

Results from the Compiler Construction Competition

IMADA

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Public Programs

Program	Group		
	1	2	3
AbsTest			
ArrayIndex			
Assoc			
ErrOutOfBounds1			R_E
ErrOutOfBounds2			R_E
Factorial			
Function			
IfThen			
Knapsack			
WhileDo			
SimpleRecord			
StaticLink			

Other Programs

Program	Group		
	1	2	3
AbsoluteValue	C_E	C_E	C_E
ArrayComparisonsA		C_E	C_E
ArrayComparisonsB	C_E	C_S	C_E
ArrayOfOwnType	C_E	C_E	C_E
ArrayOfRecords	C_I	C_E	C_E
ArrayLength			C_E
BinarySearchTree	C_E	C_E	C_E
ErrAssignToType	C_O		C_O
ErrFuncParamsInvalidType			
ErrFuncParamsTooFew			C_S
ErrFuncParamsTooMany			
ErrInvalidToken			
ErrRuntimeDiv0			R_E
ErrRuntimeNegArraySize			C_E
ErrRuntimeNullPointer	R_E	C_E	R_E
ErrRuntimeOutOfMem			R_E
ErrTypeLoop ¹	C_E	C_E	C_T
ErrUnmatchedBeginComment	C_E		C_E
FuncCallAsParamA			R_O
FuncCallAsParamB		R_O	R_O
FuncModifyingParams			
FuncParamsEvalOrder			R_O
FuncRedefinedInItself			C_O
FuncRedefinedReturnType	C_E	C_E	C_E
FuncRedefinedType		C_E	
FuncReturnRecord	C_E	C_S	C_E
LargeExpTreeA			
LargeExpTreeB		R_S	
LargeExpTreeC		R_S	
MultiDimArray	C_E	R_O	C_E
MultipleTypecheckPassesA	C_E	C_E	
MultipleTypecheckPassesB	C_E	C_E	

MultipleTypecheckPassesC			
NullCorrect		C_E	
NullWrong	C_E		
RecordComparisonsA	C_E	C_E	
RecordComparisonsB	C_E	C_E	C_E
RecordWithArrays	C_I	C_S	C_E
Recursion			
ReturnInMainScope ²			C_S
ShortCircuitAND	C_E	C_S	
ShortCircuitOR	C_E	C_S	
StaticLinkA			
StaticLinkB			
Compile-time problems	19	19	19
Run-time problems	1	4	6
Total problems (out of 44 tests)	20	23	25

¹Group 1 and 2 has wrong error messages

²Group 1: not allowed, Group 2: returns the value

Legend

Compile-time problems:

C_T : Compiler does not terminate.

C_E : Compiler gives no or incorrect error when an error during compilation was expected, or compiler gives an error when no error during compilation was expected.

C_S : Compiler gives Segmentation fault or Floating exception.

C_O : The produced output cannot be assembled.

C_I : The compiler returns 'Error not implemented'.

Run-time problems:

R_T : The compiled program does not terminate.

R_E : The compiled program gives no or incorrect runtime error when a runtime error was expected, or the compiled program gives a runtime error when no runtime error was expected.

R_S : The compiled program gives Segmentation fault or Floating exception.

R_O : The compiled program produces incorrect output.

R_X : The compiled program behaves in an unexpected fashion.

Time Trial on Knapsack

Compilation done using the -x switch. All tests performed on dalila, each program run 3 times

Group	First	Second	Third	Average
1	35.543	34.954	36.166	35.554
2	41.851	42.227	41.927	42.001
3	37.010	36.638	36.746	36.798