

Summary				
RE		Score(Functional Test)	100	
		Time(Performance Test)	692 s 320249 us	
Git Clone Command				
Last Commit At	-			
Detail				
Functional Test	0 CE; 0 RE; 0 TLE; 0 WA; 140 AC			
No	Case Name	Status	Score	Log
1	add2	AC	1.163	
2	addc	AC	1.163	
3	arr_defn2	AC	0.233	
4	arr_defn3	AC	0.233	
5	arr_defn4	AC	0.233	
6	arr_expr_len	AC	0.233	
7	assign_complex_expr	AC	1.163	
8	big_int_mul	AC	1.163	
9	brainfk	AC	1.163	
10	break	AC	0.581	
11	calculator	AC	1.163	
12	chaos_token	AC	1.163	
13	color	AC	1.163	
14	comment1	AC	1.163	
15	const_array_defn	AC	0.388	
16	const_var_defn2	AC	0.388	
17	const_var_defn3	AC	0.388	
18	continue	AC	1.163	
19	dijkstra	AC	1.163	
20	div	AC	1.163	
21	divc	AC	1.163	
22	empty_stmt	AC	1.163	
23	exgcd	AC	1.163	
24	expr_eval	AC	1.163	
25	float	AC	1.163	
26	full_conn	AC	1.163	
27	func_defn	AC	0.581	
28	hanoi	AC	1.163	

29	hex_defn	AC	0.581	
30	hex_oct_add	AC	0.581	
31	hidden_var	AC	1.163	
32	if_complex_expr	AC	0.233	
33	if_test2	AC	0.233	
34	if_test3	AC	0.233	
35	if_test4	AC	0.233	
36	if_test5	AC	0.233	
37	int_io	AC	1.163	
38	kmp	AC	1.163	
39	logi_assign	AC	1.163	
40	long_array	AC	0.194	
41	long_array2	AC	0.194	
42	long_code	AC	0.194	
43	long_code2	AC	0.194	
44	long_func	AC	0.194	
45	main	AC	1.163	
46	many_globals	AC	0.145	
47	many_locals	AC	0.145	
48	many_locals2	AC	0.145	
49	many_params	AC	0.145	
50	many_params2	AC	0.145	
51	matrix_add	AC	0.233	
52	matrix_mul	AC	0.233	
53	matrix_sub	AC	0.233	
54	matrix_tran	AC	0.233	
55	max_flow	AC	1.163	
56	mod	AC	1.163	
57	mul	AC	1.163	
58	mulc	AC	1.163	
59	n_queens	AC	1.163	
60	nested_calls	AC	0.581	
61	nested_loops	AC	0.581	
62	op_priority1	AC	0.233	
63	op_priority2	AC	0.233	
64	op_priority3	AC	0.233	
65	op_priority4	AC	0.233	
66	op_priority5	AC	0.233	

67	percolation	AC	1.163	
68	register_alloc	AC	1.163	
69	rem	AC	1.163	
70	reverse_output	AC	1.163	
71	scope	AC	1.163	
72	scope2	AC	1.163	
73	short_circuit	AC	0.581	
74	short_circuit3	AC	0.581	
75	side_effect	AC	0.581	
76	skip_spaces	AC	1.163	
77	sort_test1	AC	0.145	
78	sort_test2	AC	0.145	
79	sort_test3	AC	0.145	
80	sort_test4	AC	0.145	
81	sort_test5	AC	0.145	
82	sort_test6	AC	0.145	
83	sort_test7	AC	0.145	
84	stmt_expr	AC	1.163	
85	sub2	AC	1.163	
86	subc	AC	1.163	
87	substr	AC	1.163	
88	unary_op	AC	0.581	
89	unary_op2	AC	0.581	
90	var_defn2	AC	0.291	
91	var_defn3	AC	0.291	
92	var_defn_func	AC	0.291	
93	var_name	AC	0.291	
94	while_if	AC	0.166	
95	while_if_test1	AC	0.166	
96	while_if_test2	AC	0.166	
97	while_if_test3	AC	0.166	
98	while_test1	AC	0.166	
99	while_test2	AC	0.166	
100	while_test3	AC	0.166	
101	BFS	AC	1.163	
102	BST	AC	1.163	
103	DFS	AC	1.163	
104	DSU	AC	1.163	

