

Program 4 pgm4acop3530 - cop3530 Data Structures and Algorithms

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- Program must be named: yourLastNameFirstLetterOfYourFirstNamepgm2.java  
If your name is George Washington the program should be named:  
WashingtonGpgm2.java
- Turn in the signed source code on paper, and email me the source code.
- Make sure the program is properly documented and aligned uniformly, looking professionally, I will take points off if it is not.
- Include the following header in every program:

```
/*
Author      : Your Name
Course      : COP 3530 Date, Time and place of class
Professor   : Michael Robinson
Program #   : Program Purpose/Description
              {A brief description of the program }
Due Date    : MM/DD/YYYY
*/
```

Certification:

I hereby certify that this work is my own and none of it is the work of any other person.  
.....{ your signature }.....

```
*/
```

Purpose of this program: Implement Insertion Sort  
Merge Sort  
Quicksort Sort  
External Sort

```
*****
* Use either the implementations shown in the Data Structures Book *
* or the Java api classes *
*****
```

- 1 - Worth 2 points. Insertion Sort Implementation
  - Using <http://users.cis.fiu.edu/~mrobi002/downloads/samples/b23.pro>
  - Sort this data using the Insertion Sort
  - Find out how long it took to get this data file sorted
- 2 - Worth 2 points Quicksort Sort Implementation
  - Using <http://users.cis.fiu.edu/~mrobi002/downloads/samples/b23.pro>
  - Sort this data using the Quicksort Sort
  - Find out how long it took to get this data file sorted
- 3 - Worth 2 points Merge Sort Implementation
  - Using:  
[http://users.cis.fiu.edu/~mrobi002/downloads/samples/b23\\_1.pro](http://users.cis.fiu.edu/~mrobi002/downloads/samples/b23_1.pro) and  
[http://users.cis.fiu.edu/~mrobi002/downloads/samples/b23\\_2.pro](http://users.cis.fiu.edu/~mrobi002/downloads/samples/b23_2.pro)
  - Using any sort of your choice, sort these files individually.
  - Sort these two sorted data files using the Merge Sort.
  - Find out how long it took to get this data file sorted
- 4 - Worth 2 points External Sort Implementation
  - Using <http://users.cis.fiu.edu/~mrobi002/downloads/samples/b23.pro>
  - Sort this data using the External Sort ideas  
assuming that your RAM will only hold 100 records at a time.
  - Find out how long it took to get this data file sorted