Clava Testing Results

July 24, 2023

1 C++98

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
Arraytypetraitexpr	0	False						
Cxxbindtemporaryexpr	0.317	True	0.083	True	1	True	0.05	True
Cxxboolliteralexpr	0.348	True	0.061	True	1	True	0.045	True
Cxxconstcastexpr	0.393	True	0.131	True	1	True	0.047	True
Cxxconstructexpr	0.337	True	0.095	True	1	True	0.051	True
Cxxconversiondecl	0.322	True	0.064	True	1	True	0.056	True
Cxxdefaultargexpr	0.437	True	0.065	True	1	True	0.049	True
Cxxdependentscopememberexpr	0.328	True	0.086	True	1	True	0.044	True
Cxxdestructordecl	0.368	True	0.06	True	1	True	0.047	True
Cxxdynamiccastexpr	0.335	True	0.072	True	1	True	0.046	True
Cxxfoldexpr	0	False						
Cxxfunctionalcastexpr	0.348	True	0.084	True	1	True	0.047	True
Cxxmembercallexpr	0.334	True	0.089	True	1	True	0.05	True
Cxxnewexpr	0.318	True	0.073	True	1	True	0.052	True
Cxxoperatorcallexpr	0.337	True	0.087	True	1	True	0.046	True
Cxxpseudodestructorexpr	0.355	True	0.087	True	1	True	0.048	True
Cxxreinterpretcastexpr	0.312	True	0.083	True	1	True	0.048	True
Cxxscalarvalueinitexpr	0.321	True	0.066	True	1	True	0	False
Cxxstaticcastexpr	0.433	True	0.087	True	1	True	0.047	True
Cxxthisexpr	0.301	True	0.095	True	1	True	0.047	True
Cxxthrowexpr	0.554	True	0	False				
Cxxtypeidexpr	0.594	True	0	False				
Cxxunresolvedconstructexpr	0.33	True	0.072	True	1	True	0.054	True
Classscopefunctionspecializationdecl	0	False						
Classtemplatepartialspecializationdecl	0.376	True	0.08	True	1	True	0	False
Classtemplatespecializationdecl	0.375	True	0.077	True	1	True	0.058	True
Dependentscopedeclrefexpr	0.344	True	0.066	True	1	True	0.048	True
Exprwithcleanups	0.387	True	0.072	True	1	True	0.054	True
Filescopeasmdecl	0	False						
Frienddecl	0.306	True	0.081	True	1	True	0.044	True
Functiontemplatedecl	0.323	True	0.065	True	1	True	0.044	True
Gnunullexpr	0.31	True	0.081	True	1	True	0.047	True

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
Implicitcastexpr	0.339	True	0.068	True	1	True	0.044	True
Initlistexpr	0.334	True	0.076	True	1	True	0.049	True
Linkagespecdecl	0.325	True	0.068	True	1	True	0.047	True
Materializetemporaryexpr	0.362	True	0.085	True	1	True	0.045	True
Namespacealiasdecl	0.313	True	0.079	True	1	True	0.048	True
Namespacedecl	0.317	True	0.07	True	1	True	0.044	True
Nontypetemplateparmdecl	0.334	True	0.06	True	1	True	0.047	True
Opaquevalueexpr	0.334	True	0.089	True	1	True	0.048	True
Parenlistexpr	0.367	True	0.084	True	1	True	0.045	True
Sizeofpackexpr	0.333	True	0.051	True	1	True	0.044	True
Substnontypetemplateparmexpr	0.669	True	0.091	True	1	True	0.788	True
Templatetypeparmdecl	0.314	True	0.051	True	1	True	0.043	True
Unresolvedusingvaluedecl	0.35	True	0.09	True	1	True	0	False
Usingdirectivedecl	0.316	True	0.073	True	1	True	0.044	True
Vaargexpr	0.319	True	0.075	True	1	True	0.051	True
And	0.305	True	0.06	True	1	True	0.044	True
And_eq	0.316	True	0.087	True	1	True	0.048	True
Bitand	0.306	True	0.079	True	1	True	0.049	True
Bitor	0.328	True	0.067	True	1	True	0.05	True
Bool	0.281	True	0.065	True	1	True	0.044	True
Break_do	0.289	True	0.067	True	1	True	0.043	True
Break_for	0.304	True	0.057	True	1	True	0.044	True
Break_switch	0.328	True	0.07	True	1	True	0.044	True
Break_while	0.329	True	0.072	True	1	True	0.047	True
Case	0.318	True	0.098	True	1	True	0.05	True
Catch	0.357	True	0.085	True	1	True	0.069	True
Char	0.391	True	0.077	True	1	True	0.055	True
Class	0.358	True	0.058	True	1	True	0.051	True
Class_public	0.337	True	0.068	True	1	True	0.065	True
Compl	0.383	True	0.097	True	1	True	0.048	True
Const	0.356	True	0.071	True	1	True	0.047	True
Const_cast	0.326	True	0.069	True	1	True	0.045	True
Continue_do_while_loop	0.401	True	0.099	True	1	True	0.048	True
Continue_for_loop	0.336	True	0.1	True	1	True	0.054	True
Continue_while_loop	0.349	True	0.072	True	1	True	0.049	True
Default	0.324	True	0.088	True	1	True	0.051	True
Delete_ptr	0.384	True	0.064	True	1	True	0.051	True
Do_while	0.391	True	0.096	True	1	True	0.051	True
Double_var_decl	0.386	True	0.078	True	1	True	0.052	True
Dynamic_cast	0.378	True	0.083	True	1	True	0.048	True
Enum_decl	0.327	True	0.073	True	1	True	0.048	True
Explicit_struct_member_decl	0.324	True	0.069	True	1	True	0.051	True
Extern_language_func_decl	0.363	True	0.065	True	1	True	0.056	True
False	0.335	True	0.059	True	1	True	0.048	True

