# Homework 8 Due Monday Upload to Canvas

- We are given that we want to be able to resolve the temperature in 1 degree Celsius increments over a range of 0 degrees to 125 degrees Celsius

- Determine the following:

  1. How many codewords are needed to provide an accuracy of 1 degree over the temperature range given

  2. Provide the number of bits (N) along with how many unique values that it can attain (X)

  3. Show that if you choose N-1 bits there is not enough unique codewords to meet the requirements

  4. Suggest an assignment of codewords for EVERY degree over the range 0 to 125 degrees Celsius. You MUST use a Microsoft Excel spreadsheet to form your table

     - Make sure you include ALL codewords even if they are not to be assigned to any temperature
     - Clearly indicate which codewords are unassigned

- You must use a word processor to document your assignment. Please use Microsoft Word and produce a professional looking document. For credit you must upload your word document as a .docx file **AND** your excel spreadsheet as an .xlsx file to Canvas