

Disclosure

You will submit your file to an assignment that is given through MS teams. Your filename should be *HW01_yourStudentNumber.java*. Submissions made after the deadline will not be accepted, be sure to submit your work before the due date and make sure to click turn in button. Your code will be automatically controlled, so be sure to have the same class, method, variable names as described here. Failure to do so may result in you receiving 0 from this homework. **All classes should be written to a single Java file. In a single java file there can only be single public class. Do NOT use Inner Classes. Be careful naming your file. If your editor inserts the file into a package, remove that line from the file but do NOT delete the import statements.**

Write set of classes according to the following specifications. Declare all attributes as **private** if not requested otherwise and use camelCase formatting for attributes.

Homework

1. Stock

- Data Fields:
 - String: symbol
 - String: name
 - double: previousClosingPrice
 - double: currentPrice
- Methods:
 - A constructor that creates a stock with the specified symbol and name. symbol should be all capitalized and each word in name should have upper case first letter.
 - Accessors for all data fields
 - Mutators for double data fields. If negative value is entered display an error message starting with "ERROR".
 - `getChangePercent()`: double – returns the percentage change from `previousClosingPrice` to `currentPrice`. If `currentPrice` is 100 and `previousPrice` is 50, it should return 100.
 - `toString()`: String – returns "[symbol] - [name]: [currentPrice]"

Stock symbol is like ORCL and name Oracle Corporation.

2. Fan

- Data Fields:
 - SLOW: int = 1, constant
 - MEDIUM: int = 2, constant
 - FAST: int = 3, constant
 - speed: int
 - on: boolean
 - radius: double
 - color: String
- Methods:
 - No-arg constructor that sets speed to SLOW, on to False, radius to 5 and color to "Blue"
 - 2 argument constructor that takes radius and color, invokes no-arg constructor and sets radius and color data fields
 - Accessor and Mutator for speed, radius, and color. setSpeed(speed:int) only changes speed if the fan is on.
 - isOn(): boolean - returns whether fan is on or off
 - change(): void – changes the state of fan, turns it off if its on turns it on if its off
 - toString(): String – if the fan is on "Speed: %d, Radius %.2f, Color: %s", if the fan is off "Fan is off"