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
Float_var_decl	0.319	True	0.073	True	1	True	0.051	True
For_loop	0.374	True	0.083	True	1	True	0.051	True
Friend_member_decl	0.294	True	0.064	True	1	True	0.049	True
Goto	0.351	True	0.092	True	1	True	0.044	True
If	0.369	True	0.058	True	1	True	0.046	True
If_else	0.316	True	0.069	True	1	True	0.045	True
Inline_func_decl	0.362	True	0.058	True	1	True	0.049	True
Int_var_decl	0.363	True	0.07	True	1	True	0.063	True
Long_var_decl	0.344	True	0.075	True	1	True	0.045	True
Mutable_struct_member_decl	0.33	True	0.088	True	1	True	0.082	True
Named_union_decl	0.314	True	0.058	True	1	True	0.043	True
Namespace	0.345	True	0.071	True	1	True	0.047	True
New	0.371	True	0.077	True	1	True	0.048	True
Not	0.385	True	0.084	True	1	True	0.05	True
Not_eq	0.322	True	0.067	True	1	True	0.046	True
Operator	0.4	True	0.119	True	1	True	0.054	True
Or	0.298	True	0.091	True	1	True	0.051	True
Or_eq	0.465	True	0.082	True	1	True	0.048	True
Private	0.341	True	0.077	True	1	True	0.044	True
Protected_member_decl	0.324	True	0.083	True	1	True	0.045	True
Register	0.281	True	0.042	True	1	True	0.044	True
Return	0.308	True	0.063	True	1	True	0.044	True
Short_val_decl	0.434	True	0.112	True	1	True	0.049	True
Signed_var_decl	0.422	True	0.085	True	1	True	0.052	True
Sizeof	0.324	True	0.086	True	1	True	0.049	True
Static_cast	0.301	True	0.058	True	1	True	0.046	True
Static_var_decl	0.327	True	0.07	True	1	True	0.059	True
Struct_decl	0.319	True	0.077	True	1	True	0.044	True
Switch_case	0.325	True	0.078	True	1	True	0.044	True
Template_decl	0.377	True	0.076	True	1	True	0.053	True
Template_typename	0.331	True	0.075	True	1	True	0.045	True
This	0.318	True	0.089	True	1	True	0.047	True
Throw	0.704	True	0.076	True	1	True	0.598	True
True	0.337	True	0.066	True	1	True	0.048	True
Try	0.331	True	0.088	True	1	True	0.093	True
Typedef	0.275	True	0.061	True	1	True	0.044	True
Typeid	0.34	True	0.069	True	1	True	0.054	True
Unsigned_var_decl	0.323	True	0.061	True	1	True	0.048	True
Using	0.315	True	0.054	True	1	True	0.055	True
Using_namespace	0.338	True	0.06	True	1	True	0.045	True
Virtual_struct_member_decl	0.317	True	0.057	True	1	True	0.042	True
Void_func_decl	0.332	True	0.063	True	1	True	0.051	True
Volatile_var_decl	0.341	True	0.06	True	1	True	0.071	True
Wchar_t_var_decl	0.324	True	0.057	True	1	True	0.045	True

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
While_loop	0.322	True	0.086	True	1	True	0.046	True
Xor	0.393	True	0.084	True	1	True	0.045	True
Xor_eq	0.318	True	0.071	True	1	True	0.044	True
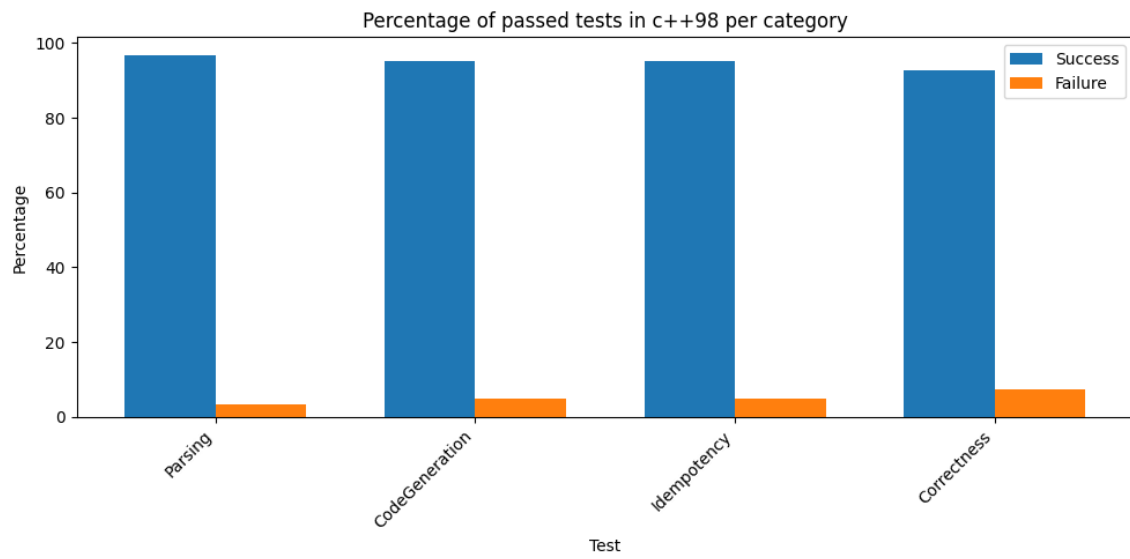
Figure 1: Percentage of passed tests in c++98

