



Project 4: Venue Sort



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- This project is an exercise in
 - Using C++ strings.
 - Operator overloading.
 - Text File Input



Operator Overloading

- Modify the Venue class from the Ticket Printer project by adding a < operator.
- [http://www.csee.usf.edu/~turnerr/Object Oriented Design/Downloads/2016_02_19_In_Class/](http://www.csee.usf.edu/~turnerr/Object_Oriented_Design/Downloads/2016_02_19_In_Class/)
- If two venues have different zip codes, consider the one with the smaller zip code smaller.
- If two venues have equal zip codes, consider the one whose name comes first alphabetically as smaller.
 - < operator for class string
- Let the < operator for Venue implement these rules.



Text File Input

- Read a text file with information about venues.
- Create a Venue object for each venue in the file.
- Store the addresses of the Venue objects in an array of Venue*
- Handle a variable number of venues in the file.
 - Maximum of 100.
- A sample input file is available in the Downloads area of the class web site.
 - You can use this file for testing, but your program should work with any such file with any number of venues, up to the max of 100.



Program Flow

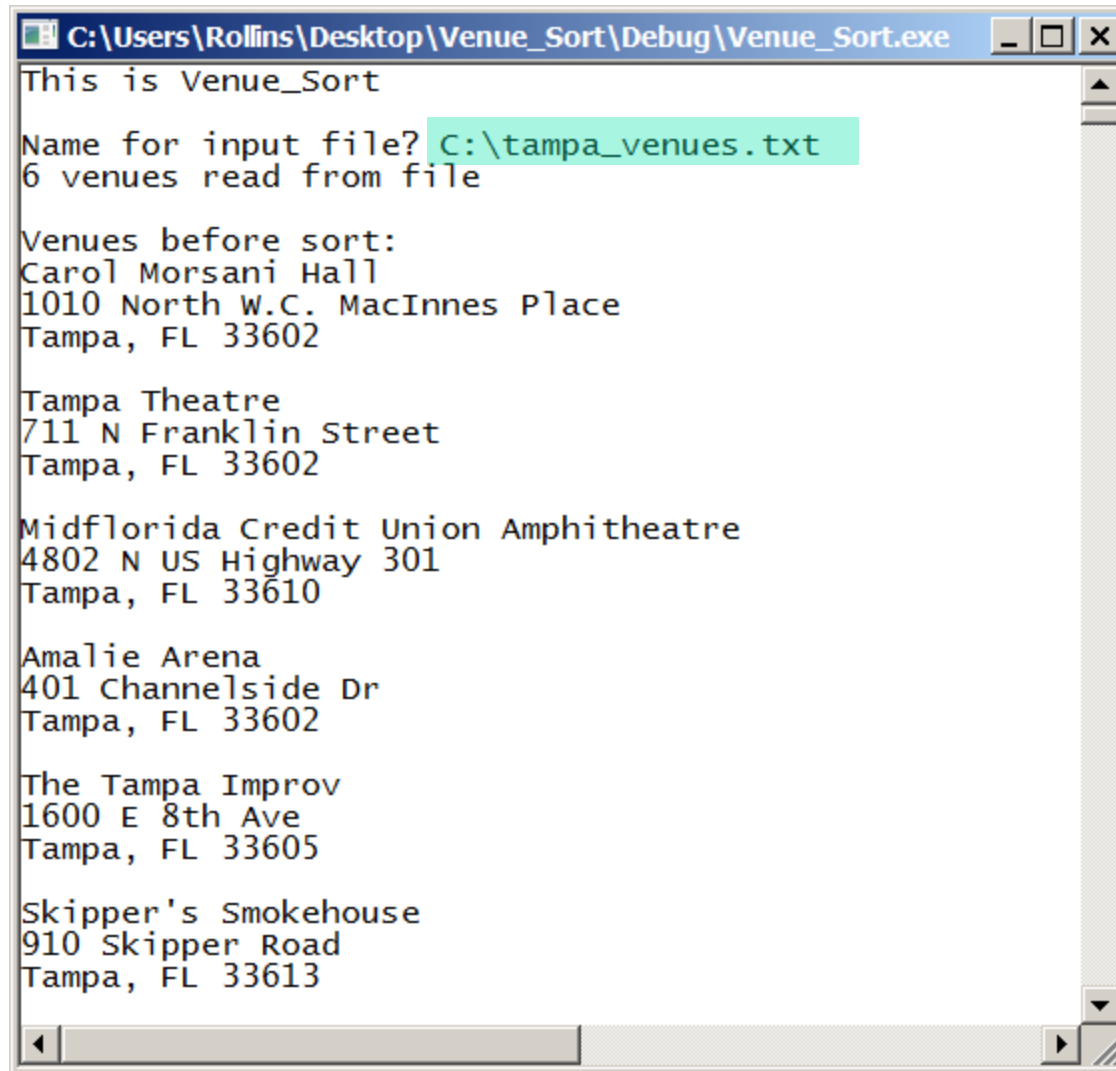
- Prompt the user for filename.
- Read the file and create array of Venue*
- Output the venues to the screen as read.
- Sort the array into increasing order, using the < operator for class Venue.
 - Be sure to compare the Venue objects, not the pointers.
 - Sort the pointers.
- Output the venues to the screen as sorted.



