

# Appendix Testcases

## 1 Testcases kotlin

Test name	Metric	File name	Expected value	Expected result
(CboA) CBO for empty class	CBO	a/CboA.kt	CboA.kt	0
(CboB) CBO for class with parent using import	CBO	b/CboB.kt	CboB.kt	1
(CboBParent) CBO for class that is parent by import	CBO	b/CboBParent.kt	CboBParent.kt	1
(CboC) CBO for class with parent using fully qualified name	CBO	c/CboC.kt	CboC.kt	1
(CboD) CBO for class with field values using fully qualified name	CBO	d/CboD.kt	CboD.kt	1
(CboE) CBO for class with constructor calls in method using import and fully qualified name	CBO	e/CboE.kt	CboE.kt	1
(CboF) CBO for class with method call of static class using import	CBO	f/CboF.kt	CboF.kt	1
(CboH) CBO for class calling extension function using import and alias import	CBO	h/CboH.kt	CboH.kt	1
(CboHExtensionFunctions) CBO for extension functions in file called from other class	CBO	h/CboHExtensionFunctions.kt	CboHExtensionFunctions.kt	1
(CboI) CBO for class with alias import	CBO	i/CboI.kt	CboI.kt	1
(CboJ) CBO for class with internal class import	CBO	j/CboJ.kt	CboJ.kt	1
(CboOther) CBO for 2 classes in same package with 2 usages each	CBO	other/CboStaticClass.kt	CboStaticClass.kt	4
(CboOther) CBO for 2 classes in same package with 2 usages each	CBO	other/CboSubClass.kt	CboSubClass.kt	4
(ClocA) CLOC for class	CLOC	ClocA.kt	ClocA	8
(ClocB) CLOC for multiple classes is same file	CLOC	ClocB1.kt	ClocB1	3
(ClocB) CLOC for multiple classes is same file	CLOC	ClocB2.kt	ClocB2	2
(ClocB) CLOC for multiple classes is same file	CLOC	ClocB3.kt	ClocB3	1
(ClocC) CLOC for extension function in file	CLOC	ClocC.kt	ClocC.kt	4
(ClocD) CLOC for class and extension function in file	CLOC	ClocD.kt	ClocD	2
(ClocD) CLOC for class and extension function in file	CLOC	ClocD.kt	ClocD.kt	3
(ClocE) CLOC for nested class	CLOC	ClocE.kt	ClocE	5
(DitA) DIT for empty class	DIT	DitA.kt	DitA	0
(DitB) DIT for multiple class in same file inheriting each other	DIT	DitB1.kt	DitB1	0

(DitB) DIT for multiple class in same file inheriting each other	DIT	DitB2.kt	DitB2	1
(DitB) DIT for multiple class in same file inheriting each other	DIT	DitB3.kt	DitB3	2
(DitC) DIT for class inheriting by fully qualified name	DIT	DitC.kt	DitC	2
(DitD) DIT for class inheriting by import	DIT	DitD.kt	DitD	2
(DitE) DIT for class inheriting from class not existing in project	DIT	DitE.kt	DitE	1
(DitF) DIT for class inheriting from class not existing in project by fully qualified name	DIT	DitF.kt	DitF	1
(DitG) DIT for class extending interface	DIT	DitG.kt	DitG	1
(DitH) DIT for class extending interface and inheriting from class takes max value	DIT	DitH1.kt	DitH1	2
(DitH) DIT for class extending interface and inheriting from class takes max value	DIT	DitH2.kt	DitH2	3
(DitH) DIT for class extending interface and inheriting from class takes max value	DIT	DitH3.kt	DitH3	1
(LcamA) LCAM for empty class	LCAM	LcamA.kt	LcamA	0.0
(LcamB) LCAM for class with single field and reference in primary constructor	LCAM	LcamB.kt	LcamB	1.0 - (3.0 / 4.0)
(LcamB2) LCAM for class with single field and reference in primary constructor via 'init'	LCAM	LcamB2.kt	LcamB2	1.0 - (3.0 / 4.0)
(LcamB3) LCAM for class with single field and reference in primary constructor via direct assignment	LCAM	LcamB3.kt	LcamB3	1.0 - (3.0 / 4.0)
(LcamC) LCAM for class with single field and reference in secondary constructor	LCAM	LcamC.kt	LcamC	1.0 - (3.0 / 4.0)
(LcamD) LCAM for class with multiple fields referenced in multiple methods	LCAM	LcamD.kt	LcamD	1.0 - (4.0 / (2 * 4.0))
(LcamE) LCAM for class with single field and method using same field name as local variable	LCAM	LcamE.kt	LcamE	1.0 - (2.0 / 4.0)
(LcamF) LCAM for class with single field and method referencing field with 'this' keyword	LCAM	LcamF.kt	LcamF	1.0 - (3.0 / 4.0)
(LcamG) LCAM for object with single field and method referencing field	LCAM	LcamG.kt	LcamG	1.0 - (2.0 / 3.0)
(LcamH) LCAM for file with multiple classes	LCAM	LcamH1.kt	LcamH1	1.0 - (1.0 / 2.0)
(LcamH) LCAM for file with multiple classes	LCAM	LcamH2.kt	LcamH2	1.0 - (1.0 / 2.0)
(LcamI) LCAM for class with method using expression body	LCAM	LcamI.kt	LcamI	1.0 - (1.0 / 2.0)
(LcamJ) LCAM for data class with getter referencing fields	LCAM	LcamJ.kt	LcamJ	1.0 - (4.0 / (2.0 * 3.0))