2 C++11

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
Arrayinitindexexpr	0.395	True	0.081	True	1	True	0.047	True
Arrayinitloopexpr	0	False						
Atomicexpr	0.359	True	0.09	True	1	True	0	False
Cxxdefaultinitexpr	0.346	True	0.099	True	1	True	0.048	True
Cxxdeleteexpr	0.377	True	0.092	True	1	True	0.046	True
Cxxforrangestmt	0.382	True	0.086	True	1	True	0.053	True
Cxxinheritedctorinitexpr	0.34	True	0	False				
Cxxnoexceptexpr	0.298	True	0.08	True	1	True	0.044	True
Cxxnullptrliteralexpr	0.349	True	0.079	True	1	True	0.043	True
Cxxstdinitializerlistexpr	0.348	True	0.061	True	1	True	0.058	True
Constantexpr	0.352	True	0.082	True	1	True	0.046	True
Constructorusingshadowdecl	0.308	True	0	False				
Lambdaexpr	0.34	True	0.082	True	1	True	0.051	True
Packexpansionexpr	0.359	True	0.095	True	1	True	0.057	True
Typealiasdecl	0.317	True	0.065	True	1	True	0.067	True
Typetraitexpr	0.315	True	0.077	True	1	True	0	False
Unresolvedlookupexpr	0.367	True	0.111	True	1	True	0.049	True
Unresolvedusingtypenamedecl	0.314	True	0.084	True	1	True	0.046	True
Userdefinedliteral	0.626	True	0.094	True	1	True	0.536	True
Alignas	0.304	True	0.064	True	1	True	0	False
Alignof	0.976	True	0.075	True	1	True	0.738	True
Auto	0.347	True	0.084	True	1	True	0.049	True
Char16_t	0.359	True	0.072	True	1	True	0.051	True
Char32_t	0.315	True	0.075	True	1	True	0.048	True
Constexpr	0.368	True	0.08	True	1	True	0.047	True
Decltype	0.359	True	0.069	True	1	True	0.046	True
Noexcept	0.3	True	0.055	True	1	True	0.045	True
Nullptr	0.294	True	0.062	True	1	True	0.043	True
Reinterpret_cast	0.429	True	0.128	True	1	True	0.058	True
Static_assert	0.362	True	0.078	True	1	True	0.081	True
Thread_local	0.459	True	0.072	True	1	True	0.38	True
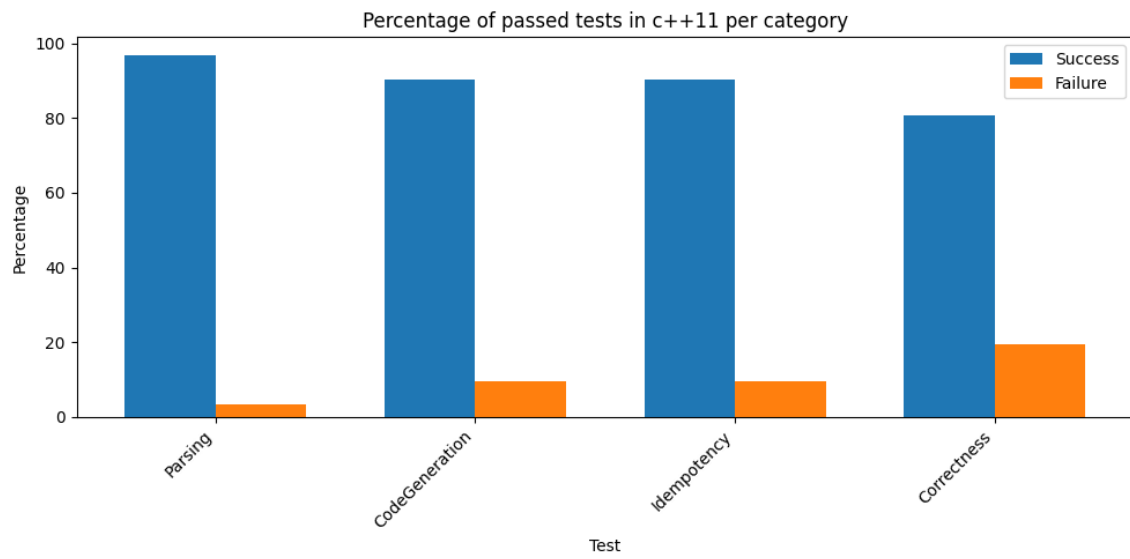
Figure 2: Percentage of passed tests in c++11

