PARAMETER PASSING EXAMPLES
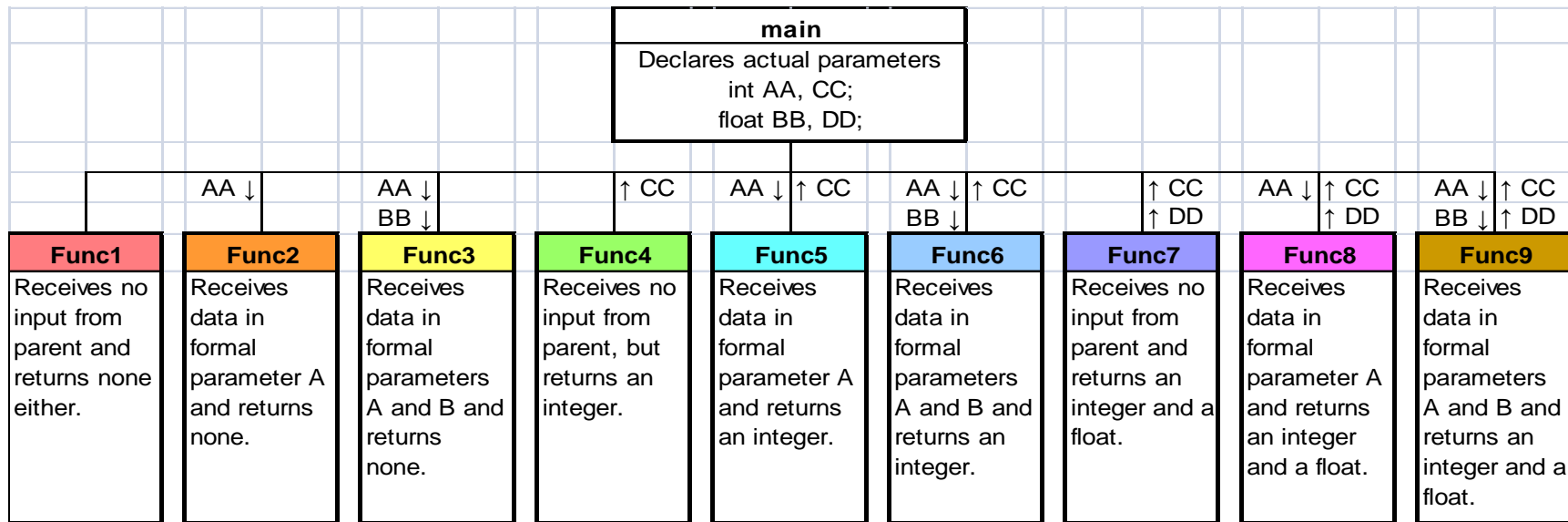
Readers who prefer or require a non-tabular version of this document should read the code-based parameter passing examples. The method used to code parameter passing varies depending on the quantity of parameters and whether they are being passed into the function or returned from it. The structure diagram below shows nine functions that pass parameters in different ways. Atypically, the contents of the function boxes in this example describe data definition issues rather than the purpose of each function.

main
Declares actual parameters
int AA, CC;
float BB, DD;

Func1	Func2	Func3	Func4	Func5	Func6	Func7	Func8	Func9
AA ↓	AA ↓		↑ CC	AA ↓ ↑ CC	AA ↓ ↑ CC	↑ CC	AA ↓ ↑ CC	AA ↓ ↑ CC
	BB ↓				BB ↓	↑ DD	↑ DD	BB ↓ ↑ DD
Receives no input from parent and returns none either.	Receives data in formal parameter A and returns none.	Receives data in formal parameters A and B and returns none.	Receives no input from parent, but returns an integer.	Receives data in formal parameter A and returns an integer.	Receives data in formal parameters A and B and returns an integer.	Receives no input from parent and returns an integer and a float.	Receives data in formal parameter A and returns an integer and a float.	Receives data in formal parameters A and B and returns an integer and a float.

The table below illustrates the syntax used to declare and to call those function in C++.

Output Parameters	Input Parameters	Syntax of the Function Header Declaration	Syntax of Calling Statement
0	0	void Func1 ()	Func1 ();
0	1	void Func2 (int A)	Func2 (AA);
0	2	void Func3 (int A, float B)	Func3 (AA, BB);
1	0	int Func4 ()	CC = Func4 ();
1	1	int Func5 (int A)	CC = Func5 (AA);
1	2	int Func6 (int A, float B)	CC = Func6 (AA, BB);
2	0	void Func7 (int *C, float *D)	Func7 (&CC, &DD);
2	1	void Func8 (int *C, float *D, int A)	Func8 (&CC, &DD, AA);
2	2	void Func9 (int *C, float *D, int A, float B)	Func9 (&CC, &DD, AA, BB);