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Script started on Tue 04 Apr 2017 12:39:39 PM CDT
\033]0;b_pepa@mars:~/CSC122/file_search\007[b_pepa@mars file_search]$ pwd
/home/students/b_pepa/CSC122/file_search
\033]0;b_pepa@mars:~/CSC122/file_search\007[b_pepa@mars file_search]$ cat\033[K search
.info
Brandon Pepa
CSC122-001
Hide 'n' Go Seek
Lab

(level 1.5)
(level 1.5)
       allow user to search multiple times before quitting

**(level 3)**

Description:
       The function of this program is to find a name from within a file.
It will prompt the user which file they want to open, and then which name
they want to find.
\033]0;b_pepa@mars:~/CSC122/file_search\007[b_pepa@mars file_search]$ cat s\033[Ktrext
ra.h
#ifndef STRING_EXTRA_LIBRARY_INCLUDED
#define STRING_EXTRA_LIBRARY_INCLUDED

// Compares 2 strings without case sensitivity
long strcmp_ncase(const char str1[], const char str2[]);



#endif
\033]0;b_pepa@mars:~/CSC122/file_search\007[b_pepa@mars file_search]$ cat strextra.cpp
#include "strextra.h"

#include <cctype>

using namespace std;

long strcmp_ncase(const char str1[], const char str2[])
{

   size_t c = 0;

   while( str1[c] != '\0' && str2[c] != '\0' &&
          toupper(str1[c]) == toupper(str2[c]) )
   {
      c++;
   }

   if( str1[c] == '\0' || str2[c] == '\0' )
   {
      // if the both strings reached the '\0' the strings are equal
      // otherwise if the seconds string is longer return -1 or +1 if the
      // first is longer
      return str1[c] == '\0' ? str2[c] == '\0' ? 0 : -1 : 1;
   }

   //return which string has the higher numerical character
   return toupper(str1[c]) > toupper(str2[c]) ? 1 : -1;
}
\033]0;b_pepa@mars:~/CSC122/file_search\007[b_pepa@mars file_search]$ cat s\033[Kearch
.cpp
#include "strextra.h"
#include <iostream>
#include <fstream>

using namespace std;

const long MAX_NAME = 100,
           MAX_FNAME = 200;

//searching for "find" in file. if it finds it, it returns true
//and the position is also returned as a reference. if it doesn't find it,
//it returns false (pos will be the last value and should be ignored if it
//returns false
bool search(ifstream & f, const char find[], long & pos);


int main(void)
{
   //Input stream from the file
   ifstream infile;

   //cstring for the name of the input file
   char fname[MAX_FNAME],
        name[MAX_NAME];

   long position;

   cout << "\tWelcome to the Name Searching Program";

   //Opens the input file
   cout << "\n\nPlease enter the name of your data file: ";
   cin.getline(fname, MAX_FNAME);
   infile.open(fname);
   while(!infile)
   {
      infile.close();
      infile.clear();
      cout << "\nI'm sorry, I could not open \'" << fname << "\'."
              " Please enter another name:\n";
      cin.getline(fname, MAX_FNAME);
      infile.open(fname);
   }

   cout << "File \'" << fname << "\' opened successfully!";

   cout << "\n\nType \'exit\' to close the program"
        << "\nWhat name would you like to find in this file? ";
   cin.getline(name, MAX_NAME);

   while(strcmp_ncase(name, "exit"))
   {
      if(search(infile, name, position))
      {
         cout << "\n\n\'" << name << "\' is in position " << position
              << " in the file!";
      }
      else
      {
         cout << "\n\nI'm sorry, I could not find \'" << name
              << "\' in the file";
      }

      cout << "\n\nWhat name would you like to find in the file? ";
      cin.getline(name, MAX_NAME);
   }
```

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return 0;
}


bool search(ifstream & f, const char find[MAX_NAME], long & pos)
{
   char name[MAX_NAME];
   f.clear();
   f.seekg(0);
   pos = 0;
   while(!f.eof())
   {
      f.getline(name, MAX_NAME);
      if(!strcmp_ncase(name, find))
      {
         return true;
      }
      pos++;
   }
   return false;
}
\033]0;b_pepa@mars:~/CSC122/file_search\007[b_pepa@mars file_search]$ cat names
Jason James
Mary Jones
Tammy Henry
Bob Smith
Brandon Pepa
John Doe

\033]0;b_pepa@mars:~/CSC122/file_search\007[b_pepa@mars file_search]$ CPP search strex
tra
search.cpp***
strextra.cpp...


\033]0;b_pepa@mars:~/CSC122/file_search\007[b_pepa@mars file_search]$ ./search.cpp\033[
K033[K033[Kout
        Welcome to the Name Searching Program

Please enter the name of your data file: bob.dat

I'm sorry, I could not open 'bob.dat'. Please enter another name:
names
File 'names' opened successfully!

Type 'exit' to close the program
What name would you like to find in this file? jeff


I'm sorry, I could not find 'jeff' in the file

What name would you like to find in the file? Jason james


'Jason james' is in position 0 in the file!

What name would you like to find in the file? bRanDOn pEPA


'bRanDOn pEPA' is in position 4 in the file!

What name would you like to find in the file? john


I'm sorry, I could not find 'john' in the file

What name would you like to find in the file? john doe


'john doe' is in position 5 in the file!

What name would you like to find in the file? exit
\033]0;b_pepa@mars:~/CSC122/file_search\007[b_pepa@mars file_search]$ exit\033[K033[K
\033[K033[Kcat searh\033[K033[Kch.tpa\033[Kq
Thought Provoking Questions
1. How do you handle not knowing how much data is in the file?
A. Go through a loop running getline until eof is found

2. What kind of loop do you use to process the file?
A. A sentinal while loop is used and the sentinal will be the eof.

3. What do you do if the person isn't found in the file?
A. then eof must have been reached so that person's name isn't in the file

4. Can there be more than one name on a single file line? (Will your program handle it
?)
A. For my program, it won't handle more than one name on a single line
   because it uses the 'getline' function.
\033]0;b_pepa@mars:~/CSC122/file_search\007[b_pepa@mars file_search]$ exit
exit

Script done on Tue 04 Apr 2017 12:41:57 PM CDT
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