3 C++14

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
Vartemplatedecl	0.36	True	0.076	True	1	True	0	False
Vartemplatepartialspecializationdecl	0	False						
Vartemplatespecializationdecl	0.359	True	0.082	True	1	True	0	False
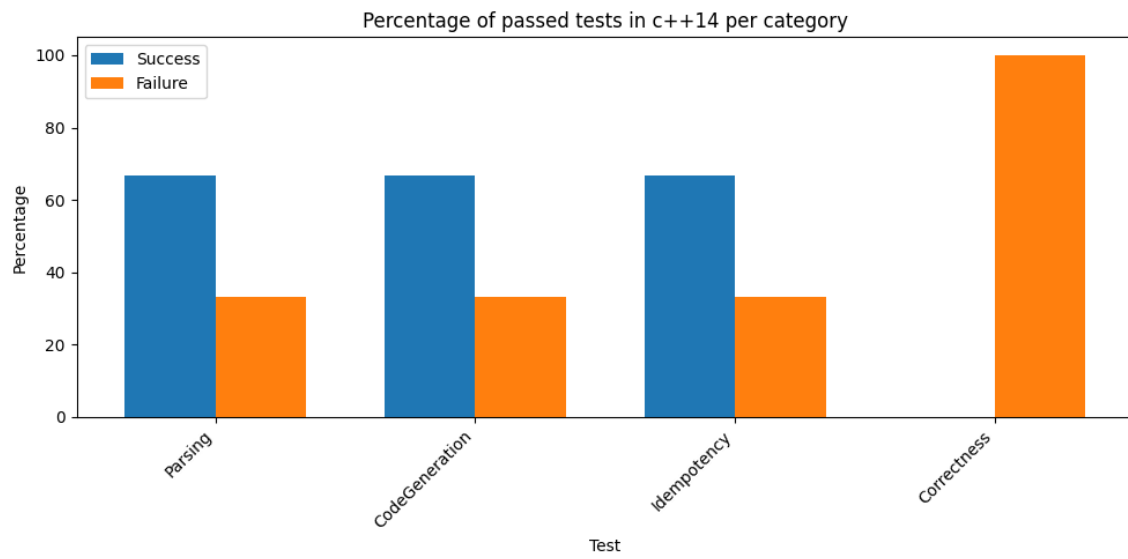
Figure 3: Percentage of passed tests in c++14

4   C++17

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
Bindingdecl	0	False						
Cxxdeductionguidedecl	0	False						
Decompositiondecl	0	False						
Usingpackdecl	0.319	True	0.092	True	1	True	0.051	True
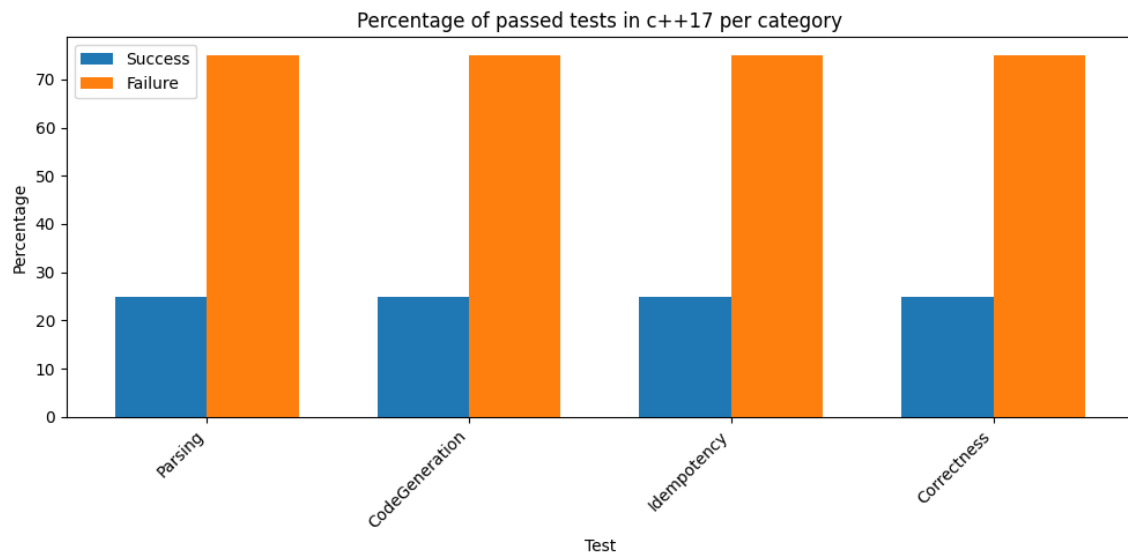
Figure 4: Percentage of passed tests in c++17