105	LCA	AC	1.163	
106	arr_init_nd	AC	0.233	
107	array_only	AC	1.163	
108	branch	AC	1.163	
109	break_continue	AC	0.581	
110	comment2	AC	1.163	
111	dct	AC	1.163	
112	dp	AC	1.163	
113	fp_params	AC	1.163	
114	func_name	AC	0.581	
115	global_arr_init	AC	1.163	
116	graph_coloring	AC	1.163	
117	json	AC	1.163	
118	k_smallest	AC	1.163	
119	light2d	AC	1.163	
120	long_line	AC	0.194	
121	many_dimensions	AC	0.145	
122	many_indirections	AC	0.145	
123	many_params3	AC	0.145	
124	math	AC	1.163	
125	matrix_multiply	AC	0.233	
126	maximal_clique	AC	1.163	
127	multi_branch	AC	0.581	
128	multi_loop	AC	0.581	
129	multiple_returns	AC	1.163	
130	param_name	AC	1.163	
131	prim	AC	1.163	
132	ret_in_block	AC	1.163	
133	rotate	AC	1.163	
134	scope3	AC	1.163	
135	scope4	AC	1.163	
136	scope5	AC	1.163	
137	search	AC	1.163	
138	side_effect2	AC	0.581	
139	sort	AC	0.145	
140	union_find	AC	1.163	
Performance Test		0 CE; 0 RE; 4 TLE; 0 WA; 55 AC		
No	Case Name	Status	Time	Log

1	hoist-3	TLE	-	Timeout while executing assembly on Raspberry Pi.(300 s)
2	integer-divide-optimization-1	TLE	-	Timeout while your compiler generates assembly on x86 server
3	integer-divide-optimization-2	TLE	-	Timeout while your compiler generates assembly on x86 server
4	integer-divide-optimization-3	TLE	-	Timeout while your compiler generates assembly on x86 server
5	bitset1	AC	2 s 42269 us	Timer@0056-0064: 0H-0M-2S-42269us TOTAL: 0H-0M-2S-42269us
6	bitset2	AC	4 s 75204 us	Timer@0056-0064: 0H-0M-4S-75204us TOTAL: 0H-0M-4S-75204us
7	bitset3	AC	6 s 147830 us	Timer@0056-0064: 0H-0M-6S-147830us TOTAL: 0H-0M-6S-147830us
8	brainfuck-bootstrap	AC	27 s 165894 us	Timer@0116-0118: 0H-0M-27S-165894us TOTAL: 0H-0M-27S-165894us
9	brainfuck-mandelbrot-nerf	AC	78 s 500635 us	Timer@0116-0118: 0H-1M-18S-500635us TOTAL: 0H-1M-18S-500635us
10	brainfuck-pi-nerf	AC	4 s 237670 us	Timer@0116-0118: 0H-0M-4S-237670us TOTAL: 0H-0M-4S-237670us
11	conv0	AC	13 s 957163 us	Timer@0109-0116: 0H-0M-13S-957163us TOTAL: 0H-0M-13S-957163us
12	conv1	AC	23 s 911253 us	Timer@0109-0116: 0H-0M-23S-911253us TOTAL: 0H-0M-23S-911253us
13	conv2	AC	17 s 851349 us	Timer@0109-0116: 0H-0M-17S-851349us TOTAL: 0H-0M-17S-851349us
14	crypto-1	AC	1 s 775328 us	Timer@0161-0184: 0H-0M-1S-775328us TOTAL: 0H-0M-1S-775328us
15	crypto-2	AC	1 s 499036 us	Timer@0161-0184: 0H-0M-1S-499036us TOTAL: 0H-0M-1S-499036us
16	crypto-3	AC	1 s 925120 us	Timer@0161-0184: 0H-0M-1S-925120us TOTAL: 0H-0M-1S-925120us