(NocA) NOC for empty class	NOC	NocA.kt	NocA	0
(NocB) NOC for open class with with three subclasses	NOC	NocB1.kt	NocB1	3
(NocB) NOC for open class with with three subclasses	NOC	NocB2.kt	NocB2	0
(NocB) NOC for open class with with three subclasses	NOC	NocB3.kt	NocB3	0
(NocB) NOC for open class with with three subclasses	NOC	NocB4.kt	NocB4	0
(NocC) NOC for classes with multiple inheritance	NOC	NocC1.kt	NocC1	1
(NocC) NOC for classes with multiple inheritance	NOC	NocC2.kt	NocC2	2
(NocC) NOC for classes with multiple inheritance	NOC	NocC3.kt	NocC3	0
(NocC) NOC for classes with multiple inheritance	NOC	NocC4.kt	NocC4	0
(NocD) NOC for interfaces with multiple inheritance	NOC	NocD1.kt	NocD1	0
(NocD) NOC for interfaces with multiple inheritance	NOC	NocD2.kt	NocD2	0
(NocD) NOC for interfaces with multiple inheritance	NOC	NocD3.kt	NocD3	0
(NocD) NOC for interfaces with multiple inheritance	NOC	NocD4.kt	NocD4	0
(NocD) NOC for interfaces with multiple inheritance	NOC	NocD5.kt	NocD5	0
(NocE) NOC for class implementing interface interface and extending class	NOC	NocE1.kt	NocE1	0
(NocE) NOC for class implementing interface interface and extending class	NOC	NocE2.kt	NocE2	0
(NocE) NOC for class implementing interface interface and extending class	NOC	NocE3.kt	NocE3	1
(NocE) NOC for class implementing interface interface and extending class	NOC	NocE4.kt	NocE4	0
(NocF) NOC for class extending class in different package	NOC	NocF1.kt	NocF1	0
(NocF) NOC for class extending class in different package	NOC	NocF2.kt	NocF2	0
(NocF) NOC for class extending class in different package	NOC	NocF3.kt	NocF3	0
(NocF) NOC for class extending class in different package	NOC	other/NocF.kt	NocF	3
(RfcA) RFC for empty class	RFC	RfcA.kt	RfcA	0
(RfcB) RFC for class with with two methods calling its own method	RFC	RfcB.kt	RfcB	2
(RfcC) RFC for class with with a methods calling two different methods from other class	RFC	RfcC.kt	RfcC	3

