CS51 **Spring 2024**

Code Review 5: Midterm Review

1 Logistics

The first midterm will be on Monday 3/4 from 7:30-9pm in the Science Center. The room you will be in will assigned alphabetically by **last** name.

- Science Center D: A-Park
- Science Center E: Patel-Z

See this Ed Post for more details.

Also, read Exam Procedures. Practice exams can be found here. The exam will cover topics from Labs 1 - 8 (up to and including Functors). The exam will be taken on Gradescope.

2 Topics

- Recursive and First-Order Programming
- Simple Data Structures (e.g. List, Tuples, Records)
- Higher Order Programming (e.g. List, Filter, Map)
- Anomalous Conditions, Error Handling, Options, and Exceptions
- Variants, Algebraic Data Types, Pattern Matching
- Recursive Algebraic Data Types
- Modules and Abstract Data Types
- Functors

3 How to Prepare

To prepare, ensure you have redone all the labs (on your own) without looking at the solutions. After, read the lab solutions carefully. Then, you should try to do as many as the practice exams as possible. Note that the exams prior to 2020 were taken on paper, so there are slight differences (but they are still good to use for practice). The recent exams were taken on Gradescope.

For other practice problems, the ones in the textbook are another great option. The code review problems from section 1 to 4 could also be good for reinforcing the material, though some of these problems are more difficult than what you would normally see on exam (however, if you can solve them, then you're understanding the relevant material quite well!).

The exam is open-book and open `utop`, so you can have your code editors open as well as the textbook and any kind of notes that you've downloaded locally on your computer. Note that it is **not** open Internet (you should only have your Gradescope tab open during the exam), so if you would like to use online resources (such as the OCaml documentation), you should download it as a PDF onto your computer.

During the exam, it is recommended to have an ML file where you can write source code and test it, and then copy and paste your code into the Gradescope answer boxes after working on a problem.

Good luck studying!