```c
/*  Thomas Gibbons
    9-29-16
    ECE 3220
    In class assignment 3*/

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#define ERROR {printf("\nCorrect Usage:\t<program name> -f <filename> -w Line1 Line2 ...");
printf("\n\t\t<program name> -f <filename> -r\n"); return 1;}

int readFile(char* filename);
int writeFile(char* filename, char** string, int numberStrings);

int main(int argc, char *argv[])
{
    //first check if there are arguments and if the file argument is there
    if(argc>1 && strcmp(argv[1],"-f")!=0)
        ERROR
    //next make sure there are enough arguments that it could possibly run
    else if(argc>=4)
    {
        //check argument for read
        if(strcmp(argv[3],"-r")==0)
        {
            //show file entered in case they made mistake and see what they did
            printf("\nFilename entered is %s\n",argv[2]);
            readFile(argv[2]);
        }
        //check argument for write
        else if(strcmp(argv[3],"-w")==0)
        {
            //write requires at least one other argument
            if(argc>=5)
            {
                //show file entered in case they made mistake and see what they did
                printf("\nFilename entered is %s\n",argv[2]);
                writeFile(argv[2],&argv[4],argc-4);
            }
            //otherwise not enough arguments which shows error
            else
                ERROR
        }
        //otherwise neither write or read selected and show error
        else
            ERROR
    }
    //otherwise not enough arguments which shows error
    else
        ERROR

    return 0;
}
```

```
int readFile(char* filename)
/*  input:      name of file
    output:     0 for success, 1 for error
    displays:   Contents of file or error message*/
{
    FILE *read;
    read=fopen(filename,"r");
    if(read==NULL)
    {
        printf("%s could not be accessed\n",filename);
        return 1;
    }

    putchar('\n');
    char ch;
    while((ch=fgetc(read))!=EOF)
        putchar(ch);
    putchar('\n');

    fclose(read);

    return 0;
}
int writeFile(char* filename, char** string, int numberStrings)
/*  input:      name of file
                array of strings
                number of strings in array
    output      0 for success, 1 for error
    displays    success or error message*/
{
    FILE *write;
    write=fopen(filename,"w");
    if(write==NULL)
    {
        printf("%s could not be accessed\n",filename);
        return 1;
    }
    int count=0;

    while(count<numberStrings)
    {
        fprintf(write,"%s\n",string[count]);
        count++;
    }

    printf("%s has been written\n",filename);
    fclose(write);
    return 0;
}
```