(RfcD) RFC for object with with two methods calling same method from other class	RFC	RfcD.kt	RfcD	4
(RfcE) RFC for file with two classes	RFC	RfcE1.kt	RfcE1	3
(RfcE) RFC for file with two classes	RFC	RfcE2.kt	RfcE2	2
(RfcF) RFC for file with a class and a global method	RFC	RfcF.kt	RfcF	3
(RfcF) RFC for file with a class and a global method	RFC	RfcF.kt	RfcF	2
(RfcG) RFC for class with with a methods calling a method from other class from two different local objects	RFC	RfcG.kt	RfcG	3
(RfcH) RFC for class with with a method accessing a field from other class	RFC	RfcH.kt	RfcH	1
(WmcA) WMC for empty class	WMC	WmcA.kt	WmcA	1
(WmcB) WMC for class with with two methods	WMC	WmcB.kt	WmcB	3
(WmcC) WMC for class with two secondary secondary constructor and primary constructor	WMC	WmcC.kt	WmcC	3
(WmcD) WMC for object with with two methods	WMC	WmcD.kt	WmcD	2
(WmcE) WMC for file with two classes	WMC	WmcE1.kt	WmcE1	3
(WmcE) WMC for file with two classes	WMC	WmcE2.kt	WmcE2	2
(WmcF) WMC for file with a class and two global methods	WMC	WmcF.kt	WmcF	3
(WmcF) WMC for file with a class and two global methods	WMC	WmcF.kt	WmcF	2
(WmcG) WMC for file with complexity of 'if'	WMC	WmcG.kt	WmcG	6
(WmcH) WMC for file with complexity of 'for'	WMC	WmcH.kt	WmcH	6
(WmcI) WMC for file with complexity of 'while'	WMC	WmcI.kt	WmcI	6
(WmcJ) WMC for file with complexity of 'switch'	WMC	WmcJ.kt	WmcJ	8
(WmcK) WMC for file with complexity of 'catch'	WMC	WmcK.kt	WmcK	6
(WmcL) WMC for file with complexity of 'throw'	WMC	WmcL.kt	WmcL	6
(WmcM) WMC for file with complexity of 'and operator' and 'or operator'	WMC	WmcM.kt	WmcM	8

## 2 Testcases dart

Test name	Metric	File name	Expected value	Expected result
(CboA) CBO for empty class	CBO	a/cbo_a.dart	cbo_a.dart	0
(CboB) CBO for class with parent using absolute path import	CBO	b/cbo_b.dart	cbo_b.dart	1
(CboBParent) CBO for class that is parent by absolute path import	CBO	b/cbo_b_parent.dart	cbo_b_parent.dart	1
(CboC) CBO for class with parent using relative path import	CBO	c/cbo_c.dart	cbo_c.dart	1
(CboCParent) CBO for class that is parent using relative path import	CBO	c/cbo_c_parent.dart	cbo_c_parent.dart	1
(CboD) CBO for class with field values using alias	CBO	d/cbo_d.dart	cbo_d.dart	1
(CboE) CBO for class with constructor calls in method using import and alias name import	CBO	e/cbo_e.dart	cbo_e.dart	1
(CboF) CBO for class with method call of static class using import	CBO	f/cbo_f.dart	cbo_f.dart	1
(CboG) CBO for class with method call of static class using import and fully qualified name	CBO	g/cbo_g.dart	cbo_g.dart	2
(CboGStatic) CBO for static class which is called by other class by alias name	CBO	g/cbo_g_static.dart	cbo_g_static.dart	1
(CboI) CBO for class with alias import	CBO	i/cbo_i.dart	cbo_i.dart	1
(CboOther) CBO for 2 classes in same package with 2 usages each	CBO	other/cbo_static_class.dart	cbo_static_class.dart	3
(CboOther) CBO for 2 classes in same package with 2 usages each	CBO	other/cbo_sub_class.dart	cbo_sub_classes.dart	3
(ClocA) CLOC for class	CLOC	cloc_a.dart	ClocA	8
(ClocB) CLOC for multiple classes is same file	CLOC	cloc_b.dart	ClocB1	3
(ClocB) CLOC for multiple classes is same file	CLOC	cloc_b.dart	ClocB2	2
(ClocB) CLOC for multiple classes is same file	CLOC	cloc_b.dart	ClocB3	1
(ClocC) CLOC for global function in file	CLOC	cloc_c.dart	cloc_c.dart	4
(DitA) DIT for empty class	DIT	dit_a.dart	DitA	0
(DitB) DIT for multiple class in same file inheriting each other	DIT	dit_b.dart	DitB1	0
(DitB) DIT for multiple class in same file inheriting each other	DIT	dit_b.dart	DitB2	1
(DitB) DIT for multiple class in same file inheriting each other	DIT	dit_b.dart	DitB3	2
(DitD) DIT for class inheriting by import	DIT	dit_d.dart	DitD	2
(DitE) DIT for class inheriting from class not existing in project	DIT	dit_e.dart	DitE	1
(DitF) DIT for class inheriting from class not existing in project by fully qualified name	DIT	dit_f.dart	DitF	1

