

**AP® COMPUTER SCIENCE A
GENERAL SCORING GUIDELINES**

Apply the question assessment rubric first, which always takes precedence. Penalty points can only be deducted in a part of the question that has earned credit via the question rubric. No part of a question (a, b, c) may have a negative point total. A given penalty can be assessed only once for a question, even if it occurs multiple times, or in multiple parts of that question. A maximum of 3 penalty points may be assessed per question.

1-Point Penalty

- (w) Extraneous code that causes side effect (e.g., printing to output, incorrect precondition check)
- (x) Local variables used but none declared
- (y) Destruction of persistent data (e.g., changing value referenced by parameter)

Mr Lee's 1-Point Penalty:

- Inefficient, “long winded” or “messy” difficult to understand code which takes longer to write than standard more efficient solutions.
 - In an exam you need to save time by writing quickly hand writable efficient code which is easy for AP readers to understand.

No Penalty

- Extraneous code with no side effect (e.g., precondition check, no-op)
- Spelling/case discrepancies where there is no ambiguity*
- Local variable not declared provided other variables are declared in some part
- Keyword used as an identifier
- Common mathematical symbols used for operators (\cdot \div \leq \geq $<$ $>$ \neq)
- `=` instead of `==` and vice versa
- Missing `{ }` where indentation clearly conveys intent
- Missing `()` around `if` or `while` conditions

** Spelling and case discrepancies for identifiers fall under the "No Penalty" category only if the correction can be unambiguously inferred from context; for example, "total" instead of "totl". As a counterexample, that if the code declares "int G=99, g=0; ", then uses "while (G < 10) " instead of "while (g < 10) ", the context does not allow for the reader to assume the use of the lower-case variable.*

Strings – ScrambledWord FRQ

This question involves reasoning about strings made up of uppercase letters.

Write a code segment which takes a given word and constructs a String that contains a scrambled version of the word according to the following rules.

- The scrambling process begins at the first letter of the word and continues from left to right.
- If two consecutive letters consist of an "A" followed by a letter that is not an "A", then the two letters are swapped in the resulting string.
- Once the letters in two adjacent positions have been swapped, neither of those two positions can be involved in a future swap.

The following table shows several examples of words and their scrambled versions.

<i>word</i>	<i>scrambled version</i>
"TAN"	"TNA"
"ABRACADABRA"	"BARCADABARA"
"WHOA"	"WHOA"
"AARDVARK"	"ARADVRAK"
"EGGS"	"EGGS"
"A"	"A"
" "	" "

Complete the code segment below.

```
/**
 * Scrambles a given word.
 * @param word the word to be scrambled
 * @prints the scrambled word (possibly equal to word)
 * Precondition: word is either an empty string or contains only
 * uppercase letters.
 * Postcondition: the String printed is stored in a String variable and
 * was created from word as follows:
 * - the word was scrambled, beginning at the first letter and
 *   continuing from left to right
 * - two consecutive letters consisting of "A" followed by a letter
 *   that was not "A" were swapped
 * - letters were swapped at most once
 */
String word;
```