1D Arrays – ArraySum FRQ

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 $(x \bullet \div \leq \geq < > \pm)$
- [] vs. ()
- Extraneous [] when referencing entire array
- [i, j] instead of [i] [j]
- = 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.

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Write a code segment that calculates and prints the sum of the entries in a specified one dimensional array. The following example shows an array arr and the value printed by executing the code segment.

arr

Value printed by the code segment

[0]	[1]	[2]	[3]	[4]
1	3	2	7	3

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```
/** Returns the sum of the entries in the one-dimensional
  * array arr.
  * Precondition: all entries are valid ints
  */
int[] arr;
```