

General notes (not conveyed to the students)

Marker:

Programming language features as implemented and tested in the assignment

mark	test	comment
X	X	1.1 global symbol table is created
X	X	1.2 symbol tables are created for classes
X	X	2.2 symbol table entry for a class is created in the global symbol table
X	X	2.3 global symbol table entry for a class contains a reference to the local symbol table for the class
X	X	3.1 class symbol table contains an entry for a class data member
X	X	3.2 function symbol table contains an entry for a function's local variable, including parameters of the function
X	X	4.1 symbol table is created for a free function
X	X	4.2 symbol table entry for a free function is created in the global symbol table
X	X	4.3 global symbol table entry for a free function contains a reference to the local symbol table for the free function
X	X	4.4 symbol tables are created for a member function
X	X	4.5 class symbol table entry for a member function is created in the symbol table
X	X	4.6 class symbol table entry for a member function contains a reference to the local symbol table for the member function
X	X	5.1 error: undefined member function definition
X	X	5.2 error: undefined member function declaration
X	X	6.1 error: multiply declared class
X	X	6.2 error: multiply declared free function
X	X	6.3 error: multiply declared data member in class
X	X	6.4 error: multiply declared identifier in function
X	X	8.5 warning: shadowed inherited data member
X	X	8.6 warning: shadowed inherited data member
X	X	9.1 warning: overloaded free function
X	X	9.2 warning: overloaded member function
X	X	10.1 error: Type error in expression
X	X	10.2 error: Type error in return statement
X	X	10.3 error: Type error in assignment statement
X	X	11.1 error: Undeclared variable (lookup - check for existence of local variable)
X	X	11.2 error: Undeclared variable (lookup - if function is member function, check in the class for member used as variable)
X	X	11.3 error: Undeclared variable (lookup - if function is member function, and its class inherits search in all super classes' tables for member used as variable)
X	X	11.4 error: Undeclared data member (lookup - search in class table)
X	X	11.5 error: Undeclared data member (lookup - if class inherits from other classes, search in all super classes' tables)
X	X	11.6 error: Undeclared member function (lookup - search in class table)
X	X	11.7 error: Undeclared member function (lookup - if class inherits from other classes, search in all super classes' tables)
X	X	11.8 error: Undeclared/undefined free function (called from a member function or from a free function)
X	X	11.9 error: Undeclared class
X	X	12.1 error: Function call with wrong number of parameters
X	X	12.2 error: Function call with wrong type of parameters
X	X	13.1 error: Array of array with wrong number of dimensions
X	X	13.2 error: Array index is not an integer
X	X	13.3 error: Array parameter using wrong number of dimensions
X	X	14.1 error: Circular class dependency (inheritance cycles)
X	X	14.2 error: Circular class dependency (member types cycles)
X	X	15.1 error: '+' operator used on non-class type