5 C++20

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
Cxxrewrittenbinaryoperator	0.385	True	0.101	True	1	True	0.048	True
Coawaitexpr	0	False						
Conceptdecl	0	False						
Conceptspecializationexpr	0	False						
Coroutinebodystmt	0	False						
Coroutinesuspendexpr	0	False						
Coyieldexpr	0	False						
Dependentcoawaitexpr	0	False						
Requiresexpr	0	False						
Usingenumdecl	0	False						
Char8_t	0	False						
Co_await_nf	0	False						
Co_return_nf	0	False						
Co_yield	0	False						
Concept	0	False						
Consteval	0	False						
Constinit	0	False						
Export	0	False						
Requires	0	False						
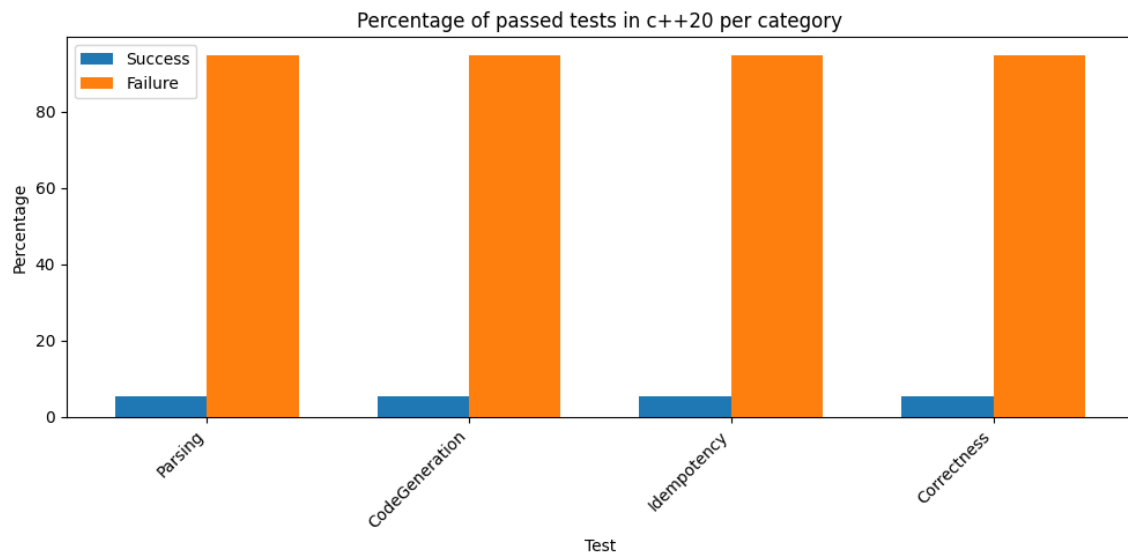
Figure 5: Percentage of passed tests in c++20

6 C89

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
Addrlabelexpr	0	False						
Arrayinitindexexpr	0.335	True	0.071	True	1	True	0.067	True
Arraysubscriptexpr	0	False						
Binaryconditionaloperator	0.332	True	0.088	True	1	True	0.045	True
Binaryoperator	0.305	True	0.086	True	1	True	0.049	True
Cstylecastexpr	0.376	True	0.087	True	1	True	0.045	True
Callexpr	0.365	True	0.087	True	1	True	0.047	True
Characterliteral	0.334	True	0.075	True	1	True	0.05	True
Compoundassignoperator	0.335	True	0.083	True	1	True	0.048	True
Compoundliteralexpr	0.319	True	0.066	True	1	True	0.046	True
Conditionaloperator	0.312	True	0.08	True	1	True	0.045	True
Declrefexpr	0.343	True	0.068	True	1	True	0.049	True
Enumconstantdecl	0.323	True	0.072	True	1	True	0.059	True
Extvectorelementexpr	0	False						
Floatingliteral	0.321	True	0.065	True	1	True	0.045	True
Imaginaryliteral	0	False						
Implicitvalueinitexpr	0.372	True	0.07	True	1	True	0.048	True
Indirectfielddecl	0.306	True	0.068	True	1	True	0.047	True
Indirectgotostmt	0	False						
Initlistexpr	0.337	True	0.069	True	1	True	0.052	True
Integerliteral	0.354	True	0.078	True	1	True	0.045	True
Matrixsubscriptexpr	0.305	True	0.086	True	1	True	0.047	True
Memberexpr	0.342	True	0.086	True	1	True	0.051	True
Noinitexpr	0.35	True	0.073	True	1	True	0.049	True
Parenexpr	0.316	True	0.084	True	1	True	0.051	True
Stringliteral	0.379	True	0.078	True	1	True	0.046	True
Unaryexprortypetraitexpr	0.352	True	0.074	True	1	True	0.044	True
Unaryoperator	0.331	True	0.075	True	1	True	0.044	True
Asm_func_decl	0	False						
Auto_var_decl	0.392	True	0.13	True	1	True	0.098	True
Char_var_decl	0.362	True	0.081	True	1	True	0.053	True
Const_var_decl	0.424	True	0.08	True	1	True	0.054	True
Do_while	0.353	True	0.091	True	1	True	0.049	True
Double_var_decl	0.353	True	0.083	True	1	True	0.054	True
Enum_decl	0.398	True	0.085	True	1	True	0.06	True
Extern_var_decl	0.327	True	0.07	True	1	True	0.048	True
Float_var_decl	0.32	True	0.073	True	1	True	0.046	True
For_loop	0.332	True	0.094	True	1	True	0.047	True
For_loop_break	0.325	True	0.071	True	1	True	0.054	True
For_loop_continue	0.367	True	0.096	True	1	True	0.059	True
Goto	0	False						
If	0.355	True	0.089	True	1	True	0.048	True

