Marker:

Max	Assessed	Language features as implemented and tested in the assignment
A	A	1.1 global symbol table is created
A	A	1.2 global symbol table contains a class
A	A	1.3 symbol table entry for a class is created in the global symbol table
A	A	1.4 global symbol table entry for a class contains a reference to the local symbol table for the class
A	A	1.5 class symbol table contains an entry for a class data member
A	A	1.6 function symbol table contain an entry for a function's local variable, including parameters of the function
A	A	1.7 symbol table is created for a free function
A	A	1.8 symbol table entry for a free function is created in the global symbol table
A	A	1.9 global symbol table entry for a free function contains a reference to the local symbol table for the free function
A	A	1.10 symbol table is created for a member function
A	A	1.11 class symbol table entry for a member function is created in the symbol table
A	A	1.12 class symbol table entry for a member function contains a reference to the local symbol table for the member function
A	A	2.1 [error] undeclared member function definition
A	A	2.2 [error] undefined member function declaration
A	A	2.3 [error] multiply declared class
A	A	2.4 [error] multiply declared free function
A	A	2.5 [error] multiply declared data member in class
A	A	2.6 [error] multiply declared identifier in function
A	A	2.7 [warning] shadowed inherited data member
A	A	2.8 [warning] local variable in a member function shadows a data member of its class
A	A	2.9 [warning] Overloaded free function
A	A	2.10 [warning] Overloaded member function
A	A	2.11 [warning] Overrides member function
A	A	3.1 [error] Type error in expression
A	A	3.2 [error] Type error in assignment statement
A	A	3.3 [error] Type error in return statement
A	A	3.4 [error] Undeclared variable (check for existence of local variable)
A	A	3.5 [error] Undeclared variable (if function is member function, check in the class for member used as variable)
A	A	3.6 [error] Undeclared variable (if function is member function, and its class inherits search in all super classes' tables for member used as variable)
A	A	3.7 [error] Undeclared data member (search in class table)
A	A	3.8 [error] Undeclared data member (if class inherits from other classes, search in all super classes' tables)
A	A	3.9 [error] Undeclared member function (search in class table)
A	A	3.10 [error] Undeclared member function (if class inherits from other classes, search in all super classes' tables)
A	A	3.11 [error] Undeclared free function
A	A	3.12 [error] Undeclared class
A	A	3.13 [error] Function call with wrong number of parameters
A	A	3.14 [error] Function call with wrong type of parameters
A	A	3.15 [error] Use of array with wrong number of dimensions
A	A	3.16 [error] Array index is not an integer
A	A	3.17 [error] Array parameter using wrong number of dimensions
A	A	3.18 [error] Circular class dependency (inheritance cycles)
A	A	3.19 [error] Circular class dependency (member types cycles)
A	A	3.20 [error] "." operator used on non-class type

Notes	%mark	grade	assessed	comments
	100%	30		
	100%	1	1	**1 Document Section 1 - List of semantic rules implemented**
	100%	1	1	1.1 Clarity - presentation of grammar and the problems/transformations 1.1 - A:
	100%	1	1	1.2 Completeness - all problems with the grammar are identified/solved 1.2 - A:
	100%	2	2	**2 Document Section 2 - Design description/rationale (Section 2.1 and 2.2)**
	100%	2	2	2.1 Description/rationale of the overall structure of the solution and the roles of the individual components used in the applied solution (document Section 2.1) 2.1 - A:
	100%	2	2	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/role of each semantic action (document Section 2.2) 2.2 - A:
	100%	2	2	**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** 3 -
	100%	1	1	3.1 All tools used in the ex phase/implementation are mentioned 3.1 - A:
	100%	1	1	3.2 Justification for all tools 3.2 - A:
	100%	30	15	**4 Correct implementation of a symbol table generator and semantic checker** 4 -
	100%	0.5	0.5	A	4.1.1 global symbol table is created 4.1 - A:
	100%	0.5	0.5	A	4.1.2 symbol table is created for a class 4.2 - A:
	100%	0.25	0.25	A	4.1.3 symbol table entry for a class is created in the global symbol table 4.3 - A:
	100%	0.25	0.25	A	4.1.4 global symbol table entry for a class contains a reference to the local symbol table for the class 4.4 - A:
	100%	0.25	0.25	A	4.1.5 class symbol table contains an entry for a class data member 4.5 - A:
	100%	0.25	0.25	A	4.1.6 function symbol table contain an entry for a function's local variable, including parameters of the function 4.6 - A:
	100%	0.25	0.25	A	4.1.7 symbol table is created for a free function 4.7 - A:
	100%	0.25	0.25	A	4.1.8 symbol table entry for a free function is created in the global symbol table 4.8 - A:
	100%	0.25	0.25	A	4.1.9 global symbol table entry for a free function contains a reference to the local symbol table for the free function 4.9 - A:
	100%	0.5	0.5	A	4.1.10 symbol table is created for a member function 4.10 - A:
	100%	0.25	0.25	A	4.1.11 class symbol table entry for a member function is created in the symbol table 4.11 - A:
	100%	0.25	0.25	A	4.1.12 class symbol table entry for a member function contains a reference to the local symbol table for the member function 4.12 - A:
	100%	0.5	0.5	A	4.1.13 [error] undeclared member function definition 4.13 - A:
	100%	0.5	0.5	A	4.1.14 [error] undefined member function declaration 4.14 - A:
	100%	0.5	0.5	A	4.1.15 [error] multiply declared class 4.15 - A:
	100%	0.5	0.5	A	4.1.16 [error] multiply declared free function 4.16 - A:
	100%	0.5	0.5	A	4.1.17 [error] multiply declared data member in class 4.17 - A:
	100%	0.5	0.5	A	4.1.18 [error] multiply declared identifier in function 4.18 - A:
	100%	0.5	0.5	A	4.1.19 [warning] shadowed inherited data member 4.19 - A:
	100%	0.5	0.5	A	4.1.20 [warning] local variable in a member function shadows a data member of its class 4.20 - A:
	100%	0.5	0.5	A	4.1.21 [warning] Overloaded free function 4.21 - A:
	100%	0.5	0.5	A	4.1.22 [warning] Overloaded member function 4.22 - A:
	100%	0.5	0.5	A	4.1.23 [warning] Overrides member function 4.23 - A:
	100%	0.5	0.5	A	4.1.24 [error] Type error in expression 4.24 - A:
	100%	0.25	0.25	A	4.1.25 [error] Type error in assignment statement 4.25 - A:
	100%	0.25	0.25	A	4.1.26 [error] Type error in return statement 4.26 - A:
	100%	0.25	0.25	A	4.1.27 [error] Undeclared variable (check for existence of local variable) 4.27 - A:
	100%	0.25	0.25	A	4.1.28 [error] Undeclared variable (if function is member function, check in the class for member used as variable) 4.28 - A:
	100%	0.25	0.25	A	4.1.29 [error] Undeclared variable (if function is member function, and its class inherits search in all super classes' tables for member used as variable) 4.29 - A:
	100%	0.25	0.25	A	4.1.30 [error] Undeclared data member (search in class table) 4.30 - A:
	100%	0.25	0.25	A	4.1.31 [error] Undeclared data member (if class inherits from other classes, search in all super classes' tables) 4.31 - A:
	100%	0.25	0.25	A	4.1.32 [error] Undeclared member function (search in class table) 4.32 - A:
	100%	0.25	0.25	A	4.1.33 [error] Undeclared member function (if class inherits from other classes, search in all super classes' tables) 4.33 - A:
	100%	0.5	0.5	A	4.1.34 [error] Undeclared free function 4.34 - A:
	100%	0.5	0.5	A	4.1.35 [error] Undeclared class 4.35 - A:
