CS 2204: Homework #4

Assigned: October 3, 2005
Date Due: next week, in your assigned lab session
What to turnin: A legible paper copy giving your answers

Write `sed` commands to operate on a file and perform the following operations.

1. (3 point) Reverse the lines in the file, so that the last line is output first and the first line is output last.

2. (3 points) Print the lines containing the string 'president'. However, the letters in this string can be arbitrarily capitalized, e.g., 'President', 'PRESident', 'PresideNt', and so on. We do not know *a priori* which forms are possible. Nor do we want to write the command so that it enumerates every possible form (which would be very painful). Note that the lines must be printed as they appear and should not be changed.

3. (4 points) Search for the string 'Virginia Polytechnic Institute and State University' in the file and replace it with 'Virginia Tech'. However, we do not know *a priori* whether the string will appear on a single line, or over two lines (you may assume that it will not occur over three lines). For the sample six-line input file:

```
In the picturesque hamlet of Blacksburg lies the renowned Virginia Polytechnic
Institute and State University, an institution established in 1872.
Its challenging academic standards attract high-achieving students.
Dr. Charles W. Steger is the president of Virginia Polytechnic Institute
and State University. His ties to Virginia Tech span four decades.
Virginia Polytechnic Institute and State University is also famous for
```

the output must be:

```
In the picturesque hamlet of Blacksburg lies the renowned Virginia Tech,
an institution established in 1872.
Its challenging academic standards attract high-achieving students.
Dr. Charles W. Steger is the president of Virginia Tech.
His ties to Virginia Tech span four decades.
Virginia Tech is also famous for
```