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
If_else	0.327	True	0.077	True	1	True	0.047	True
Int_var_decl	0.33	True	0.058	True	1	True	0.044	True
Long_var_decl	0.314	True	0.074	True	1	True	0.047	True
Named_union_decl	0.328	True	0.071	True	1	True	0.048	True
Prep_define	0.308	True	0.08	True	1	True	0.049	True
Prep_defined	0.328	True	0.082	True	1	True	0.047	True
Prep_elif	0.357	True	0.086	True	1	True	0.046	True
Prep_else	0.312	True	0.089	True	1	True	0.045	True
Prep_endif	0.314	True	0.072	True	1	True	0.055	True
Prep_error	0.298	True	0.08	True	1	True	0.047	True
Prep_if	0.305	True	0.097	True	1	True	0.052	True
Prep_ifdef	0.359	True	0.086	True	1	True	0.046	True
Prep_ifndef	0.295	True	0.079	True	1	True	0.05	True
Prep_include	0.323	True	0.073	True	1	True	0.054	True
Prep_line	0.331	True	0.062	True	1	True	0.047	True
Prep_pragma	0.314	True	0.068	True	1	True	0.049	True
Prep_undef	0.354	True	0.099	True	1	True	0.051	True
Register_var_decl	0.306	True	0.066	True	1	True	0.077	True
Return_stmt	0.331	True	0.078	True	1	True	0.048	True
Short_var_decl	0.322	True	0.087	True	1	True	0.048	True
Signed_var_decl	0.329	True	0.085	True	1	True	0.047	True
Sizeof	0.322	True	0.069	True	1	True	0.052	True
Static_var_decl	0.318	True	0.07	True	1	True	0.047	True
Struct_decl	0.338	True	0.074	True	1	True	0.048	True
Switch_case	0.331	True	0.066	True	1	True	0.055	True
Switch_default	0.319	True	0.087	True	1	True	0.044	True
Typedef_decl	0.323	True	0.085	True	1	True	0.051	True
Unnamed_union_decl	0	False						
Unsigned_var_decl	0.313	True	0.075	True	1	True	0.051	True
Void_func_decl	0.33	True	0.054	True	1	True	0.048	True
Volatile_var_decl	0.336	True	0.059	True	1	True	0.049	True
While_stmt	0.324	True	0.069	True	1	True	0.045	True
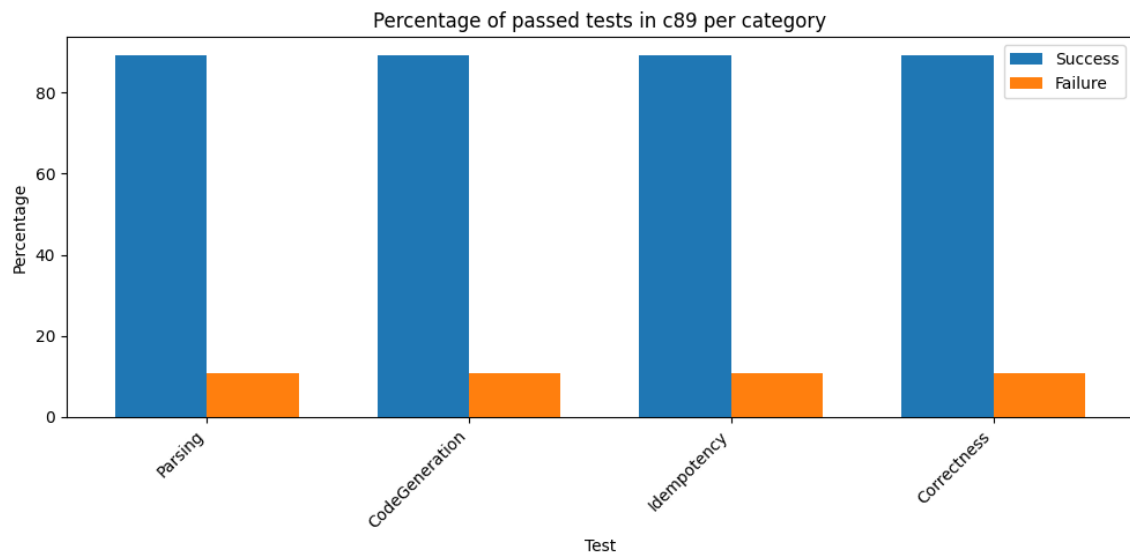
Figure 6: Percentage of passed tests in c89

