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/*Lab2
Chau Nguyen
tug37553@temple.edu*/
#include <stdio.h>
#include <limits.h>
#include <float.h>
#include <ctype.h>
#include <string.h>
#include <stdarg.h>
#include <stdlib.h>
//Prototype
char * read_file(char* input, char* file_name);
void write(char * input, char * file_name);
void make_rand_key();
//main function
int main(){
        //user input

        char file_name[150];
        printf("Name: ");
        gets(file_name);
        //char *input;
        char* input;
        //read file
        input = read_file(input, file_name);
        //write file
        //char*output;
        //printf("Output file:");
        //gets(output);

        //write(10, file_name, output);


        write(input, "file_out.txt");
//make_rand_key();
        //menu
        // int for user's choice
    /*int choice = 0;
        while(choice != 3){
         printf("Menu\n");
         printf("Encrypt a file: 1\n");
         printf("Decrypt a file: 2\n");
         printf("Exit           3\n");
         // Prompt user for choice
         printf("Enter a choice: ");
         // Get choice from user
         scanf("%d", &choice);
         // Switch-case is a good structure for processing menu choices
         switch (choice){
             case 1: // choice is 1
                 printf("You chose 1\n");
                 printf("Performing operation 1...\n\n");
                 break;
             case 2: // choice is 2
                 printf("You chose 2\n");
                 printf("Performing operation 2...\n\n");
                 break;
             case 3: // choice is 4
                 printf("You chose 3\n");
                 printf("Bye\n\n");
                 break;
             default: // Invalid choice
                 printf("Please enter a valid choice\n\n");
                 break;
         }
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    }

*/


}

char * read_file(char * input, char * file_name){
        FILE *fp;
        fp= fopen(file_name,"r");
        //File read buffer
        char c;
        int len=0;
        if(fp!=NULL){
                while((c=fgetc(fp))!=EOF){
                        len++;
                }

        }
        rewind(fp);
        //*input = (char *)(malloc( (sizeof(char))*(len+1)) );
        input = (char *)(malloc(len+1));
                int location=0;
        if(fp!=NULL){
                while((c=fgetc(fp))!=EOF){
                        if (c!=0)
                                input[location++]=c;
                        //location++;
                }
                input[location]='\0'; //On the last character, put it a null
                printf("%s\n", input);
        }

                printf("len= %d\n",len);

                return input;

}
//write
        void write(char * input, char * file_name){
        FILE *fp;
    fp = fopen(file_name, "w");
    if(fp != NULL){
        // Use putc to write char data to file
        int location = 0;

        if(fp==NULL){
                printf("Error\n");
                exit(3);
                }

        while(input[location] != '\0'){
            putc(input[location++], fp);
        }
        // Close file when done writing
        fclose(fp);
    }
    // File not opened - error
    else{
        printf("File not opened.\n");
    }


                }
```