CS 2413 Test 1

1. **[10]** You made a mistake in writing a program, `program.c`, and sometimes called a function, `deltaf()` with the wrong argument, `distance` instead of `speed`. The argument may or may not have spaces around it. Write a sed command which will change all occurrences of `deltaf(distance)` to `deltaf(speed)` This should modify the file `program.c` storing the result in `program2.c`. The command should be entirely on the command line.

2. **[15]** Write a single sed script which will do all of the following:

   (a) reduce all white space (blanks and tabs) to a single space,

   (b) delete all blank lines (no **non-blank** characters) and

   (c) change, on all lines starting with "/*" and ending with "*/" (* is not meant as a wildcard here), any occurrence of "perl" to "PERL".

3. **[15]** Write an awk script which adds the contents of the third field on every line that begins with "Income" and the second and fourth field on every line that begins with "Interest". The third field of every line that ends with "Expense" must be subtracted. At the end of the input, the total should be printed in a line **similar** to:
   "Total = $12000.00"

4. **[15]** Write a perl script that will read in lines from the files given on the command line and print out all comment lines without the leading "/*" and the trailing "*/". Assume that all comment lines begin with "/*" and end with "*/".

5. **[15]** You have several files which contain the pathnames of the root directories of source trees. Write a perl script that will print out a list of all TeX and Postscript files (*.tex and *.ps) which lie below the directories whose names are given in these files.

6. **[20]** Write a single perl script which will read from stdin and will

   (a) reduce all white space (blanks and tabs) to a single space,

   (b) delete all blank lines (no **non-blank** characters) and

   (c) change, on all lines starting with "/*" and ending with "*/" (* is not meant as a wildcard here), any occurrence of "perl" to "PERL".

7. **[20]** Write a Perl program, called ileaf, which will interleave the lines of a file with those of another file writing the result into a third file. If the files are a different length then the excess lines are written at the end. A sample invocation:
   `ileaf file1 file2 outfile`