CS142/IT501 **Assignment 5** Spring 2016

Given: Fri Feb 19
Due: Thu Feb 25, 11 a.m.

1. (48%) Revise the class `Song` you created in the previous assignment by doing the following:

   (a) Create an exception class `SongError` modeled after the exception class `PayCalculatorError` we saw in class. Then add some error-checking to the third constructor of `Song` by having that constructor throw a `SongError` in case either of its arguments is an empty string. Write a test driver. (This test driver should use the constructor and catch any possible exceptions.)

   (b) Add some error-checking to the input operator. The operator should check that neither input line is empty. If that's the case, the song should be left unchanged and the stream should be put in an error state. Write a test driver. (This test driver should use the operator and test the stream for possible errors.)

2. (24%) Create a function `append(v1, v2)` that adds a copy of all the elements of vector `v1` to the end of vector `v2`. The arguments are vectors of integers.

3. (28%) Add a *jump* command to the file viewer. This command asks the user for a line number and redisplays the file with the requested line at the top. In case the user enters an invalid line number *N*, the program should print the error message *ERROR: N is not a valid line number*. This error message should be displayed at the top of the window, just like when a file does not open. Note that you'll also need to revise the *previous* command

to ensure that it doesn't move past the beginning of the file after a jump. Change the original specification, design and implementation of the program as little as possible. (Make sure to hand in all the source files so we can compile and run the program.)