

2. Refer to your Personalized Project Reference when answering this question.

- A. Consider the first selection statement included in the Procedure section of your Personalized Project Reference. Identify the Boolean expression in this selection statement. Identify a specific value or set of values that will cause this expression to evaluate to `true`. Explain why the specified value(s) will cause the expression to evaluate to `true`.
- B. Consider the procedure included in part (i) of the Procedure section of your Personalized Project Reference. Suppose another programmer modifies the code within this procedure. Describe a modification the other programmer could make that would cause this procedure to have a logic error. Describe how the behavior of this procedure would change because of the error.
- C. Consider the list included in the List section of your Personalized Project Reference. Suppose another programmer adds several new elements to the end of the list. Explain how the code segment in part (ii) of the List section would need to be modified to account for the additional elements. If no changes to the code segment are necessary, explain why this is the case for your program.

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END OF EXAM

2. Refer to your Personalized Project Reference when answering this question.

- A. Consider the first selection statement included in the Procedure section of your Personalized Project Reference. Identify the Boolean expression in this selection statement. Identify a specific value or set of values that will cause this expression to evaluate to `false`. Explain why the specified value(s) will cause this expression to evaluate to `false`.
- B. Consider the code segment in part (ii) of the List section of your Personalized Project Reference. Suppose another programmer modifies this code segment. Describe a modification the other programmer could make to this code segment that would result in a logic error. Explain why this modification would result in a logic error.
- C. Consider the procedure identified in part (i) of the Procedure section of your Personalized Project Reference. Describe the functionality provided by this procedure. Explain how implementing this functionality as a procedure results in your program being easier to maintain than if the functionality were not implemented as a procedure.

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2. Refer to your Personalized Project Reference when answering this question.

- (a) Consider the first iteration statement included in the Procedure section of your Personalized Project Reference. Describe what is being accomplished by the code in the body of the iteration statement.
- (b) Consider the procedure identified in part (i) of the Procedure section of your Personalized Project Reference. Write two calls to your procedure that each cause a different code segment in the procedure to execute. Describe the expected behavior of each call. If it is not possible for two calls to your procedure to cause different code segments to execute, explain why this is the case for your procedure.
- (c) Suppose another programmer provides you with a procedure called `checkValidity(value)` that returns `true` if a value passed as an argument is considered valid by the other programmer and returns `false` otherwise. Using the list identified in the List section of your Personalized Project Reference, explain in detailed steps an algorithm that uses `checkValidity` to check whether all elements in your list are considered valid by the other programmer. Your explanation must be detailed enough for someone else to write the program code for the algorithm that uses `checkValidity`.

Write your responses to this question only on the designated pages in the separate Written Response booklet. If there are multiple parts to this question, write the part letter with your response.

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2. Refer to your Personalized Project Reference when answering this question.

- (a) Consider the first conditional statement included in the Procedure section of your Personalized Project Reference. Describe your conditional statement, including its Boolean expression. Describe what the procedure does in general when the Boolean expression of this conditional statement evaluates to `false`.
- (b) Consider the procedure and procedure call identified in parts (i) and (ii) of the Procedure section of your Personalized Project Reference. Describe the outcome that your procedure call is intended to produce. Write a new procedure call with at least one different argument value that will produce the same outcome, if possible, and explain why this procedure call produces the same outcome. If it is not possible to write a new procedure call that produces the same outcome, explain why this is not possible.
- (c) Consider the procedure identified in part (i) of the Procedure section of your Personalized Project Reference. Identify the parameter(s) used in this procedure. Explain how your identified parameter(s) use abstraction to manage complexity in your program.

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