**Programming Assignment #3 (due 11:59pm, 12/05, 2014)**

**Problem: File System Handler**

In this programming assignment, your task is to write a C++ program that behaves like a directory handler for ftp server. To simplify the problem, you are requested to complete three functions. The first function catches the file name. The second checks whether the file exists. The last is listing all files in the directory in lexicographical order.

*Hint:* Tree

**Functions**

**Add file name** takes the file name as input. You are requested to record the file name. The characters in a file name include *number, alphabet and underscore*.

The second function would **search file name** from given name. If the name is given before, the function will return *true* and vice versa.

for i from 0 to length:

for j from i+1 to length:

if strcmp(data[i], data[j])>0:

swap(data[i], data[j])

The last is **get file list** in lexicographical order which is the same as the order used in a dictionary. You are requested to return all names given before. You can use *strcmp* to compare the strings, which is the same function call TAs will use to check your result. (More information is available from main.cpp source code.)

**Input**

An example sequence is shown below:

Add file: Captain\_Kirk

Add file: Enterprise

Add file: Commander\_Spock

Add file: battleship

Check file: HAL

Add file: starTrek

Check file: Clock

Check file: battleship

Check file: Major\_Tom

List file

Check file: Space\_Odyssey

**Platform**

You may develop your software on UNIX/Linux.

Compile: $g++ main.cpp fileHandler.cpp

Execution: $./a.out

**Submission**

Please update the following materials to online judge system on the course website by the deadline, specifying your account and check the leader board.

1. fileHandler.h
2. fileHandler.cpp

**Grading**

1. example correct: 40%
2. 100% accuracy: 20%
3. leader board ranking: 20% (ranking priority: accuracy > runtime)
4. hidden cases ranking: 20% (ranking priority: accuracy > runtime)

**Forbidden words:**

system, sort