



# **Discussion 11**

## **: Exam 2 review**

**If time we we will hold Project 5 Q&A**

.

# Logistics



**Programming Exam 2: December 6 and 8**

**Exam 2: December 13**

**Project 6: Due December 19**

**Project 6 Slides will be posted Later This Week**

- You will be responsible for Exercises and Project Problems since we won't have time to cover it**

**This is the Last Discussion! Thank you for being great students!**



## **Practice Exam Review: Scans of my notes will be posted by Saturday on my website**

[https://www.swamiiyer.net/cs210/cs210\\_written\\_exam2.pdf](https://www.swamiiyer.net/cs210/cs210_written_exam2.pdf)

NOTE: Use of any of the following practice tools and resources during the exam WILL result in a 0 and may be reported to the university for violating academic honesty



# Tree Traversals

<https://www.geeksforgeeks.org/tree-traversals-inorder-preorder-and-postorder/>



## 2-3 Search Tree

[https://cathyatseneca.gitbooks.io/data-structures-and-algorithms/content/2-3 trees/](https://cathyatseneca.gitbooks.io/data-structures-and-algorithms/content/2-3%20trees/)

Visualizer

<https://people.ksp.sk/~kuko/gnarley-trees/23tree.html>

A-1 Cypher for visualizer

<http://rumkin.com/tools/cipher/numbers.php>



## Red Black BST

Visualizers will not be very useful for practicing as they are usually implemented slightly differently, and the practice problems do not give insight into the order in which elements are added (Which has a major impact on the tree's structure).

To Practice, use the given tree in the practice pdf and try out different insertions

The Visualizers are helpful in understanding the rules of insertion, but the visualizers have colored nodes instead of edges, so if that confuses you do not use a visualizer to learn the operations, and just use the slides and sample pdf rules.

Use the following at your own risk

<https://www.cs.usfca.edu/~galles/visualization/RedBlack.html>



# Practice Programming Exam Review

[https://www.swamiiyer.net/cs210/cs210\\_programming\\_exam2.pdf](https://www.swamiiyer.net/cs210/cs210_programming_exam2.pdf)