Notes	Remark	grade	unweighted	total
		0		
		3		1
		1	X	1.1 Clarity - all semantic rules are clearly presented and explained
		2	X	1.2 Completeness - all semantic rules are given and explained
		4	X	2 Document Section 2 - Design description (rationale) (Section 2.1 and 2.2)
		2	X	2.1 Description of the individual components used in the applied solution (document Section 2.1)
		2	X	2.2 Description of the purpose of each semantic checking phase involved in the implementation. For each phase, mapping of semantic actions to AST nodes, along with a description of the effect/node of each semantic action (document Section 2.2)
		2	X	3 Document Section 3 - Description of tools/libraries/techniques used in the analysis/implementation. Description of other tools that might have been used. Justification of why the chosen tools were selected
		1	X	3.1 All tools used in the analysis/implementation are mentioned
		1	X	3.2 Justification for all tools
		4	X	4 Correct implementation of a symbol table generator and semantic checker
		0.5	X	4.1.1 global symbol table is created
		0.5	X	4.2.1 symbol table is created for classes
		0.25	X	4.3.1 symbol table entry for a class is created in the global symbol table
		0.25	X	4.4.2 global symbol table entry for a class contains a reference to the local symbol table for the class
		0.25	X	4.5.1 class symbol table contains an entry for a class data member
		0.25	X	4.6.2 function symbol table contains an entry for a function's local variable, including parameters of the function
		0.25	X	4.7.1 symbol table is created for a free function
		0.25	X	4.8.2 symbol table entry for a free function is created in the global symbol table
		0.25	X	4.9.3 global symbol table entry for a free function contains a reference to the local symbol table for the free function
		0.25	X	4.10.4 symbol table is created for a member function
		0.25	X	4.11.5 class symbol table entry for a member function is created in the symbol table
		0.25	X	4.12.6 class symbol table entry for a member function contains a reference to the local symbol table for the member function
		0.5	X	4.13.1 error: undefined member function definition
		0.5	X	4.14.2 error: undefined member function declaration
		0.5	X	4.15.1 error: multiply declared class
		0.5	X	4.16.2 error: multiply declared free function
		0.5	X	4.17.3 error: multiply declared data member in class
		0.5	X	4.18.4 error: multiply declared identifier in function
		0.5	X	4.19.5 warning: shadowed inherited data member
		0.5	X	4.20.6 warning: local variable in a member function shadows a data member of its class
		0.5	X	4.21.1 warning: overloaded free function
		0.5	X	4.22.2 warning: overloaded member function
		0.5	X	4.23.3 warning: overloaded member function
		0.5	X	4.24.10.1 error: Type error in expression
		0.5	X	4.25.10.2 error: Type error in return statement
		0.5	X	4.26.10.3 error: Type error in assignment statement
		0.25	X	4.27.11.1 error: Undeclared variable (lookup - check for existence of local variable)
		0.25	X	4.28.11.2 error: Undeclared variable (lookup - if function is member function, check in the class for member used as variable)
		0.25	X	4.29.11.3 error: Undeclared variable (lookup - if function is member function, and its class inherits search in all super classes' tables for member used as variable)
		0.25	X	4.30.11.4 error: Undeclared data member (lookup - search in class table)
		0.25	X	4.31.11.5 error: Undeclared data member (lookup - if class inherits from other classes, search in all super classes' tables)
		0.25	X	4.32.11.6 error: Undeclared member function (lookup - search in class table)
		0.25	X	4.33.11.7 error: Undeclared member function (lookup - if class inherits from other classes, search in all super classes' tables)
		0.5	X	4.34.11.8 error: Undeclared/undefined free function (called from a member function or from a free function)
		0.5	X	4.35.11.9 error: Undeclared class
		0.25	X	4.36.12.1 error: Function call with wrong number of parameters
		0.25	X	4.37.12.2 error: Function call with wrong type of parameters
		0.25	X	4.38.13.1 error: Array of array with wrong number of dimensions
		0.25	X	4.39.13.2 error: Array index is not an integer
		0.25	X	4.40.13.3 error: Array parameter using wrong number of dimensions
		0.25	X	4.41.14.1 error: Circular class dependency (inheritance cycles)
		0.25	X	4.42.14.2 error: Circular class dependency (member types cycles)
		0.25	X	4.43.15.1 error: '+' operator used on non-class type
		4	X	5 Output - student messages file: Output of clear error messages (error description and location) in a file
