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#include <stdio.h>
#include <stdlib.h>
#include <string.h>

/* run this program using the console pauser or add your own getch, system("pause") or input
    loop */

int read(FILE *, char[][21], char[][21]);
void print(FILE *, char[][21], char[][21], int);
void sort(char[][21], char[][21], int);

int main(int argc, char *argv[])
{
	FILE *in, *out;
	char string[81];
	char fname[10][21], lname[10][21];
	int n;
	printf("Enter input file name: ");
	gets(string);
	in = fopen(string, "r");
	if(in != NULL)
	{
		printf("Enter output file name: ");
		gets(string);
		out = fopen(string, "w");
		if(out != NULL)
		{
			n = read(in, fname, lname);
			printf("The names:\n");
			fprintf(out, "The names\n");
			print(out, fname, lname, n);
			sort(fname, lname, n);
			printf("\nSorted names:\n");
			fprintf(out, "\nSorted names\n");
			print(out, fname, lname, n);
			fclose(in);
			fclose(out);
		}
		else
		{
			printf("Error opening output file %s\n", string);
			fclose(in);
		}
	}
	else
	{
		printf("Error opening i nput file %s\n", string);
	}
	return 0;
}


int read(FILE * f, char fn[][21], char ln[][21])
{
	int i;
	i = 0;
	char s[21];

	fscanf(f, "%s", s);
	while(!feof(f) && i < 10)
	{
		strcpy(fn[i], s);
		fscanf(f, "%s", s);
		if(!feof(f))
		{
			strcpy(ln[i], s);
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		}
		i++;
		fscanf(f, "%s", s);
	}
	return i;
}

void print(FILE * f, char fn[][21], char ln[][21], int n)
{
	int i;
	for(i = 0; i < n; i++)
	{
		printf("%s\t%s\n", fn[i], ln[i]);
		fprintf(f, "%s\t%s\n", fn[i], ln[i]);

	}
}

void sort(char fn[][21], char ln[][21], int n)
{
	int i, e, again;
	char t[21];
	e = n - 1;
	again = 1;
	while(again)
	{
		again = 0;
		for(i = 0; i < e; i++)
		{
			if(strcmpi(ln[i], ln[i+1]) > 0)
			{
				again = 1;
				strcpy(t, ln[i]);
				strcpy(ln[i], ln[i+1]);
				strcpy(ln[i+1], t);
				strcpy(t, fn[i]);
				strcpy(fn[i], fn[i+1]);
				strcpy(fn[i+1], t);
			}
			else
			{
				if(strcmpi(ln[i], ln[i+1]) == 0)
				{
					if(strcmpi(fn[i], fn[i+1]) > 0)
					{
						again = 1;
						strcpy(t, ln[i]);
						strcpy(ln[i], ln[i+1]);
						strcpy(ln[i+1], t);
						strcpy(t, fn[i]);
						strcpy(fn[i], fn[i+1]);
						strcpy(fn[i+1], t);
					}
				}
			}
		}
		e--;
	}
}
```