## $\rm HW01$ - Due Sunday 7 February 2016 before 11:59 PM

Dr. Touma

January 28, 2016

Write a C program that lets the user input the grades for a number of students (a variable) and computes the following:

- 1. the average of the grades  $(\mu)$
- 2. the variance of the grades  $(\sigma^2)$
- 3. the highest grade
- 4. the lowest grade
- 5. a table showing the distribution of grades (use my grading scale for this)

You need to use looping constructs, if and if-else or select-case. Go back to the first lecture and see the code on how to nicely format the output.

Here are the formulas for the mean and variance for a sequence of numbers (array)  $x_i$ 

$$\mu = \frac{\sum_{i=1}^{n} x_i}{n}$$

$$\sigma^2 = \frac{\sum_{i=1}^{n} x_i^2}{n} - \mu^2$$