		1	X	5.1 Clarity - error messages include a line number where the error was found
		1	X	5.2 Clarity - error messages describe the what specific kind of error was found
		1	X	5.3 Correctness - errors are correctly identified and essentially correct code is not reported as errors
		1	X	5.4 Completeness - all errors are reported - except possibly when error recovery is triggered.
		4	X	6 Output - output messages file: Output of a representation of the symbol tables in a text file
		1	X	6.1 Clarity - tables are readable
		1	X	6.2 Correctness - correct information is shown in the tables with regards to the compiled program
		2	X	6.3 Completeness - all tables are generated (global, classes, functions) and appropriate records are in the correct tables.
		15	X	7 Test cases - completeness of testing (in addition to the provided files)
		0.5	X	7.1.1 global symbol table is created
		0.5	X	7.2.1 symbol table is created for classes
		0.25	X	7.3.2 symbol table entry for a class is created in the global symbol table
		0.25	X	7.4.2 global symbol table entry for a class contains a reference to the local symbol table for the class
		0.25	X	7.5.1 class symbol table contains an entry for a class data member
		0.25	X	7.6.2 function symbol table contains an entry for a function's local variable, including parameters of the function
		0.25	X	7.7.1 symbol table is created for a free function
		0.25	X	7.8.2 symbol table entry for a free function is created in the global symbol table
		0.25	X	7.9.4.2 global symbol table entry for a free function contains a reference to the local symbol table for the free function
		0.5	X	7.10.4.4 symbol table is created for a member function
		0.25	X	7.11.4.5 class symbol table entry for a member function is created in the symbol table
		0.5	X	7.12.4.6 class symbol table entry for a member function contains a reference to the local symbol table for the member function
		0.5	X	7.13.6.1 error: undefined member function definition
		0.5	X	7.14.6.2 error: undefined member function declaration
		0.5	X	7.15.1 error: multiply declared class
		0.5	X	7.16.2 error: multiply declared free function
		0.5	X	7.17.3 error: multiply declared data member in class
		0.5	X	7.18.4 error: multiply declared identifier in function
		0.5	X	7.19.5 warning: shadowed inherited data member
		0.5	X	7.20.6 warning: local variable in a member function shadows a data member of its class
		0.5	X	7.21.1 warning: overloaded free function
		0.5	X	7.22.2 warning: overloaded member function
		0.5	X	7.23.3 warning: overloaded member function
		0.5	X	7.24.10.1 error: Type error in expression
		0.25	X	7.25.10.2 error: Type error in return statement
		0.25	X	7.26.10.3 error: Type error in assignment statement
		0.25	X	7.27.11.1 error: Undeclared variable (lookup - check for existence of local variable)
		0.25	X	7.28.11.2 error: Undeclared variable (lookup - if function is member function, check in the class for member used as variable)
		0.25	X	7.29.11.3 error: Undeclared variable (lookup - if function is member function, and its class inherits search in all super classes' tables for member used as variable)
		0.25	X	7.30.11.4 error: Undeclared data member (lookup - search in class table)
		0.25	X	7.31.11.5 error: Undeclared data member (lookup - if class inherits from other classes, search in all super classes' tables)
		0.25	X	7.32.11.6 error: Undeclared member function (lookup - search in class table)
		0.25	X	7.33.11.7 error: Undeclared member function (lookup - if class inherits from other classes, search in all super classes' tables)
		0.5	X	7.34.11.8 error: Undeclared/undefined free function (called from a member function or from a free function)
		0.5	X	7.35.11.9 error: Undeclared class
		0.25	X	7.36.12.1 error: Function call with wrong number of parameters
		0.25	X	7.37.12.2 error: Function call with wrong type of parameters
		0.25	X	7.38.13.1 error: Array of array with wrong number of dimensions
		0.25	X	7.39.13.2 error: Array index is not an integer
		0.25	X	7.40.13.3 error: Array parameter using wrong number of dimensions
		0.25	X	7.41.14.1 error: Circular class dependency (inheritance cycles)
		0.25	X	7.42.14.2 error: Circular class dependency (member types cycles)
		0.25	X	7.43.15.1 error: '+' operator used on non-class type
		7	X	8 Successful/correct use of tools/libraries/techniques in the analysis/implementation.
		1	X	8.1 The program never crashes or throws exceptions
		2	X	8.2 Tools presented in the lab are used appropriately, or comparable tools are used appropriately