(DitG) DIT for class extending interface	DIT	dit_g.dart	DitG	1
(DitH) DIT for class extending interface and inheriting from class takes max value	DIT	dit_h.dart	DitH1	2
(DitH) DIT for class extending interface and inheriting from class takes max value	DIT	dit_h.dart	DitH2	3
(DitH) DIT for class extending interface and inheriting from class takes max value	DIT	dit_h.dart	DitH3	1
(LcamA) LCAM for empty class	LCAM	lcam_a.dart	LcamA	0.0
(LcamB) LCAM for class with single field and reference in constructor	LCAM	lcam_b.dart	LcamB	$1.0 - (2.0 / 3.0)$
(LcamB2) LCAM for class with single field and reference in constructor as named parameter	LCAM	lcam_b2.dart	LcamB2	$1.0 - (2.0 / 3.0)$
(LcamC) LCAM for class with single field and reference in secondary constructor	LCAM	lcam_c.dart	LcamC	$1.0 - (3.0 / 4.0)$
(LcamD) LCAM for class with multiple fields referenced in multiple methods	LCAM	lcam_d.dart	LcamD	$1.0 - (4.0 / (2 * 4.0))$
(LcamE) LCAM for class with single field and method using same field name as local variable	LCAM	lcam_e.dart	LcamE	$1.0 - (2.0 / 3.0)$
(LcamF) LCAM for class with single field and method referencing field with 'this' keyword	LCAM	lcam_f.dart	LcamF	$1.0 - (2.0 / 2.0)$
(LcamG) LCAM for object with single field and method referencing field	LCAM	lcam_g.dart	LcamG	$1.0 - (1.0 / 1.0)$
(LcamH) LCAM for file with multiple classes	LCAM	lcam_h.dart	LcamH1	$1.0 - (1.0 / 2.0)$
(LcamH) LCAM for file with multiple classes	LCAM	lcam_h.dart	LcamH2	$1.0 - (1.0 / 2.0)$
(LcamI) LCAM for class with method using expression body	LCAM	lcam_i.dart	LcamI	$1.0 - (1.0 / 2.0)$
(LcamJ) LCAM for data class with getter referencing fields	LCAM	lcam_j.dart	LcamJ	$1.0 - (4.0 / (2.0 * 3.0))$
(NocA) NOC for empty class	NOC	noc_a.dart	NocA	0
(NocB) NOC for open class with with three subclasses	NOC	noc_b.dart	NocB1	3
(NocB) NOC for open class with with three subclasses	NOC	noc_b.dart	NocB2	0
(NocB) NOC for open class with with three subclasses	NOC	noc_b.dart	NocB3	0
(NocB) NOC for open class with with three subclasses	NOC	noc_b.dart	NocB4	0
(NocC) NOC for classes with multiple inheritance	NOC	noc_c.dart	NocC1	1
(NocC) NOC for classes with multiple inheritance	NOC	noc_c.dart	NocC2	2
(NocC) NOC for classes with multiple inheritance	NOC	noc_c.dart	NocC3	0