Sample Input File

Carol Morsani Hall
1010 North W.C. MacInnes Place
Tampa
FL
33602
Tampa Theatre
711 N Franklin Street
Tampa
FL
33602
Midflorida Credit Union Amphitheatre
4802 N US Highway 301
Tampa
FL
33610
Amalie Arena
401 Channelside Dr
Tampa
FL
33602
The Tampa Improv
1600 E 8th Ave
Tampa
FL
33605
Skipper's Smokehouse
910 Skipper Road
Tampa
FL
33613

Sample Run



```
C:\Users\Rollins\Desktop\Venue_Sort\Debug\Venue_Sort.exe
This is Venue_Sort
Name for input file? C:\tampa_venues.txt
6 venues read from file

Venues before sort:
Carol Morsani Hall
1010 North W.C. MacInnes Place
Tampa, FL 33602

Tampa Theatre
711 N Franklin Street
Tampa, FL 33602

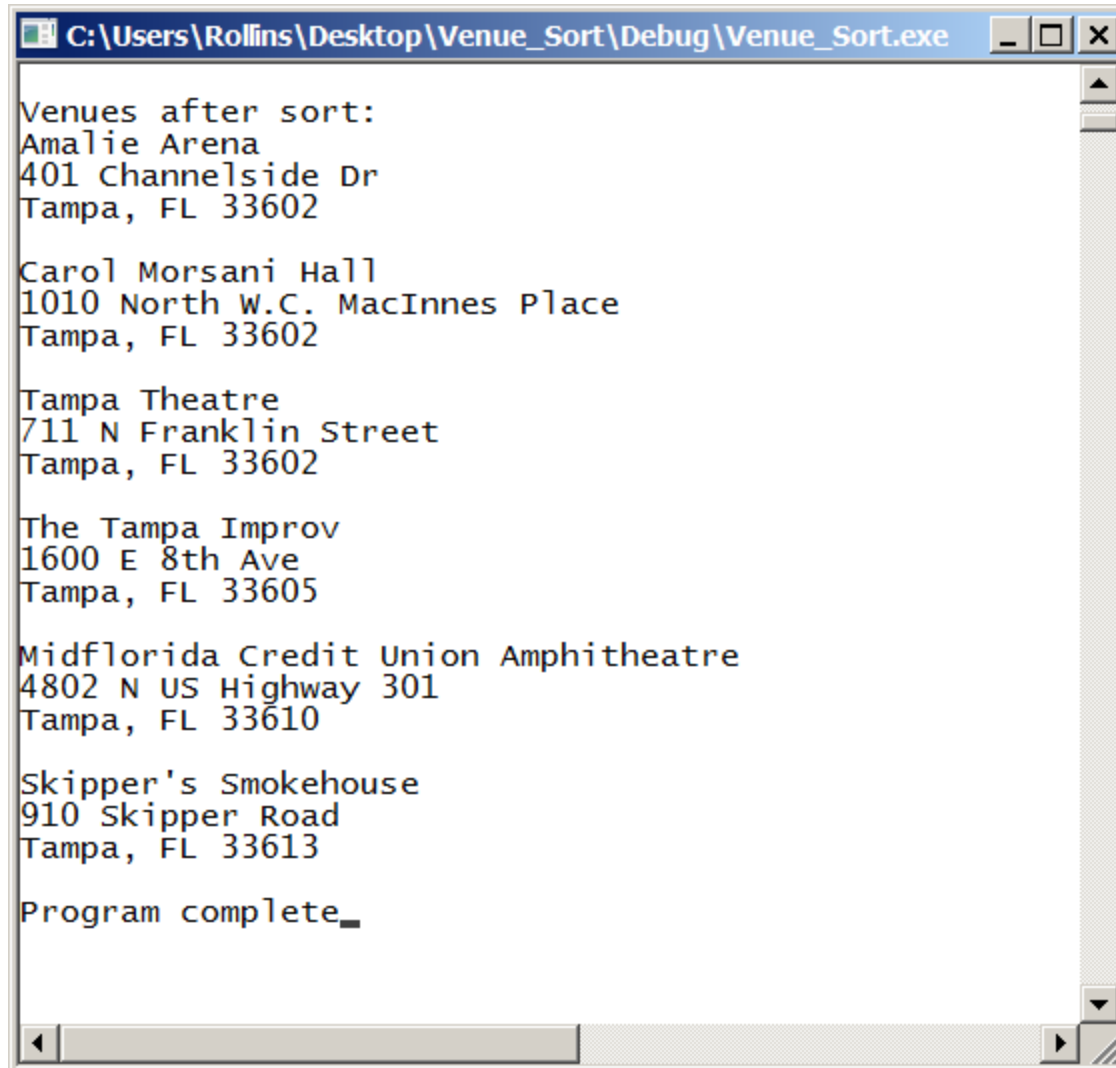
Midflorida Credit Union Amphitheatre
4802 N US Highway 301
Tampa, FL 33610

Amalie Arena
401 Channelside Dr
Tampa, FL 33602

The Tampa Improv
1600 E 8th Ave
Tampa, FL 33605

Skipper's Smokehouse
910 Skipper Road
Tampa, FL 33613
```

