



COMPONENT C: PERSONALIZED PROJECT REFERENCE (CREATED

INDEPENDENTLY) To assist in responding to the written response prompts on exam day, submit required portions of your code by capturing and pasting program code segments you developed during the administration of this task. Screen captures should not be blurry, and text should be at least 10-point font size. Your code segments should not include any comments. These code segments will be made available to you on exam day only if this component is submitted as final in the AP Digital Portfolio by the deadline.

Procedure: Capture and paste two program code segments you developed during the administration of this task that contain a student-developed procedure that implements an algorithm used in your program and a call to that procedure.

IMPORTANT:

Built-in or existing procedures and language structures, such as event handlers and main methods, are not considered student-developed.

- i. The first program code segment must be a student-developed procedure that:
 - Defines the procedure's name and return type (if necessary)
 - Contains and uses one or more parameters that have an effect on the functionality of the procedure
 - Implements an algorithm that includes sequencing, selection, and iteration

- ii. The second program code segment must show where your student-developed procedure is being called in your program.

List: Capture and paste two program code segments you developed during the administration of this task that contain a list (or other collection type) being used to manage complexity in your program.

- i. The first program code segment must show how data have been stored in the list.

- ii. The second program code segment must show the data in the same list being used, such as creating new data from the existing data or accessing multiple elements in the list, as part of fulfilling the program's purpose.

DEFINITION:

List

A **list** is an ordered sequence of elements. The use of lists allows multiple related items to be represented using a single variable. Lists may be referred to by different names, such as **arrays**, depending on the programming language.

DEFINITION:

Collection Type

A **collection type** is a type that aggregates elements in a single structure. Some examples include lists, databases, and sets.

IMPORTANT:

The data abstraction manages complexity by making the program easier to develop (alternatives would be more complex) or easier to maintain (future changes to the size of the list would otherwise require significant modifications to the program code).