

## Project State

While implementing the project I encountered few milestones which are listed below

### **Roadblock#1:** Reading file without using fstream

Read the documentation on cin and scanf. Identified that using cin and scanf we can directly read the file (as if we are reading input from command line)

### **Roadblock#2:** Segmentation fault

While creating arrays dynamically and accessing them I was running into this issue

### **Roadblock#3:** Sorting on string field

Unlike other language C++ does not have a built-in wrapper class to hold all datatypes (Similar to objects in JAVA) hence had to think of an overloading function to do the comparison without duplicating much code

For implementing merge sort I have not faced any road blocks. Since the basic structure was build up for insertion sort it was mostly reusing the implemented modules

### **Output format:**

For isort function I'm printing TeamName string, TeamName, field, value

For ifind function I'm printing TeamName string, TeamName, field, value (max,min) for average and median we print Average and Median

For isort max and min instruction whenever there are multiple maxima's and minima's I have random chosen the first team

For isort range function I'm printing TeamName string, TeamName, field, start year, end year, field, value

For ifind of average I'm printing float value

If field is not given I'm printing na

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For msort function I'm printing TeamName string, TeamName, field, value

For mfind function I'm printing TeamName string, TeamName, field, value (max,min) for average and median we print Average and Median

For msort max and min instruction whenever there are multiple maxima's and minima's I have random chosen the first team

For msort range function I'm printing TeamName string, TeamName, field, start year, end year, field, value

For mfind of average I'm printing float value

If field is not given I'm printing na

**Interactions done:**

I had a verbal discussion on few of the above road blocks with my classmates and TA

**References:**

<http://www.cplusplus.com/forum/beginner/12726/>

<https://www.learncpp.com/cpp-tutorial/96-overloading-the-comparison-operators/>

<https://kb.iu.edu/d/aqsj>

<https://realpython.com/python-matplotlib-guide/>

<https://python-graph-gallery.com/>