Mid-term study guide

What to expect

- The mid-term exam will last 90 minutes, be online and closed-book (no phones, no books, no web browsers).

- Expect quite a few multiple choice questions, true-false, and other similar types of question.

- If there are coding questions, you will do the coding *in the REPL*

- There will probably be some "Short Answer" questions. DO NOT write an essay! I just need to see that you have mentioned the salient points. Spelling and grammar are not important. Exact syntax (or names of methods) is nice but not absolutely required. If you don't know the name of a method you need—invent one.

- There may be more questions than you have time for. Don't worry, but try to get as many reasonable answers as possible: there will usually be <u>some</u> credit at least for attempting a question.

Topics to expect

- Language fundamentals: what are the principal features of Scala;

- Basic syntax: use of "_", "=>", "<-", etc.;

- Significance of val, def, lazy; difference between call-by-value and call-by-name; functions vs. methods;

- For comprehensions, *map* and *flatMap;* syntactic sugar;

- *Option, Try, Future, List, Stream, Tuple2*;

- Basic rules of <u>implicits</u> (not "type classes" or "Context Bounds");

- Functional composition: *map2, lift, curried, compose,* etc.;

- Recursion (especially tail-recursion).