

**CSC1310: LAB 6**

Concepts

* Stacks
* Files

# DESCRIPTION

**File Reverser using Stacks**



Write a program that reads an entire text file (provided) and then prints to a separate text file all the data, but in reverse order.

The resulting file should be the best movie quotes from the movie **Steel Magnolias** (<https://www.imdb.com/title/tt0098384/>)

# Specifications

STACK Class (stack.h)

You will have a header file that contains a Stack class specification and member function definitions. This should be a **template class** that can accept any data type. **The stack should be implemented using a linked list**.

The Stack class should have the following member functions:

* Constructor
* Push
* Pop
* isEmpty

fileReverser.cpp

Name your program **fileReverser.cpp**.

Your program should use your Stack class.

In order to write a text file in reverse to a separate file, you will have to open the text file (named **file1.txt**) and read its contents into a stack of characters. Then, pop those characters from the stack and save them in a second text file (named **file2.txt**).

This resulting file should contain a readable file of Steel Magnolias movie quotes.

sample output

command prompt

**Opening file1.txt as input.**

**Opening file2.txt as output.**

**Reading one character at a time from file1.txt and pushing the character on the stack.**

**Done reading all of file1.txt. All characters from the file have been pushed on the stack.**

**Popping one character at a time from the stack and writing the character to file2.txt.**

**Done! See your results in file2.txt.**

file2.txt

**Ouiser Boudreaux: I'm not crazy, I've just been in a very bad mood 40 years!**

**Clairee Belcher: Well, you know what they say: if you don't have anything nice to say about anybody, come sit by me!**

**Clairee: Ouiser, you sound almost chipper. What happened today - you run over a small child or something?**

**M'Lynn: [crying] I'm fine, I'm fine, I'm fine.**

**[screaming]**

**M'Lynn: I'm fine! I can jog all the way to Texas and back, but my daughter can't! She never could! Oh God! I am so mad I don't know what to do! I wanna know why! I wanna know \*why\* Shelby's life is over! I wanna know how that baby will \*ever\* know how wonderful his mother was! Will he \*ever\* know what she went through for him! Oh \*God\* I wanna know \*why\*? \*Why\*? Lord, I wish I could understand!**

**[in a firm tone]**

**M'Lynn: No! No! No! It's not supposed to happen this way! I'm supposed to go first. I've always been ready to go first! I-I don't think I can take this! I-I don't think I can take this! I-I just wanna \*hit\* somebody 'til they feel as bad as I do! I just wanna hit something! I wanna hit it hard!**

**[continues sobbing]**

**Clairee: Here!**

**[grabs Ouiser by the shoulder and positions her in front of M'Lynn]**

**Clairee: Hit this! Go ahead M'Lynn, slap her!**

**Ouiser Boudreaux: [taken aback and confused] Are you crazy?**

**Clairee: Hit her!**

**Ouiser Boudreaux: Are you \*high\*, Clairee?**

**Truvy: [in a frightened tone] Clairee, have you lost your mind?**

**Clairee: We'll sell t-shirts sayin' "I SLAPPED OUISER BOUDREAUX!" Hit her!**

**Annelle: [in a scared tone] Ms. Clairee, enough!**

**Clairee: Ouiser, this is your chance to do something for your fellow man! Knock her lights out, M'Lynn!**

**Ouiser Boudreaux: [snatches away] Let go o' me!**

**Clairee: M'Lynn, you just missed the chance of a lifetime! Half o' Chiquapin Parish'd give their eye teeth to take a whack at Ouiser!**

**Clairee Belcher: Ouiser, I'd recognize this penmanship anywhere. You have the handwritin' of a serial killer.**

**Truvy: Laughter through tears is my favorite emotion.**

**Clairee Belcher: I love ya more than my luggage.**

**Drum: Ouiser, can we call a truce long enough for me to get a piece of cake?**

**[Ouiser slices him the tail piece of an armadillo cake]**

**Drum: Aww, thanks Ouiser. Nothin' like a good piece of ass.**

**Clairee: I've just been to the dedication of the new children's park.**

**Truvy: Yeah, how did that go?**

**Clairee: Janice Van Meter got hit with a baseball. It was fabulous.**

**Truvy: Was she hurt?**

**Clairee: I doubt it. She got hit in the head.**

**Shelby: Pink is my signature color.**

**Clairee Belcher: Ouiser could never stay mad at me; she worships the quicksand I walk on.**

**Truvy: Honey, time marches on and eventually you realize it is marchin' across your face.**

**Ouiser Boudreaux: Yes, Annelle, I pray! Well, I do! There, I said it, I hope you're satisfied.**

**Annelle: I suspected this all along!**

**Ouiser Boudreaux: Oh! Well don't you expect me to come to one of your churches or one of those tent-revivals with all those Bible-beaters doin' God-only-knows-what! They'd probably make me eat a live chicken!**

**Annelle: Not on your first visit!**

**Clairee Belcher: Very good, Annelle! Spoken like a true smart-ass!**

**Clairee Belcher: You know, you would be a much more contented, pleasant person if you would find ways to occupy your time.**

**Ouiser Boudreaux: I'm pleasant. Damn it! I saw Drum Eatenton this morning at the Piggly Wiggly, and I smiled at the son of a bitch 'fore I couldn't help myself.**

**Ouiser Boudreaux: A dirty mind is a terrible thing to waste.**

**Clairee Belcher: The only thing that separates us from the animals is our ability to accessorize.**

**Annelle: We are in the house of the Lord!**

**Clairee Belcher: Oh like she cares. Ousier's never done a religious thing in her life.**

**Ouiser Boudreaux: Now that is not true. When I was in school, a bunch of my friends and I would dress up as nuns and go bar-hoppin'.**

**Truvy: Smile! It increases your face value.**

**Truvy: There's so much static electricity in this room, I pick up everything but boys and money.**

# What to Turn In

Zip all the following files and upload to ilearn.

* fileReverser.cpp
* Stack.h
* file1.txt
* file2.txt