Exercise sheet 1
(Submit by email to dm@sfs.uni-tuebingen.de before class on Thursday, May 22)

Write the little programs below, naming them nr1.py, nr2.py, etc. Save them in a folder ex1-*userid* (e.g., ex1-dm) and send me an email with a tar.bz2 archive of that directory. Please make sure that it unpacks to a directory ex1-*userid*, not the individual files.

1. Create a program that will convert Fahrenheit to Celsius and vice versa. The program should ask users to enter the temperature in Fahrenheit or Celsius, e.g., 32F or 20C, and print out the temperature in the other system. Use the equation C = (5/9)(F - 32).

2. Create a program that will check a string to see if it is a palindrome. The program should ignore spaces, punctuation, and capitalization. Some example palindromes:
   - race car
   - evil olive
   - Dammit, I'm mad!
   - Madam, in Eden I'm Adam.
   - Do geese see God?
   - Never odd or even.
   - Devil never even lived.
   - Yawn. Madonna Fan? No damn way!
   - A man, a plan, a canal – Panama!
   - Are we not drawn onward, we few? Drawn onward to new era?

3. Write a program that will read in a line of text and print out how many times each letter occurs in the text, ignoring capitalization and spaces. Example:
   Input: This is a test.
   Output: t   2
           h   1
           i   2
           s   3
           a   1
           e   1