

Study guide for CS163/CS164 Midterm 3

You should be able to interpret or write Java code that uses any of the items shown below:

1) ArrayLists

- a. Type Parameters (Generics)
- b. Store any type of object
- c. Basic methods – add, clear, indexOf, get, remove, set, size, toString, contains, equals
- d. Iterating through a list
- e. Modifying while looping
- f. Storing primitives in wrapper classes

2) File Input/Output

- a. File objects
- b. File Basic methods – canRead, delete, exists, length
- c. Scanner for file input
- d. Scanner basic methods – next, nextLine, nextInt, nextDouble, hasNext, hasNextLine, hasNextInt, hasNextDouble
- e. Difference between relative and absolute path names
- f. PrintWriter for file output

3) Exceptions

- a. Checked vs. unchecked
- b. Catching an exception
- c. Throwing an exception
- d. finally clause

4) Interfaces

- a. Only contains *abstract* methods
- b. Cannot contain *concrete* methods
- c. **implements** keyword
- d. Methods only, no class or instance data
- e. Constants sometimes included
- f. Enumerations often included
- g. Pure functionality (no implementation)
- h. Arrays defined as interface type can store any class that implements
- i. Comparable

5) Bitwise operators

- a. & (and)
- b. | (or)
- c. ^ (xor)
- d. ~ (not)