

CS138 Abbreviated Exam Review

David Lu ft. Tim V.

April 15, 2016

150 minute exam, assigned seating in PAC

1 Basic Knowledge

- History
 - Unix history
 - Unix distributions
 - GNU, RMS, Software
 - FORTRAN, COBOL, BASIC, Lisp, etc.
 - Interpreted vs. Compiled
- Unix
 - File Permissions (RWX)
 - Unix commands (ls, cd, mkdir, chmod, rm, cp, mv, man)
- Classes
 - Constructors
 - Destructors
 - Operators
 - Access controls
- Structs
 - Variables (all public)
 - Functions on structs
 - Pointers

2 Data Structures

- Vector
- String
- Linked List
- Queue
- Double-ended Queue
- Stack
- Trees
- Binary Search Trees
- Priority Queue

- Heap
- Hash Tables
- Map
- Set

3 Inheritance

- Public, protected, private inheritance
- Virtual functions (destructor, functions, etc.)
- Multiple inheritance

4 Advanced C++

- Templates
- Casting
- Containers
- Iterators
- Algorithm Library
- Dynamic types
- Generics
- Adaptors (STL + Others)
- C++ vs. Java

5 C++11

- array
- forward_list
- auto
- unordered_set
- unordered_map
- unordered_multiset
- unordered_multimap