

# Manual Grading Rubric (Revised 2021/02/17)

## Manual Grading Rubric

Per	Cap	Description
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### General

-5 pts	once	If files in the src/ directory are in the default package
-5 pts	once	If test files are in the same package as the classes they are testing
-1 pts	every	Each class, interface, or package name whose name is not descriptive or appropriate (e.g. package "enums" or "interfaces")
-1 pts	every	Each class, interface, or package name whose name is not descriptive or appropriate (e.g. package "enums" or "interfaces")
-5 pts	every	<b>Each block using a variable and a if-else or switch statement instead of polymorphic behavior</b>
-3 pts	every	Each time a String that must have a precise value when an enum or other structured data could have been used.
-3 pts	every	Each group of repeated code that could be refactored into a helper method
-1 pt	-5 pts max	Each group of unwanted uncommented print statements, even if used for debugging
-1 pts	-5 pts max	Each use of "raw types" on any generic type such as List or Hashmap instead of List<String> or HashMap<String, String>

### Enumerations

- 1 pts    -5 pts    Instances of an enumeration are constant and should be named with all upper-  
max    case
- 1 pts    every    Constructor (if it exist) should be private

## Interfaces

- 1 pt    every    If interface Javadoc comment exists but is vague, not useful, and not using  
complete sentences
- 2 pts    -10  
pts    Each method in an interface that is not documented  
max
- 1 pt    -5 pts    Each method comment that exists but is incomplete. Javadoc comments should  
max    be written in complete sentences and be descriptive of *what* the method does (not  
*how* it does it), have @param, @return, and @throw tags as appropriate.
- 1 pts    -5 pts    Each use of concrete type instead of interface type on any public-facing method  
max    signature (e.g., ArrayList<> instead of List<>)

## Classes

- 1 pt    every    If class Javadoc comment exists but is vague, not useful, and not using complete  
sentences
- 2 pts    every    Class that should be declared abstract but isn't
- 1 pt    -5 pts    Each instance variable whose name is not descriptive, contain abbreviations, or  
max    are not appropriate (name should represent what that variable stores)
- 1 pt    -5 pts    Each instance variable that is declared to be of a concrete type when an interface  
max    type could be used instead
- 1 pt    -5 pts    Each instance variables that are not initialized in the class in which they are  
max    declared or are initialized at the time of declaration instead of in the constructor

- 1 pt    -5 pts    Each instance variables with the incorrect access modifier  
max
- 2 pts    every    Each time class data that is not immutable is returned without making a copy
- Warning every    Each time mutable data is provided to a method and is use to set a field in a class without making a copy

## Methods

- 1 pt    -5 pts    Each method (that is not part of an interface) comment that exists but is incomplete. Javadoc comments should be written in complete sentences and be descriptive of *what* the method does (not *how* it does it), have `@param`, `@return`, and `@throw` tags as appropriate.  
max
- 1 pt    -5 pts    Each method that should have an `@Override` tag but doesn't  
max
- 2 pts    -10 pts    Each public method that should be part of an interface but isn't  
max
- 2 pts    -10 pts    Each public method that does not check inputs for null or otherwise validate as applicable.  
max
- 2 pts    -10 pts    Each time class data that is not immutable is returned without making a copy (-1) if they are making a copy but not a deep copy  
max
- 2 pts    -10 pts    Each method that is long and had unwieldy logic (common on how it can be broken down into logical helpers)  
max
- Warning every    Each time mutable data is provided to a method and is use to set a field in a class without making a copy

## Exceptions

-3 pts	-15 pts max	Each try/catch block which catches Exception instead of a specific subtype of Exception
-3 pts	-15 pts max	Each misuse of exception: exception used as a goto or otherwise for non-exceptional situations, such as to return a result from a method. It is okay if an exception is used to handle a Quit action (if something went wrong)
-3 pts	-15 pts max	Each empty catch block with no comment as to why it's empty (if there is a comment but it does not make sense -1 each)