

CSCI-1411 FUNDAMENTALS OF COMPUTING LAB

Lab 6.2: Functions that Return a Value

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- Overview:
 - ▣ Lab 6.2 Components
 - Lab Sections (6.5, 6.6, 6.7, 6.8)
 - ▣ Key Concepts
 - Returning Values
 - Scope

Lab 6.2: Functions that Return a Value

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- Scope:
 - **Global** scope – Any identifier defined or declared can be accessed at any time during the execution of the program.
 - Global variables
 - **Local** scope – Identifiers are defined within a block that is inside a pair of braces { }.
 - Local variables
 - **Static** local variables – initialized at most once and its memory space is retained even after the function in which it is defined has finished executing.
- **Default arguments** → declared in function **prototype**

```
void add2No(int a = 0, int b = 1);
```

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	Value Returing Function	Procedure
PROTOTYPE	<code>float add(int a, int b);</code>	<code>void add(int &rlt, int a, int b);</code>
CALL	<code>rlt = add(5,8);</code>	<code>add(result,5,8);</code>
HEADING	<code>float add(int a, int b)</code>	<code>void add(int &rlt, int a, int b)</code>
BODY	<code>{ return a + b; }</code>	<code>{ rlt = a + b; }</code>

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- **Overloading** functions:
 - ▣ **Same** name
 - ▣ Parameters **differ** in **quantity** or **data type**

```
int add(int a, int b, int c);  
int add(int a, int b);  
float add(int a, int b, int c);
```

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- 6.5 Scope of Variables
 - (scope.cpp)
 - Fill in the chart in a block comment at the end of the source file
 - Answer questions asked in [exercise 1 & 4](#)
- 6.6 Parameters and Local Variables
 - (money.cpp)
 - Match the resulting output
- 6.7 Value Returning and Overloading Functions
 - (convertmoney.cpp)
 - Match the *Sample Run*
- 6.8 Pick One
 - Choose 1 of the 3 options
 - Name the source file: [main.cpp](#)
 - No Design Document

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- Submission File Checklist
 - Submit all files on Canvas (One at a time or all of them in a single zip file)
 - Be sure to include all source files and documents (if any)

 - 6.5 scope.cpp
 - 6.6 money.cpp
 - 6.7 convertmoney.cpp
 - 6.8 main.cpp (For any option you choose)