	100%	0.25	0.25	A	4.1.36 [error] Function call with wrong number of parameters 4.36 - A:
	100%	0.25	0.25	A	4.1.37 [error] Function call with wrong type of parameters 4.37 - A:
	100%	0.25	0.25	A	4.1.38 [error] Use of array with wrong number of dimensions 4.38 - A:
	100%	0.25	0.25	A	4.1.39 [error] Array index is not an integer 4.39 - A:
	100%	0.25	0.25	A	4.1.40 [error] Array parameter using wrong number of dimensions 4.40 - A:
	100%	0.25	0.25	A	4.1.41 [error] Circular class dependency (inheritance cycles) 4.41 - A:
	100%	0.25	0.25	A	4.1.42 [error] Circular class dependency (member types cycles) 4.42 - A:
	100%	0.25	0.25	A	4.1.43 [error] "." operator used on non-class type 4.43 - A:
	100%	4	4	**5 Output - outerr.antlrscom file: Output of clear error messages (error description and location) in a file** 5 -
	100%	1	1	A	5.1 Clarity - error messages include a line number where the error was found 5.1 - A:
	100%	1	1	A	5.2 Clarity - error messages describe what specific kind of error was found 5.2 - A:
	100%	1	1	A	5.3 Correctness - errors are correctly identified and semantically correct code is not reported as errors. 5.3 - A:
	100%	1	1	A	5.4 Completeness - all errors are reported - except possibly when error recovery is triggered. 5.4 - A:
	100%	4	4	**6 Output - outsymbtables file: Output of a representation of the symbol tables in a text file** 6 -
	100%	1	1	A	6.1 Clarity - tables are readable 6.1 - A:
	100%	1	1	A	6.2 Correctness - correct information is shown in the tables with regards to the compiled program 6.2 - A:
	100%	1	1	A	6.3 Completeness - all tables are generated (global, classes, functions), and appropriate records are in the correct tables. 6.3 - A:
	100%	10	10	**7 Test cases - completeness of testing (in addition to the provided files)** 7 -
	100%	0.5	0.5	A	7.1.1 global symbol table is created 7.1 - A:
	100%	0.5	0.5	A	7.2.1 symbol table is created for a class 7.2 - A:
	100%	0.25	0.25	A	7.2.2 symbol table entry for a class is created in the global symbol table 7.2 - A:
	100%	0.25	0.25	A	7.2.3 global symbol table entry for a class contains a reference to the local symbol table for the class 7.4 - A:
	100%	0.25	0.25	A	7.2.4 class symbol table contains an entry for a class data member 7.5 - A:
	100%	0.25	0.25	A	7.2.5 function symbol table contain an entry for a function's local variable, including parameters of the function 7.6 - A:
	100%	0.25	0.25	A	7.3.1 symbol table is created for a free function 7.7 - A:
	100%	0.25	0.25	A	7.3.2 symbol table entry for a free function is created in the global symbol table 7.8 - A:
	100%	0.25	0.25	A	7.3.3 global symbol table entry for a free function contains a reference to the local symbol table for the free function 7.9 - A:
	100%	0.5	0.5	A	7.10.1.4 symbol table is created for a member function 7.10 - A:
	100%	0.25	0.25	A	7.10.1.5 class symbol table entry for a member function is created in the symbol table 7.11 - A:
	100%	0.25	0.25	A	7.10.1.6 class symbol table entry for a member function contains a reference to the local symbol table for the member function 7.12 - A:
	100%	0.5	0.5	A	7.10.5.1 [error] undeclared member function definition 7.13 - A:
	100%	0.5	0.5	A	7.10.5.2 [error] undefined member function declaration 7.14 - A:
	100%	0.5	0.5	A	7.10.5.3 [error] multiply declared class 7.15 - A:
	100%	0.5	0.5	A	7.10.5.4 [error] multiply declared free function 7.16 - A:
	100%	0.5	0.5	A	7.10.5.5 [error] multiply declared data member in class 7.17 - A:
	100%	0.5	0.5	A	7.10.5.6 [error] multiply declared identifier in function 7.18 - A:
	100%	0.5	0.5	A	7.10.5.7 [warning] shadowed inherited data member 7.19 - A:
	100%	0.5	0.5	A	7.10.5.8 [warning] local variable in a member function shadows a data member of its class 7.20 - A:
	100%	0.5	0.5	A	7.10.5.9 [warning] Overloaded free function 7.21 - A:
	100%	0.5	0.5	A	7.10.5.10 [warning] Overloaded member function 7.22 - A:
	100%	0.5	0.5	A	7.10.5.11 [warning] Overrides member function 7.23 - A:
	100%	0.25	0.25	A	7.10.5.12 [error] Type error in expression 7.24 - A:
	100%	0.25	0.25	A	7.10.5.13 [error] Type error in assignment statement 7.25 - A:
	100%	0.25	0.25	A	7.10.5.14 [error] Type error in return statement 7.26 - A:
	100%	0.25	0.25	A	7.10.5.15 [error] Undeclared variable (check for existence of local variable) 7.27 - A:
	100%	0.25	0.25	A	7.10.5.16 [error] Undeclared variable (if function is member function, check in the class for member used as variable) 7.28 - A:
	100%	0.25	0.25	A	7.10.5.17 [error] Undeclared variable (if function is member function, and its class inherits search in all super classes' tables for member used as variable) 7.29 - A:
	100%	0.25	0.25	A	7.10.5.18 [error] Undeclared data member (search in class table) 7.30 - A:
	100%	0.25	0.25	A	7.10.5.19 [error] Undeclared data member (if class inherits from other classes, search in all super classes' tables) 7.31 - A:
	100%	0.25	0.25	A	7.10.5.20 [error] Undeclared member function (search in class table) 7.32 - A:
	100%	0.25	0.25	A	7.10.5.21 [error] Undeclared member function (if class inherits from other classes, search in all super classes' tables) 7.33 - A:
	100%	0.5	0.5	A	7.10.5.22 [error] Undeclared free function 7.34 - A:
	100%	0.5	0.5	A	7.10.5.23 [error] Undeclared class 7.35 - A:
	100%	0.25	0.25	A	7.10.5.24 [error] Function call with wrong number of parameters 7.36 - A:
	100%	0.25	0.25	A	7.10.5.25 [error] Function call with wrong type of parameters 7.37 - A:
	100%	0.25	0.25	A	7.10.5.26 [error] Use of array with wrong number of dimensions 7.38 - A:
	100%	0.25	0.25	A	7.10.5.27 [error] Array index is not an integer 7.39 - A:
	100%	0.25	0.25	A	7.10.5.28 [error] Array parameter using wrong number of dimensions 7.40 - A:
	100%	0.25	0.25	A	7.10.5.29 [error] Circular class dependency (inheritance cycles) 7.41 - A:
	100%	0.25	0.25	A	7.10.5.30 [error] Circular class dependency (member types cycles) 7.42 - A:
	100%	0.25	0.25	A	7.10.5.31 [error] "." operator used on non-class type 7.43 - A:
	100%	2	2	**8 Successful/correct use of tools/libraries/techniques in the analysis/implementation.** 8 -
	100%	1	1	8.1 The program never crashes or throws exceptions 8.1 - A:
	100%	2	2	8.2 Tools presented in the labs are used appropriately, or comparable tools are used appropriately 8.2 - A:

Marker instructions
Enter values only in the red cells. Everything else is calculated automatically.
In Column D, enter either A, B, C, or F for each marking element
Enter notes in column N. These notes will be then automatically uploaded on moodle as feedback to the students.

Designer instructions
When you add lines, add them only in the middle of the area, or else the calculation is going to be wrong
To add lines, add a new row, then copy into it one of the existing rows.

Grading rubric	ratio	grade
Document Section 1 - List of semantic rules implemented	1	1.00
Document Section 2 - Design description/rationale (Section 2.1 and 2.2)	2	2.00
Document Section 3 - Description of tools/libraries/techniques used in the analysis/implementation	2	2.00
Correct implementation of a symbol table generator and semantic checker	30	30.00
Output - outerr.antlrscom file: Output of clear error messages (error description and location) in a	4	4.00
Output - outsymbtables file: Output of a representation of the symbol tables in a text file	4	4.00
Test cases - completeness of testing (in addition to the provided files)	10	10.00
Successful/correct use of tools/libraries/techniques in the analysis/implementation.	2	2.00
Total	55	55.00