

DO-178C/ED-12C Table A-2 Software Development Process

DO-178C/ED-12C (Core) Annex A				DO-333 Formal Methods (FM)		DO-331 Model Based (MB)		DO-332 Object Oriented (OO)	
Objective	Description	Objective Reference	Output/Data Reference	Objective Reference	Output/Data Reference	Objective Reference	Output/Data Reference	Objective Reference	Output/Data Reference
A-2 #1	High-level requirements are developed	5.1.1.a, 5.1.2.a, 5.1.2.b, 5.1.2.c, 5.1.2.d, 5.1.2.e, 5.1.2.f, 5.1.2.g, 5.1.2.j, 5.5.a	11.9, 11.21	FM.6.3.a, FM.6.3.1.a, FM.6.3.1	-	MB.5.1.1.a, MB.5.1.2.a, MB.5.1.2.b, MB.5.1.2.c, MB.5.1.2.d, MB.5.1.2.e, MB.5.1.2.f, MB.5.1.2.g, MB.5.1.2.j, MB.5.1.2.k, MB.5.1.2.l, MB.5.5	MB.11.9, MB.11.21	OO.5.5.a	'OO.11.21
A-2 #2	Derived high-level requirements are defined and provided to the system processes, including the system safety assessment process.	5.1.1.b, 5.1.2.h, 5.1.2.i	11.9	FM.6.3.b, FM.6.3.c, FM.6.3.1.b, FM.6.3.1	-	MB.5.1.1.b, MB.5.1.2.h, MB.5.1.2.i, MB.5.1.2.k	MB.11.9	-	-
A-2 #3	Software architecture is developed.	5.2.1.a, 5.2.2.a, 5.2.2.d	11.10	FM.6.3.d, FM.6.3.1.c, FM.6.3.1	-	MB.5.2.1.a, MB.5.2.2.a, MB.5.2.2.d, MB.5.2.2.h	MB.11.10	OO.5.2.2.a, OO.5.2.2.d, OO.5.2.2.h, OO.5.2.2.i, OO.5.2.2.j, OO.5.2.2.k, OO.5.2.2.l	-
A-2 #4	Low-level requirements are developed.	5.2.1.a, 5.2.2.a, 5.2.2.e, 5.2.2.f, 5.2.2.g, 5.2.3.a, 5.2.3.b, 5.2.4.a, 5.2.4.b, 5.2.4.c, 5.5.b	11.10, 11.21	FM.6.3.e, FM.6.3.1.d, FM.6.3.1	-	MB.5.2.1.a, MB.5.2.2.a, MB.5.2.2.e, MB.5.2.2.f, MG.5.2.2.g, MB.5.2.2.h, MB.5.2.3.a, MB.5.2.3.b, MB.5.5	MB.11.10, MB.11.21	OO.5.2.2.a, OO.5.2.2.e, OO.5.2.2.f, OO.5.2.2.g, OO.5.2.2.i, OO.5.5.b, OO.5.5.d	'OO.11.21
A-2 #5	Derived low-level requirements are defined and provided to the system processes, including the system safety assessment process.	5.2.1.b, 5.2.2.b, 5.2.2.c	11.10	FM.6.3.f, FM.6.3.1.d, FM.6.3.1	-	MB.5.1.1.b, MB.5.2.2.b, MB.5.2.2.c, MB.5.2.2.h	MB.11.10	OO.5.2.2.b, OO.5.2.2.c, OO.5.2.2.l	-
A-2 #6	Source Code is developed.	5.3.1.a, 5.3.2.a, 5.3.2.b, 5.3.2.c, 5.3.2.d, 5.5.c	11.11, 11.21	FM.6.3.g, FM.6.3.1.f, FM.6.3.1	-	MB.5.5	MB.11.21	OO.5.5.c	'OO.11.21

A-2 #7	Executable Object Code and Parameter Data Item Files, if any, are produced and loaded in the target computer.	5.4.1.a, 5.4.2.a, 5.4.2.b, 5.4.2.c, 5.4.2.d, 5.4.2.e, 5.4.2.f,	11.12, 11.22	FM.6.3.h, FM.6.3.1.g, FM.6.3.i	-	-	-	-	-
A-2 #FM8	Formal analysis cases and procedures are correct.			FM.6.3.6.a, FM.6.3.6.b, FM.6.3.6	-				
A-2 #FM9	Formal analysis results are correct and discrepancies explained.			FM.6.3.6.c, FM.6.3.6	-				
A-2 #FM10	Requirements formalization is correct.			FM.6.3.i	-				
A-2 #FM11	Formal method is correctly defined, justified, and appropriate.			FM.6.2.1, FM.6.2.1.a, FM.6.2.1.b, FM.6.2.1.c	-				
A-2 #MB8	Specification Model elements that do not contribute to implementation or realization of any high-level requirement are identified.					MB5.1.1.c, MB.5.1.2.k	MB.11.9		
A-2 #MB9	Design Model elements that do not contribute to implementation or realization of any software architecture are identified.					MB.5.2.1.c, MB.5.2.2.h	MB.11.10		

A-2 #MB10	Design Model elements that do not contribute to implementation or realization of any low-level requirements are identified.					MB.5.2.1.c, MB.5.2.2.h	MB.11.10		
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