

Agile Alliance Debt Analysis Model (A2DAM) - 2016 Version - Ground Level

ID	Good practice	Ground level threshold	Main characteristic impacted	Remediation Cost Type	Remediation Cost	Potential impact level
Tested-CCOV	A file has an acceptable level of code coverage.	70% of line coverage	Reliability	Gap dependent	2 mn per uncovered line	High
Clear-INVL	A "for" loop iterator is not modified in the body of the loop.		Reliability	Fixed	20 mn	Very high
Clear-DEST	All "if"/"for"/"while" structures are delimited by curly braces.		Changeability	Fixed	5 mn	High
Clear-CLDO	Public classes and public methods are documented.		Maintainability	Fixed	20 mn at method or function level 45 mn at class or program level	Medium
Clear-CLCC	Classes or programs are not highly complex.	150	Testability	Gap dependent	3 mn per additional point of Cyclomatic Complexity	Medium
Clear-SWPR	An unconditional "break" statement closes all non-empty switch-clauses.		Reliability	Fixed	5 mn	Very high
Clear-CMTD	Source files have a sufficient density of comments.	25%	Maintainability	Gap dependent	3 mn per missing line of comments	Medium
Clear-RSCF	All modules locking a resource (file, socket, semaphore, port...) insure it is freed.		Reliability	Fixed	20 mn	Very high
Clear-CLAP	Class attributes are not public.		Testability	Fixed	20 mn	High
Concise-COMC	Components are not calling too many other components.	12	Testability	Gap dependent	120 mn per additional dependency	High
Concise-CDBG	Final production code does not contain debug specific instructions.		Reliability	Fixed	2 mn	Very high
Clear-EHGE	Exception handling does not catch or throw generic exceptions.		Reliability	Fixed	20 mn	High
Misc-OBLP	Objects are not instantiated in a loop.		Efficiency	Fixed	30 mn	High
Clear-CNAC	Classes, programs, methods, functions and identifiers (variables, ...)		Maintainability	Fixed	2 mn	Low
Clear-CNUL	The code does not contain paths that may attempt to dereference null values.		Reliability	Fixed	20 mn	Very high
Concise-CLHI	Class hierarchies are not too deep.	6	Maintainability	Gap dependent	120 mn per additional level	High
Clear-SWDE	All "switch" statements have a "default" clause.		Reliability	Fixed	5 mn	High
Clear-MEPA	A method or a function does not have too many parameters.	7	Testability	Fixed	30 mn	High
Clear-TYDC	There are no dangerous implicit cast operations between incompatible types.		Reliability	Fixed	5 mn	Very high
Clear-CCOM	There are no commented out code blocks.		Maintainability	Fixed	5 mn	Low
Dry-BDUP	Duplicated blocks are not too long.	100 tokens or 10 lines of code	Testability	Fixed	30mn	Medium
Clear-NMGC	There are no magic numbers.		Changeability	Fixed	4 mn	Medium
Clear-ST1L	There are no lines with more than one statement.		Maintainability	Fixed	2 mn	Low
Clear-VMSC	There is no local variable/object shadowing/redefining a variable/object with the same or a larger scope.		Reliability	Fixed	10 mn	Very high
Clear-FEQT	There is no test for equality between floating point variables.		Reliability	Fixed	20 mn	Very high
Clear-STUN	There is no unstructured branching statement (break outside a switch, goto, ...)	No more than 1 'continue' per loop No more than 1 'break' per loop No more than 2 'return' per method or function	Maintainability	Fixed	30 mn	Low
Concise-CDED	There is no dead code (a 'default' clause is not considered as dead code).		Maintainability	Fixed	2 mn	Low
Clear-MECC	Methods or functions are not highly complex.	15	Testability	Gap dependent	2 mn per additional point of Cyclomatic Complexity	High
Clear-STNS	There are no deeply nested statements.	4	Changeability	Gap dependent	20 mn per additional level	Low
Clear-DPHB	There is no direct dependency between HMI (or client)		Changeability	Fixed	120 mn	Medium
Clear-DPBP	There is no direct dependency between business components and persistence components.		Changeability	Fixed	120 mn	Medium
Clear-CLCH	A parent class does not reference any of its child classes.		Changeability	Gap dependent	120 mn per link	Medium
Concise-INSE	An interface does not have too much services (functions or methods).	50 functions or methods	Changeability	Gap dependent	120 mn per interface split	Medium
Clear-PACY	A package does not depend cyclically on itself.		Changeability	Gap dependent	120 mn per dependency cycle	Medium