

Constant Parameters and Default Values

Lecture 18
Section 6.12

Robb T. Koether

Hampden-Sydney College

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1 Constant Parameters

2 Default Values for Parameters

Outline

- 1 Constant Parameters
- 2 Default Values for Parameters

Constant Parameters

- A **constant parameter** is a function parameter that the function is not permitted to change.
- To make a parameter constant, use the keyword **const** in the formal parameter list.
- Both value and reference parameters may be designated constant.
- If a function receives a constant parameter, it may not pass it to another function as a non-constant parameter.

Examples of Constant Parameters

- Example

- `LetterCountFunc.cpp`

Constant Parameters

- A Dilemma:

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Constant Parameters

- A Dilemma:
 - Value parameters “waste time” making the copies.
 - Yet, reference parameters are not protected against change.
 - So, what do we do if we want to pass a large parameter (large object) efficiently *and* protect it against change by the function?
- The Solution:
 - Make the parameter a **constant reference** parameter.
 - The object is protected (by **const**).
 - Only its address is passed (by reference).

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1 Constant Parameters

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Default Values for Parameters

- A function parameter may be given a **default value**.
- If a default value is specified in the formal parameter list and the object is not included in the actual parameter list, then the formal parameter takes on the default value.
- Default values are specified only in the function prototype, not in the function definition.

Examples of Default Parameter Values

- Examples

- `PercentScore.cpp`
- `GetWordFunc2.cpp`

Assignment

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- Read Section 6.12.