CS 250
Homework 1

You should not write an entire program for a question unless the question specifically asks.

1. A CS 250 homework assignment is worth 20 points. It is due on Feb. 1 at 11:30 a.m.

   (a) If it is submitted late on Feb. 1 at 12:05 p.m., how many points will it be penalized?

   (b) If is is submitted late on Feb. 4 at 11:29 a.m., how many points will it be penalized?

2. A CS 250 student earns 795 points during the semester. What grade will the student get in the class?

3. On page 13 of the text is a program to print a table of Fahrenheit and celsius temperatures from 0 to 300 in steps of 20. Rewrite this program to conform to the following specifications:

   - It should use `const` declarations for any literal values that have a special meaning in the program.
   - It should count by 5 instead of 20.
   - It should print Fahrenheit, and the corresponding Celsius, Kelvin, and Delisle temperatures.[1]
   - The Fahrenheit temperatures should be printed as decimal values in a field width of five. All other temperatures should be printed as floating point values with a field size of 10, and five decimal places.

4. Write a function that counts the number of vowels in the input, up to the next newline or until the input is done, whichever comes first. The function should return this number, and it should have the following prototype:

   ```
   int count_vowels();
   ```

[1] To convert Fahrenheit to Kelvin, use the formula $k = (f + 459.67) \cdot \frac{5}{9}$. To convert a Kelvin temperature to a temperature on the Delisle scale, use the formula $d = 560.025 - \frac{3 \cdot k}{2}$.