Introduction to Programming

MTech CS, First Year, Indian Statistical Institute

Assignment 4 : File Handling in C

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Problem 1

An *anagram* is a type of word play, where the result of rearranging the letters of a word, using all the original letters exactly once, produces a new word that belongs to some predefined dictionary.

Write a C program that takes an English word as a *command-line input* from the user, and outputs all possible anagrams of the same, using a standard dictionary located at `/usr/share/dict`.

Bonus problem: Take an English phrase instead of a single word (e.g., *eleven plus two*), and output anagrammed phrases (e.g., *twelve plus one*) for the same, with the words of the output phrases belonging to the predefined standard dictionary located at `/usr/share/dict`.

Problem 2

Directory listing programs like `ls` on UNIX platforms or `dir` on DOS platforms provide various information about the files and folders within a target directory. Check `ls -l` to know more.

Write a C program that takes a valid UNIX path (e.g., ∼/Desktop/) as a *command-line input* from the user, and lists useful details of all files and folders located at that path. The output of your program should ideally simulate the output of `ls -l` ∼/Desktop/.

Good Luck! ☺