7 C99

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
_bool_var_decl	0	False						
_complex_var_decl	0	False						
_imaginary	0	False						
_pragma	0.342	True	0.069	True	1	True	0.048	True
Inline_func_decl	0.308	True	0.092	True	1	True	0.048	True
Restrict	0	False						
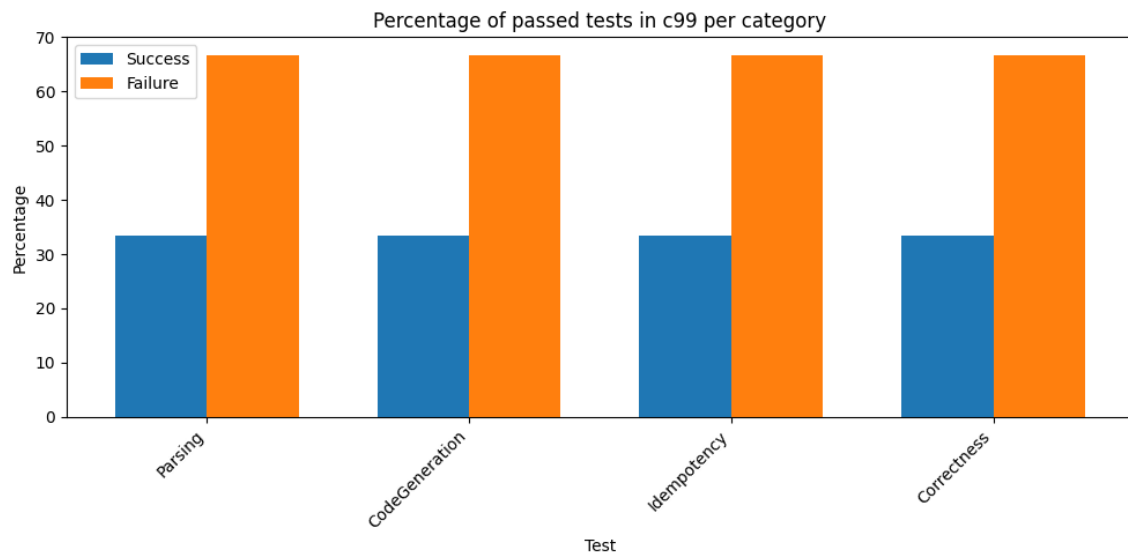
Figure 7: Percentage of passed tests in c99

8 C11

	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
Genericselectionexpr	0	False						
_alignas	0.464	True	0.107	True	1	True	0.469	True
_alignof	0.468	True	0.083	True	1	True	0.158	True
_atomic	0.35	True	0.068	True	1	True	0.05	True
_generic	0	False						
_noreturn	0.44	True	0.11	True	1	True	0.241	True
_static_assert	0.356	True	0.085	True	1	True	0.056	True
_thread_local	0.482	True	0.13	True	1	True	0.074	True
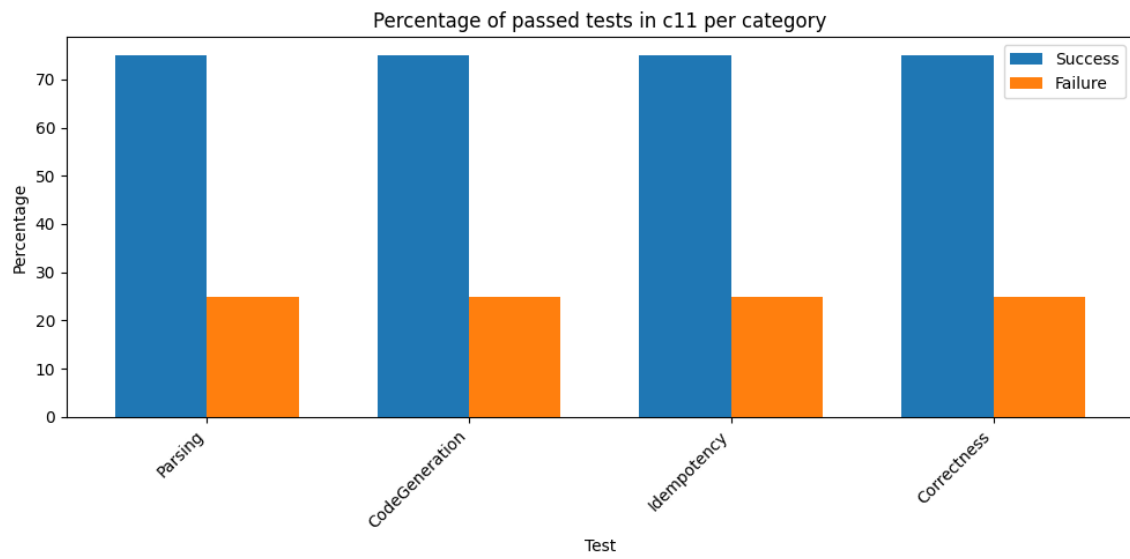
Figure 8: Percentage of passed tests in c11

