

AP[®] COMPUTER SCIENCE A

2019 SCORING GUIDELINES

Question 3: Delimiters

Part (a)	<code>getDelimitersList</code>	4 points
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Intent: *Store delimiters from an array in an `ArrayList`*

- +1 Creates `ArrayList<String>`
- +1 Accesses all elements in array `tokens` (*no bounds errors*)
- +1 Compares strings in `tokens` with both instance variables (*must be in the context of a loop*)
- +1 Adds delimiters into `ArrayList` in original order

Part (b)	<code>isBalanced</code>	5 points
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Intent: *Determine whether open and close delimiters in an `ArrayList` are balanced*

- +1 Initializes accumulator(s)
- +1 Accesses all elements in `ArrayList delimiters` (*no bounds errors*)
- +1 Compares strings in `delimiters` with instance variables and updates accumulator(s) accordingly
- +1 Identifies and returns appropriate `boolean` value to implement one rule
- +1 Identifies and returns appropriate `boolean` values for all cases

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Question 3: Scoring Notes

Part (a) <code>getDelimitersList</code>			4 points
Points	Rubric Criteria	Responses earn the point even if they...	Responses will not earn the point if they...
+1	Creates <code>ArrayList<String></code>	<ul style="list-style-type: none"> omit <code><String></code> 	<ul style="list-style-type: none"> omit the keyword <code>new</code>
+1	Accesses all elements in array <code>tokens</code> (<i>no bounds errors</i>)	<ul style="list-style-type: none"> return incorrectly inside the loop 	<ul style="list-style-type: none"> treat <code>tokens</code> as a single string access elements of <code>tokens</code> as if from an <code>ArrayList</code> (e.g., <code>tokens.get(i)</code>)
+1	Compares strings in <code>tokens</code> with both instance variables (<i>must be in the context of a loop</i>)	<ul style="list-style-type: none"> access elements of <code>tokens</code> as if from an <code>ArrayList</code> (e.g., <code>tokens.get(i)</code>) 	<ul style="list-style-type: none"> use <code>==</code> for string comparison treat <code>tokens</code> as a single string
+1	Adds delimiters into <code>ArrayList</code> in original order	<ul style="list-style-type: none"> add a delimiter by accessing <code>tokens</code> incorrectly (e.g., <code>tokens.get(i)</code>) 	<ul style="list-style-type: none"> add a token that is not a delimiter do not maintain the original delimiter order
Part (b) <code>isBalanced</code>			5 points
Points	Rubric Criteria	Responses earn the point even if they...	Responses will not earn the point if they...
+1	Initializes accumulator(s)	<ul style="list-style-type: none"> initialize inside the loop 	<ul style="list-style-type: none"> initialize an accumulator variable but don't update it
+1	Accesses all elements in <code>ArrayList</code> <code>delimiters</code> (<i>no bounds errors</i>)	<ul style="list-style-type: none"> return incorrectly inside the loop 	<ul style="list-style-type: none"> access elements of <code>delimiters</code> as if from an array (e.g., <code>delimiters[i]</code>)
+1	Compares strings in <code>delimiters</code> with instance variables and updates accumulator(s) accordingly	<ul style="list-style-type: none"> access elements of <code>delimiters</code> as if from an array (e.g., <code>delimiters[i]</code>) 	<ul style="list-style-type: none"> use <code>==</code> for string comparison adjust an accumulator without a guarding condition
+1	Identifies and returns appropriate <code>boolean</code> value to implement one rule	<ul style="list-style-type: none"> check for more closing delimiters (inside a loop) and return <code>false</code> return <code>true</code> if the number of open and close delimiters is the same, and <code>false</code> otherwise (after a loop) 	
+1	Identifies and returns appropriate <code>boolean</code> values for all cases	<ul style="list-style-type: none"> have correct logic with the exception of a loop bounds error, accessing elements as if from an array, or using <code>==</code> for string comparison 	<ul style="list-style-type: none"> initialize accumulator inside a loop fail to check for more closing delimiters inside a loop