

AP[®] COMPUTER SCIENCE A

2019 SCORING GUIDELINES

Question 2: Step Tracker

Class: <code>StepTracker</code>	9 points
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Intent: *Define implementation of a class to record fitness data*

- +1** Declares all appropriate `private` instance variables

- +2** Constructor
 - +1** Declares header: `public StepTracker(int ____)`
 - +1** Uses parameter and appropriate values to initialize instance variables

- +3** `addDailySteps` method
 - +1** Declares header: `public void addDailySteps(int ____)`
 - +1** Identifies active days and increments count
 - +1** Updates other instance variables appropriately

- +1** `activeDays` method
 - +1** Declares and implements `public int activeDays()`

- +2** `averageSteps` method
 - +1** Declares header: `public double averageSteps()`
 - +1** Returns calculated `double` average number of steps

AP[®] COMPUTER SCIENCE A 2019 SCORING GUIDELINES

Question 2: Scoring Notes

Class <code>StepTracker</code>			9 points
Points	Rubric Criteria	Responses earn the point even if they...	Responses will not earn the point if they...
+1	Declares all appropriate <code>private</code> instance variables		<ul style="list-style-type: none"> omit keyword <code>private</code> declare variables outside the class
+2	Constructor		
+1	Declares header: <code>public StepTracker(int ___)</code>	<ul style="list-style-type: none"> omit keyword <code>public</code> 	<ul style="list-style-type: none"> declare method <code>private</code>
+1	Uses parameter and appropriate values to initialize instance variables	<ul style="list-style-type: none"> initialize primitive instance variables to default values when declared 	<ul style="list-style-type: none"> fail to use the parameter to initialize some instance variable fail to declare instance variables initialize local variables instead of instance variables assign variables to parameters
+3	<code>addDailySteps</code> method		
+1	Declares header: <code>public void addDailySteps(int ___)</code>	<ul style="list-style-type: none"> omit keyword <code>public</code> 	<ul style="list-style-type: none"> declare method <code>private</code>
+1	Identifies active days and increments count	<ul style="list-style-type: none"> put valid comparison erroneously in some other method 	<ul style="list-style-type: none"> fail to use the parameter as part of the comparison fail to increment a count of active days fail to increment an instance variable compare parameter to some numeric constant
+1	Updates other instance variables appropriately		<ul style="list-style-type: none"> update another instance variable only on active days update another instance variable inappropriately fail to update appropriate instance variable update a local variable
+1	<code>activeDays</code> method		
+1	Declares and implements <code>public int activeDays()</code>	<ul style="list-style-type: none"> return appropriate count of active days where the instance variables were updated improperly in <code>addDailySteps</code> or <code>activeDays</code> 	<ul style="list-style-type: none"> declare method <code>private</code> return value that is not the number of active days fail to return a value

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Question 2: Scoring Notes (continued)

Points	Rubric Criteria	Responses earn the point even if they...	Responses will not earn the point if they...
+2	averageSteps method		
+1	Declares header: public double averageSteps()	<ul style="list-style-type: none"> omit keyword <code>public</code> 	<ul style="list-style-type: none"> declare method <code>private</code>
+1	Returns calculated double average number of steps	<ul style="list-style-type: none"> maintain instance variables improperly but calculate appropriate average fail to handle the special case where no days are tracked 	<ul style="list-style-type: none"> use integer division calculate something other than steps divided by days fail to return