(NocC) NOC for classes with multiple inheritance	NOC	noc_c.dart	NocC4	0
(NocD) NOC for interfaces with multiple inheritance	NOC	noc_d.dart	NocD1	0
(NocD) NOC for interfaces with multiple inheritance	NOC	noc_d.dart	NocD2	0
(NocD) NOC for interfaces with multiple inheritance	NOC	noc_d.dart	NocD3	0
(NocD) NOC for interfaces with multiple inheritance	NOC	noc_d.dart	NocD4	0
(NocD) NOC for interfaces with multiple inheritance	NOC	noc_d.dart	NocD5	0
(NocE) NOC for class implementing interface interface and extending class	NOC	noc_e.dart	NocE1	0
(NocE) NOC for class implementing interface interface and extending class	NOC	noc_e.dart	NocE2	0
(NocE) NOC for class implementing interface interface and extending class	NOC	noc_e.dart	NocE3	1
(NocE) NOC for class implementing interface interface and extending class	NOC	noc_e.dart	NocE4	0
(NocF) NOC for class extending class in different package using relative path import	NOC	noc_f.dart	NocF1	0
(NocF) NOC for class extending class in different package using relative path import	NOC	noc_f.dart	NocF2	0
(NocF) NOC for class extending class in different package using relative path import	NOC	noc_f.dart	NocFParent	2
(NocG) NOC for class extending class which exists in same file and imported file	NOC	noc_g.dart	NocG	0
(NocG) NOC for class extending class which exists in same file and imported file	NOC	noc_g.dart	NocGPParent	1
(NocG) NOC for class extending class which exists in same file and imported file	NOC	noc_g.dart	NocGPParent	0
(NocH) NOC for class extending class in different package using package import	NOC	noc_h.dart	NocH	0
(NocH) NOC for class extending class in different package using package import	NOC	noc_h.dart	NocHParent	1
(RfcA) RFC for empty class	RFC	rfc_a.dart	RfcA	0
(RfcB) RFC for class with with two methods calling its own method	RFC	rfc_b.dart	RfcB	2
(RfcC) RFC for class with with a methods calling two different methods from other class	RFC	rfc_c.dart	RfcC	3
(RfcD) RFC for object with with two methods calling same method from other class	RFC	rfc_d.dart	RfcD	4

(RfcE) RFC for file with two classes	RFC	rfc_e.dart	RfcE1	3
(RfcE) RFC for file with two classes	RFC	rfc_e.dart	RfcE2	2
(RfcF) RFC for file with a class and a global method	RFC	rfc_f.dart	RfcF	3
(RfcF) RFC for file with a class and a global method	RFC	rfc_f.dart	rfc_f.dart	2
(RfcG) RFC for class with with a methods calling a method from other class from two different local objects	RFC	rfc_g.dart	RfcG	3
(RfcH) RFC for class with with a method accessing a field from other class	RFC	rfc_h.dart	RfcH	1
(WmcA) WMC for empty class	WMC	wmc_a.dart	WmcA	1
(WmcB) WMC for class with with two methods	WMC	wmc_b.dart	WmcB	3
(WmcC) WMC for class with three secondary secondary constructor and primary constructor	WMC	wmc_c.dart	WmcC	4
(WmcD) WMC for object with with two methods	WMC	wmc_d.dart	WmcD	2
(WmcE) WMC for file with two classes	WMC	wmc_e.dart	WmcE1	3
(WmcE) WMC for file with two classes	WMC	wmc_e.dart	WmcE2	2
(WmcF) WMC for file with a class and two global methods	WMC	wmc_f.dart	WmcF	3
(WmcF) WMC for file with a class and two global methods	WMC	wmc_f.dart	wmc_f.dart	2
(WmcG) WMC for file with complexity of 'if'	WMC	wmc_g.dart	WmcG	6
(WmcH) WMC for file with complexity of 'for'	WMC	wmc_h.dart	WmcH	6
(WmcI) WMC for file with complexity of 'while'	WMC	wmc_i.dart	WmcI	6
(WmcJ) WMC for file with complexity of 'switch'	WMC	wmc_j.dart	WmcJ	8
(WmcK) WMC for file with complexity of 'catch'	WMC	wmc_k.dart	WmcK	6
(WmcL) WMC for file with complexity of 'throw'	WMC	wmc_l.dart	WmcL	6
(WmcM) WMC for file with complexity of 'and operator' and 'or operator'	WMC	wmc_m.dart	WmcM	8
(WmcN) WMC for file with complexity of 'inline if statement'	WMC	wmc_n.dart	WmcN	6