17	dead-code-elimination-1	AC	0 s 18 us	Timer@100016-100032: 0H-0M-0S-18us TOTAL: 0H-0M-0S-18us
18	dead-code-elimination-2	AC	0 s 1755 us	Timer@100016-100032: 0H-0M-0S-1755us TOTAL: 0H-0M-0S-1755us
19	dead-code-elimination-3	AC	0 s 179755 us	Timer@100016-100032: 0H-0M-0S-179755us TOTAL: 0H-0M-0S-179755us
20	fft0	AC	7 s 480382 us	Timer@0060-0079: 0H-0M-7S-480382us TOTAL: 0H-0M-7S-480382us
21	fft1	AC	16 s 36953 us	Timer@0060-0079: 0H-0M-16S-36953us TOTAL: 0H-0M-16S-36953us
22	fft2	AC	15 s 473636 us	Timer@0060-0079: 0H-0M-15S-473636us TOTAL: 0H-0M-15S-473636us
23	floyd-0	AC	0 s 89 us	Timer@0062-0064: 0H-0M-0S-89us TOTAL: 0H-0M-0S-89us
24	floyd-1	AC	0 s 55743 us	Timer@0062-0064: 0H-0M-0S-55743us TOTAL: 0H-0M-0S-55743us
25	floyd-2	AC	25 s 352904 us	Timer@0062-0064: 0H-0M-25S-352904us TOTAL: 0H-0M-25S-352904us
26	gameoflife-gosper	AC	22 s 478876 us	Timer@0095-0106: 0H-0M-22S-478876us TOTAL: 0H-0M-22S-478876us
27	gameoflife-oscillator	AC	20 s 43005 us	Timer@0095-0106: 0H-0M-20S-43005us TOTAL: 0H-0M-20S-43005us
28	gameoflife-p61glidergun	AC	20 s 50120 us	Timer@0095-0106: 0H-0M-20S-50120us TOTAL: 0H-0M-20S-50120us
29	hoist-1	AC	0 s 161120 us	Timer@0121-0123: 0H-0M-0S-161120us TOTAL: 0H-0M-0S-161120us
30	hoist-2	AC	156 s 829168 us	Timer@0121-0123: 0H-2M-36S-829168us TOTAL: 0H-2M-36S-829168us

31	instruction-combining-1	AC	0 s 65335 us	Timer@10015-10030: 0H-0M-0S-65335us TOTAL: 0H-0M-0S-65335us
32	instruction-combining-2	AC	13 s 128007 us	Timer@10015-10030: 0H-0M-13S-128007us TOTAL: 0H-0M-13S-128007us
33	instruction-combining-3	AC	13 s 128362 us	Timer@10015-10030: 0H-0M-13S-128362us TOTAL: 0H-0M-13S-128362us
34	median0	AC	9 s 269515 us	Timer@0059-0061: 0H-0M-9S-269515us TOTAL: 0H-0M-9S-269515us
35	median1	AC	5 s 663532 us	Timer@0059-0061: 0H-0M-5S-663532us TOTAL: 0H-0M-5S-663532us
36	median2	AC	53 s 436630 us	Timer@0059-0061: 0H-0M-53S-436630us TOTAL: 0H-0M-53S-436630us
37	mm1	AC	7 s 698083 us	Timer@0065-0084: 0H-0M-7S-698083us TOTAL: 0H-0M-7S-698083us
38	mm2	AC	6 s 887887 us	Timer@0065-0084: 0H-0M-6S-887887us TOTAL: 0H-0M-6S-887887us
39	mm3	AC	5 s 247898 us	Timer@0065-0084: 0H-0M-5S-247898us TOTAL: 0H-0M-5S-247898us
40	mv1	AC	6 s 552091 us	Timer@0059-0067: 0H-0M-6S-552091us TOTAL: 0H-0M-6S-552091us
41	mv2	AC	3 s 674187 us	Timer@0059-0067: 0H-0M-3S-674187us TOTAL: 0H-0M-3S-674187us
42	mv3	AC	4 s 768910 us	Timer@0059-0067: 0H-0M-4S-768910us TOTAL: 0H-0M-4S-768910us
43	shuffle0	AC	8 s 341148 us	Timer@0078-0090: 0H-0M-8S-341148us TOTAL: 0H-0M-8S-341148us
44	shuffle1	AC	10 s 400182 us	Timer@0078-0090: 0H-0M-10S-400182us TOTAL: 0H-0M-10S-400182us

