

## CS 2213 Advanced Programming Recitation - Exercise

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### Struct, Dynamic memory - functions

- Define a struct Rect as we studied in class.
- Write a program that asks user to enter n, it then creates a dynamic struct Rect \* array of size n
- Dynamically create each rect and initialize its with random numbers between 0 and 100.
- Then calls sort function to sort the elements and show them on the screen. (you can use the insertion sort that is available in the ch02-... slides under 1D arrays)
- Run that program with valgrind  
  
    > valgrind myprog
- Free the allocated memory then run it again with valgrind
- Try other memory functions....

#### *Extra:*

- Extend this program to create a dynamic n-by-n array, initialize it with random numbers, and print them on the screen, free the allocated memory...

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You must submit your work using Blackboard Learn and respect the following rules:

- 1) All assignments must be submitted as either a zip or tar archive file unless it is a single pdf file.
  - 2) Assignments must include all source code.
  - 3) Assignments must include an output.txt file which demonstrates the final test output run by the student.
  - 4) If your assignment does not run/compile, the output.txt file should include an explanation of what was accomplished, what the error message was that prevented the student from finishing the assignment and what the student BELIEVES to be the underlying cause of the error.
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