CSE 333 – SECTION 1

C Review and problems

A bit about us

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Sections Content

- A mix of problems, short presentations, demos and project help.
- Solve an interesting problem every week.
- Section work submission through Dropbox on Fridays at 11pm.
- Section Grading: Coarse grading (0 and 1).
  - 1 for satisfactory, credible effort.
  - 0 for no submission or unacceptable work.

Problem 1: Word Count Program

- Write a C program that counts characters and lines in a file whose name is given on the command line.
- Go through C libraries for file I/O operations – fopen, fread, fprintf, fclose, etc.
- Get in to the habit of using man pages.

Requirements

- You are expected to turn in:
- Part I: Implement a C program that counts characters and lines in a file whose name is given on the command line.

- You are free to experiment with the following:
- Part II: Add the whitespace separated word counts and also add handle option letters (-c, -l and –w).

- Helpful Link: http://www.acm.uiuc.edu/webmonkeys/book/c_guide/
- Use ‘man <command/function name>’ for more information.

Problem 2: Caesar Cipher

- Implement Caesar cipher - a substitution cipher in which each letter in the plaintext is replaced by another letter some fixed number of positions down the alphabet.

Plain: ABCDEFGHIJKLMNOPQRSTUVWXYZ
Cipher: DEFGHIJKLMNOPQRSTUVWXYZABC
With a shift of 3

- Given an input text file containing a message to be encrypted and an integer ‘n’, the number by which you want to shift, create an output message file containing the encrypted message.

Problem 2 Summary

- Write a C program to implement the encrypting function for the Caesar cipher.

- Input: Filename and an integer n.
- Output: Create a file with the encrypted message.

- Additional Task: Decryption
  - Given an encrypted message, produce the original plaintext.