45	shuffle2	AC	3 s 731818 us	Timer@0078-0090: 0H-0M-3S-731818us TOTAL: 0H-0M-3S-731818us
46	sl1	AC	7 s 58473 us	Timer@0013-0053: 0H-0M-7S-58473us TOTAL: 0H-0M-7S-58473us
47	sl2	AC	2 s 619944 us	Timer@0013-0053: 0H-0M-2S-619944us TOTAL: 0H-0M-2S-619944us
48	sl3	AC	1 s 210981 us	Timer@0013-0053: 0H-0M-1S-210981us TOTAL: 0H-0M-1S-210981us
49	sort1	AC	1 s 584258 us	Timer@0090-0102: 0H-0M-1S-584258us TOTAL: 0H-0M-1S-584258us
50	sort2	AC	22 s 610694 us	Timer@0090-0102: 0H-0M-22S-610694us TOTAL: 0H-0M-22S-610694us
51	sort3	AC	4 s 419457 us	Timer@0090-0102: 0H-0M-4S-419457us TOTAL: 0H-0M-4S-419457us
52	spmv1	AC	4 s 236607 us	Timer@0039-0047: 0H-0M-4S-236607us TOTAL: 0H-0M-4S-236607us
53	spmv2	AC	2 s 710349 us	Timer@0039-0047: 0H-0M-2S-710349us TOTAL: 0H-0M-2S-710349us
54	spmv3	AC	2 s 856947 us	Timer@0039-0047: 0H-0M-2S-856947us TOTAL: 0H-0M-2S-856947us
55	stencil0	AC	0 s 57913 us	Timer@0023-0059: 0H-0M-0S-57913us TOTAL: 0H-0M-0S-57913us
56	stencil1	AC	0 s 141505 us	Timer@0023-0059: 0H-0M-0S-141505us TOTAL: 0H-0M-0S-141505us
57	transpose0	AC	4 s 562241 us	Timer@0028-0047: 0H-0M-4S-562241us TOTAL: 0H-0M-4S-562241us
58	transpose1	AC	5 s 422172 us	Timer@0028-0047: 0H-0M-5S-422172us TOTAL: 0H-0M-5S-422172us

59	transpose2	AC	13 s 602848 us	Timer@0028-0047: 0H-0M-13S-602848us TOTAL: 0H-0M-13S-602848us
----	------------	----	----------------	----------------------------------------------------------------------