Sample Run -- Continued



```
C:\Users\Rollins\Desktop\Venue_Sort\Debug\Venue_Sort.exe

Venues after sort:
Amalie Arena
401 Channelside Dr
Tampa, FL 33602

Carol Morsani Hall
1010 North W.C. MacInnes Place
Tampa, FL 33602

Tampa Theatre
711 N Franklin Street
Tampa, FL 33602

The Tampa Improv
1600 E 8th Ave
Tampa, FL 33605

Midflorida Credit Union Amphitheatre
4802 N US Highway 301
Tampa, FL 33610

Skipper's Smokehouse
910 Skipper Road
Tampa, FL 33613

Program complete_
```




Development Environment

- You may develop your program on any system you like.
- But you should test the finished program on Circe.
 - That's where we will grade it.
- The same source files should compile and run on *either Windows or Linux*.



Ground Rules

- You may work with one other person.
 - OK to work alone if you prefer.
- If you do work as a pair
 - Work together!
 - Both members are expected to contribute.
 - Submit a single program.
 - Both members should understand the program in detail.
- **Do not share your code with other students.**
 - Before or after submitting the project.
 - It is OK to *discuss* the project.
- **Do not copy any other student's work.**
 - Don't *look at* anyone else's program.
 - Don't let anyone look at your program.



Ground Rules

Except for code posted on the class web site

- Do not copy code from the Internet
 - or any other source.
- Write your own code.



Submission

- Project is due by 11:59 PM, Thursday night, March 10
- Deliverables:
 - Use Canvas Assignments to submit your program.
 - Source code only.
 - Zip the source files for submission.
 - Put your source files into a folder
 - Use the Windows “Send to Compressed Folder” command.
- If you work with another student, include both names in the Canvas submission comments.
 - Other student should submit just a comment including both names.

End of Presentation