9 C23

|	Parsing		Code Generation		Idempotency		Correctness	
	Time	Success	Time	Success	Tries	Success	Time	Success
_bitint	0	False						
_decimal128	0	False						
_decimal32	0	False						
_decimal64	0	False						
Alignas	0.4	True	0.092	True	1	True	0.053	True
Alignof	0	False						
Bool	0.356	True	0.076	True	1	True	0	False
Constexpr	0.5	True	0.119	True	1	True	0	False
False	0.354	True	0.073	True	1	True	0	False
Nullptr	0.408	True	0.099	True	1	True	0	False
Prep __has_include	0.36	True	0.069	True	1	True	0.084	True
Prep___has_c_attribute	0.438	True	0.087	True	1	True	0.055	True
Prep___has_embed	0.462	True	0.126	True	1	True	0	False
Prep_elifdef	0	False						
Prep_elifndef	0.491	True	0.105	True	1	True	0.061	True
Prep_embed	0	False						
Prep_warning	0.372	True	0.109	True	1	True	0.063	True
Static_assert	0.388	True	0.088	True	1	True	0.054	True
Thread_local	0.387	True	0.046	True	1	True	0.046	True
True	0.419	True	0.126	True	1	True	0	False
Typeof	0	False						
Typeof_unqual	0	False						
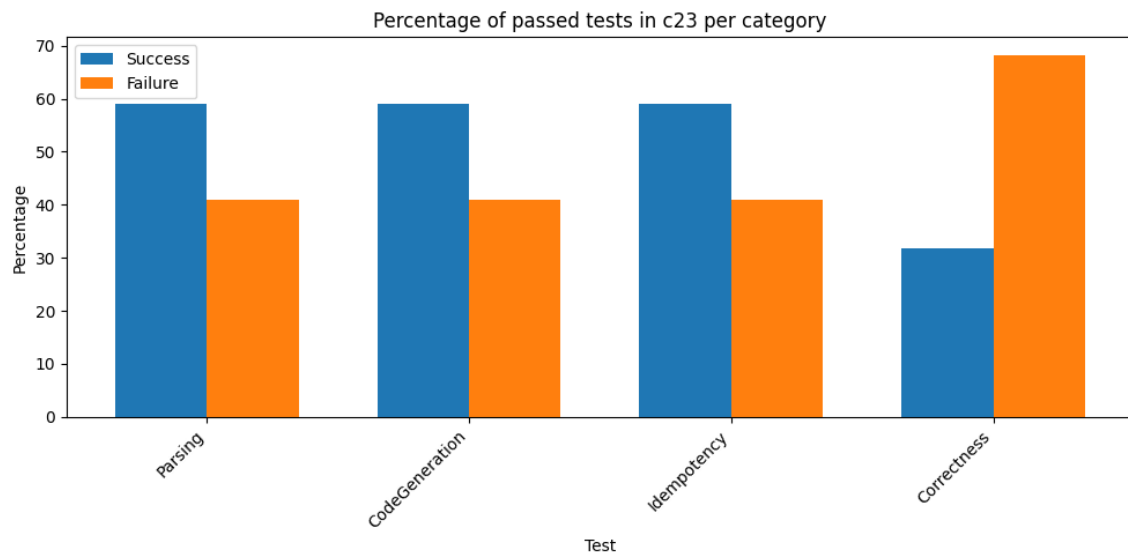
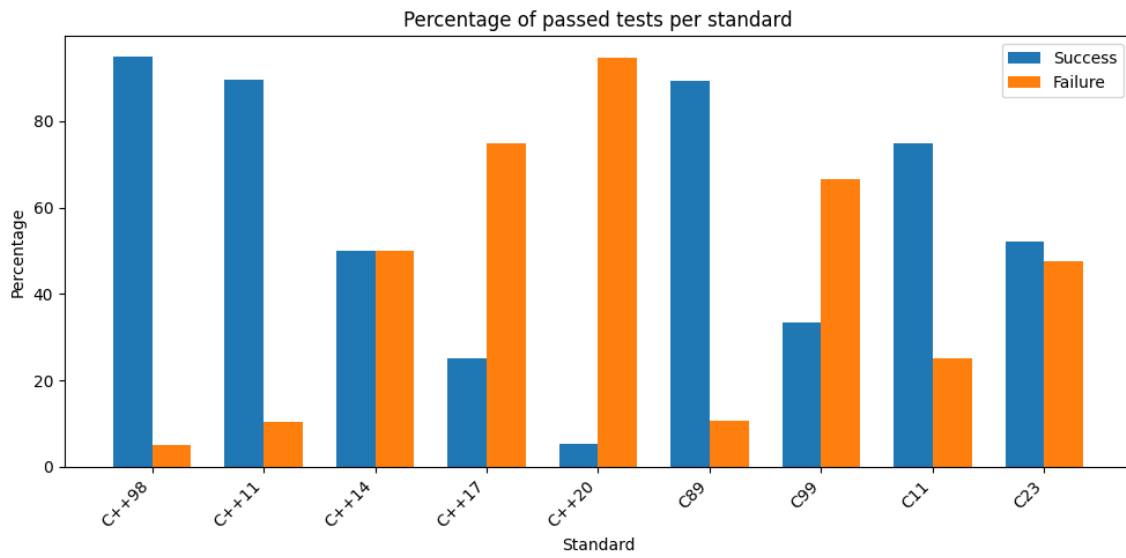Figure 9: Percentage of passed tests in c23

10 Percentages

Percentage of passed tests: 93.21 %

Figure 10: Percentage of passed tests per standard