Compile Log

Compile Command	<pre>javac -d /root/run/classes -encoding utf-8 -cp ./coursegrader/dockerext/java-cup-11b-runtime.jar:coursegrader/dockerext/antlr-4.8-complete.jar -sourcepath /coursegrader/submitdata /coursegrader/submitdata/src/Compiler.java /coursegrader/submitdata/src/FunctionalDebug.java /coursegrader/submitdata/src/DebugTools.java /coursegrader/submitdata/src/Main.java /coursegrader/submitdata/src/ir/Value.java /coursegrader/submitdata/src/ir/GlobalVar.java /coursegrader/submitdata/src/ir/Function.java /coursegrader/submitdata/src/ir/IRVerifyException.java /coursegrader/submitdata/src/ir/User.java /coursegrader/submitdata/src/ir/Parameter.java /coursegrader/submitdata/src/ir/GlobalModificationStatus.java /coursegrader/submitdata/src/ir/Module.java /coursegrader/submitdata/src/ir/BasicBlock.java /coursegrader/submitdata/src/ir/ReflectiveTools.java /coursegrader/submitdata/src/ir/Pair.java /coursegrader/submitdata/src/ir/StringUtils.java /coursegrader/submitdata/src/ir/LLVMDumper.java /coursegrader/submitdata/src/ir/Node.java /coursegrader/submitdata/src/ir/LList.java /coursegrader/submitdata/src/ir/CollectionTools.java /coursegrader/submitdata/src/ir/ChainMap.java /coursegrader/submitdata/src/ir/NodeOwner.java /coursegrader/submitdata/src/ir/ListException.java /coursegrader/submitdata/src/ir/Log.java /coursegrader/submitdata/src/ir/LListOwner.java /coursegrader/submitdata/src/ir/LogFailException.java /coursegrader/submitdata/src/ir/IteratorTools.java /coursegrader/submitdata/src/backend/Consts.java /coursegrader/submitdata/src/frontend/SysYParser.java /coursegrader/submitdata/src/frontend/SourceCodeSymbol.java /coursegrader/submitdata/src/frontend/SysYLexer.java /coursegrader/submitdata/src/frontend/IRGen.java /coursegrader/submitdata/src/frontend/SysYVisitor.java /coursegrader/submitdata/src/frontend/IRBuilder.java /coursegrader/submitdata/src/frontend/SemanticExceptionTools.java /coursegrader/submitdata/src/ir/Type/FunctionIRType.java /coursegrader/submitdata/src/ir/Type/SimpleIRType.java /coursegrader/submitdata/src/ir/Type/IRTypeException.java /coursegrader/submitdata/src/ir/Type/ArrayIRType.java /coursegrader/submitdata/src/ir/Type/IRType.java /coursegrader/submitdata/src/ir/Type/IRTypeKind.java /coursegrader/submitdata/src/ir/Inst/MemInitInst.java /coursegrader/submitdata/src/ir/Inst/BinaryCondInst.java /coursegrader/submitdata/src/ir/Inst/GEPIInst.java /coursegrader/submitdata/src/ir/Inst/IntToFloatInst.java /coursegrader/submitdata/src/ir/Inst/LoadInst.java /coursegrader/submitdata/src/ir/Inst/CallInst.java /coursegrader/submitdata/src/ir/Inst/BinaryOpInst.java /coursegrader/submitdata/src/ir/Inst/InstKind.java /coursegrader/submitdata/src/ir/Inst/CALLocInst.java /coursegrader/submitdata/src/ir/Inst/ReturnInst.java /coursegrader/submitdata/src/ir/Inst/CmpInst.java /coursegrader/submitdata/src/ir/Inst/Instruction.java /coursegrader/submitdata/src/ir/Inst/BinaryInst.java /coursegrader/submitdata/src/ir/Inst/UnaryOpInst.java /coursegrader/submitdata/src/ir/Inst/PhiInst.java /coursegrader/submitdata/src/ir/Inst/StoreInst.java /coursegrader/submitdata/src/ir/Inst/FloatToIntInst.java /coursegrader/submitdata/src/ir/Inst/BoolToIntInst.java /coursegrader/submitdata/src/ir/analysis/AnalysisInfoOwner.java /coursegrader/submitdata/src/ir/analysis/AnalysisInfo.java /coursegrader/submitdata/src/ir/constant/FloatConst.java /coursegrader/submitdata/src/ir/constant/IntConst.java /coursegrader/submitdata/src/ir/constant/ArrayConst.java /coursegrader/submitdata/src/ir/constant/BoolConst.java /coursegrader/submitdata/src/ir/constant/Constant.java /coursegrader/submitdata/src/ir/visitor/ConstantVisitor.java /coursegrader/submitdata/src/ir/visitor/ValueVisitor.java /coursegrader/submitdata/src/ir/visitor/InstructionVisitor.java /coursegrader/submitdata/src/pass/ir/FunctionInline.java /coursegrader/submitdata/src/pass/ir/ClearUnreachableBlock.java /coursegrader/submitdata/src/pass/ir/ConstantFold.java /coursegrader/submitdata/src/pass/ir/FuseImmediatelyBranch.java /coursegrader/submitdata/src/pass/ir/RemoveTrivialPhi.java /coursegrader/submitdata/src/pass/ir/IRPass.java /coursegrader/submitdata/src/pass/ir/FuseBasicBlock.java /coursegrader/submitdata/src/pass/ir/IRPassManager.java /coursegrader/submitdata/src/pass/ir/SimpleGVN.java /coursegrader/submitdata/src/pass/ir/ConstructDominatorInfo.java /coursegrader/submitdata/src/pass/ir/ClearUselessFunction.java /coursegrader/submitdata/src/pass/ir/ClearUselessInstruction.java /coursegrader/submitdata/src/backend/codegen/CodeGenManager.java /coursegrader/submitdata/src/backend/regallocator/SimpleGraphColoring.java /coursegrader/submitdata/src/backend/regallocator/LivenessAnalysis.java /coursegrader/submitdata/src/backend/regallocator/RegAllocator.java /coursegrader/submitdata/src/backend/arm/ArmInstUnary.java /coursegrader/submitdata/src/backend/arm/ArmInstMove.java /coursegrader/submitdata/src/backend/arm/ArmInstStore.java /coursegrader/submitdata/src/backend/arm/ArmInstParamLoad.java /coursegrader/submitdata/src/backend/arm/ArmInstStackLoad.java /coursegrader/submitdata/src/backend/arm/ArmInstLStore.java /coursegrader/submitdata/src/backend/arm/ArmInstBinary.java /coursegrader/submitdata/src/backend/arm/ArmInstLoad.java /coursegrader/submitdata/src/backend/arm/ArmInstStackAddr.java /coursegrader/submitdata/src/backend/arm/ArmInstReturn.java /coursegrader/submitdata/src/backend/arm/ArmInst.java /coursegrader/submitdata/src/backend/arm/ArmFunction.java /coursegrader/submitdata/src/backend/arm/ArmInstStackStore.java /coursegrader/submitdata/src/backend/arm/ArmBlock.java /coursegrader/submitdata/src/backend/arm/ArmInstFloatToInt.java /coursegrader/submitdata/src/backend/arm/ArmInstIntToFloat.java /coursegrader/submitdata/src/backend/arm/ArmInstBranch.java /coursegrader/submitdata/src/backend/arm/ArmInstCmp.java /coursegrader/submitdata/src/backend/arm/ArmInstCall.java /coursegrader/submitdata/src/backend/arm/ArmInstTernary.java /coursegrader/submitdata/src/backend/operand/FVirtualReg.java /coursegrader/submitdata/src/backend/operand/Operand.java /coursegrader/submitdata/src/backend/operand/FPhyReg.java /coursegrader/submitdata/src/backend/operand/Reg.java /coursegrader/submitdata/src/backend/operand/Flmm.java /coursegrader/submitdata/src/backend/operand/IPhyReg.java /coursegrader/submitdata/src/backend/operand/VirtualReg.java /coursegrader/submitdata/src/backend/operand/Imm.java /coursegrader/submitdata/src/backend/operand/LLmm.java /coursegrader/submitdata/src/frontend/info/CurrDefInfo.java /coursegrader/submitdata/src/frontend/info/FinalInfo.java /coursegrader/submitdata/src/frontend/folder/IntConstantFolder.java /coursegrader/submitdata/src/frontend/folder/CondFolder.java /coursegrader/submitdata/src/frontend/folder/FloatConstantFolder.java /coursegrader/submitdata/src/pass/ir/memory/ReplaceUnnecessaryLoad.java /coursegrader/submitdata/src/pass/ir/memory/MemCache.java /coursegrader/submitdata/src/pass/ir/memory/RemoveUnnecessaryArray.java /coursegrader/submitdata/src/pass/ir/memory/MemPositionHandler.java /coursegrader/submitdata/src/pass/ir/memory/MemoryInfo.java /coursegrader/submitdata/src/pass/ir/memory/MemVariable.java /coursegrader/submitdata/src/pass/ir/memory/CollectMemoryDefinition.java /coursegrader/submitdata/src/pass/ir/dataflow/DataFlowInfo.java /coursegrader/submitdata/src/pass/ir/dataflow/ForwardDataFlowPass.java /coursegrader/submitdata/src/pass/ir/loop/LoopBlockInfo.java /coursegrader/submitdata/src/pass/ir/loop/LoopUnroll.java /coursegrader/submitdata/src/pass/ir/loop/LoopInvariantInfo.java /coursegrader/submitdata/src/pass/ir/loop/MoveLoopInvariant.java /coursegrader/submitdata/src/pass/ir/loop/LoopFunctionInfo.java /coursegrader/submitdata/src/pass/ir/loop/CollectLoopsAndMakeItCanonical.java /coursegrader/submitdata/src/pass/ir/loop/SimplifySSAForLoop.java /coursegrader/submitdata/src/pass/ir/loop/NaturalLoop.java /coursegrader/submitdata/src/pass/ir/loop/CanonicalLoop.java /coursegrader/submitdata/src/pass/ir/loop/LoopPass.java /coursegrader/submitdata/src/pass/ir/loop/CollectNaturalLoop.java /coursegrader/submitdata/src/pass/ir/util/MultiBasicBlockCloner.java /coursegrader/submitdata/src/pass/ir/util/SimpleInstructionCloner.java && cd /root/run/classes && jar xf /coursegrader/dockerext/java-cup-11b-runtime.jar && jar xf /coursegrader/dockerext/antlr-4.8-complete.jar && jar --create --file /root/run/compiler.jar --main-class Compiler -C /root/run/classes .</pre>
-----------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------