Group 42 Homework 1

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3.2 list = {1,3,6,10,15,19,22,24,25,25}

4.1 A FileNotFoundException occurs

4.2 A FileNotFoundException occurs

5.1 When an exception is thrown it creates a stacktrace where you can trace your steps backwards to fix the problem versus the handler where it has a clause when the exception happens to fix the potential problem.

5.2 A checked exception is one that shows up in areas outside of immediate control of the program and are not due to bugs. These are required to be handled in the code lest you get syntax errors. An example would be the FileNotFoundException.

5.3 An unchecked exception is one that is usually due to bugs in code. They are not required to be handled in the code. Both Error and RuntimeException classes are unchecked exceptions.

5.5 Because it is an exception that is due to a bug in the code, and it is useful to a developer to let their JVM print a stacktrace, which will help them locate the bug.

5.6 No, the type of exception object that gets thrown is NOT always the same as the exception type declared in the catch clause. If an exception is thrown that is different from the catch clause, the pre-coded catch clause is the one that shows.

5.7 The finally clause is the block of code that contains all of the important statements that must execute regardless of exceptions. An example would be executing the close() statement within the finally block to make sure all input or outputs are closed properly.

5.8 They can throw the InputMismatchException, the NoSuchElementException, and the IllegalStateException. They are all unchecked exceptions.

6.3

a. An instance method will be called using an object while a class method will be called using the class name.
b. Because class methods are independent of any objects, giving little to distinguish them.

6.8 - b, c, f, h, k, m

b. It is an illegal statement because mY is a private variable in class H01_65. A private variable cannot be accessed using its class name in another class.

c. It is an illegal statement because A is a private and static constant in class C. A private variable cannot be accessed using its class name in another class.

f. It is a legal statement and it stores the current value of cObj1's mX into the variable at a5.

h. It is a legal statement and it sets cObj2's mX to the value of cObj1's mX.

k. It is a legal statement and it sets variable a7 to the value of cObj1's mY.

m. It is an illegal statement because getY is an instance method, not a class method.