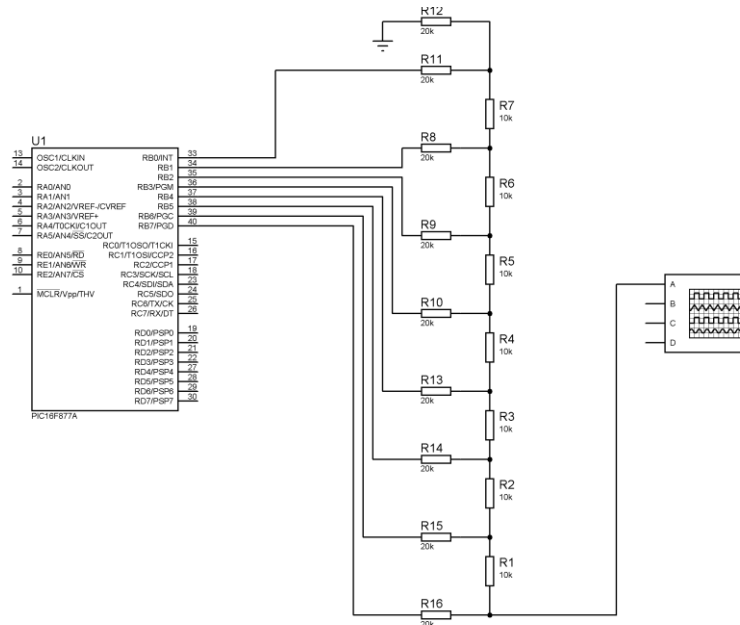


Figure-1: R-2R Ladder Circuits

- 2) Activate Analog Digital Converter in the PIC16F877A. Use adc_channel zero as the analog input pin. Generate a sine wave with 5V peak to peak with offset of 2.5V. Frequency of the signal should be set as 100 Hz. Convert analog values of sine wave to digital values then regenerate sine wave by using R-2R Ladder DAC. Connect original Sine wave and the regenerated one to the oscilloscope, observe the results.