



PROCESS DESCRIPTION
TEST

Code: 05e-QT/PM/HDCV/FSOFT
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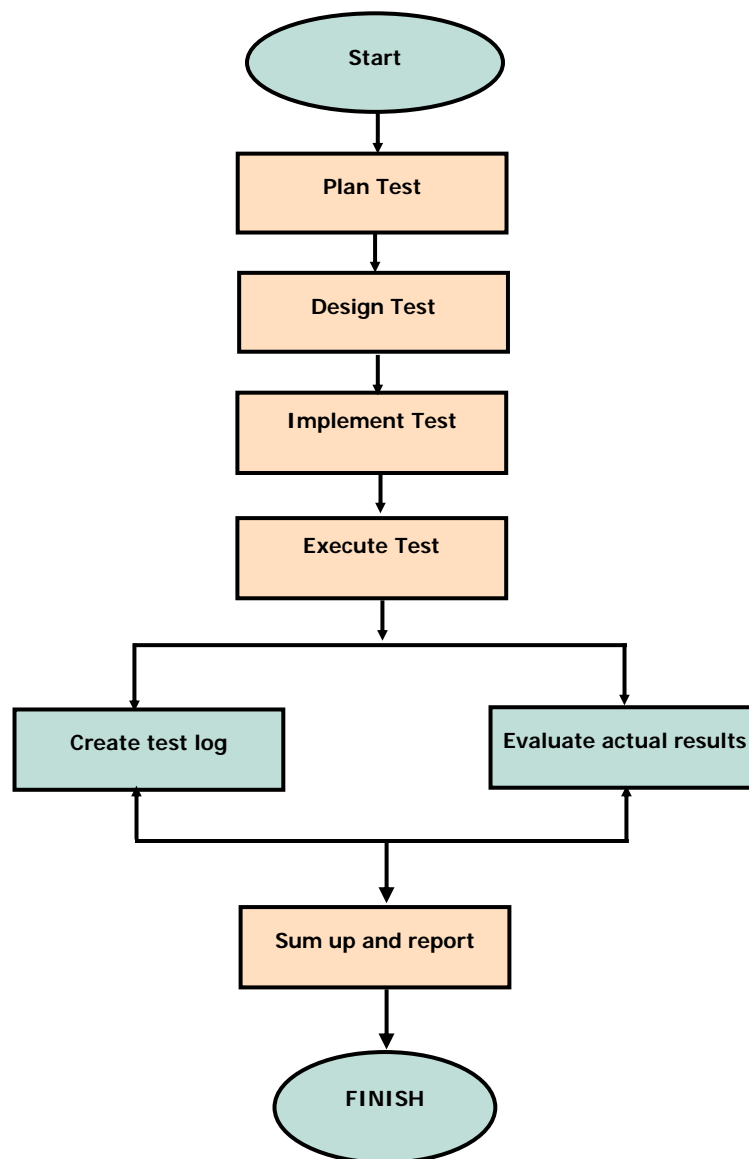
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1. PURPOSE

Plan, design and conduct test software products to assure that

- Requirements have been fulfilled
- Defects have been found and resolved before delivery.

2. WORK FLOW



3. PROCESS CHARACTERISTICS

Characteristic	Description	Requirements
Input		
	Test requirements and standards	Approved by Project Technical Leader
	Customer requirements, acceptance criteria	Approved by customer
	User Requirement Specification	Approved by Project Manager
	Software Requirement Specification	Approved by Project Manager
	Design	Approved by Project Manager
	Program	Approved by Project Technical Leader
Output		
	Test plan, Test results, Test log (as-run procedure log), Defect list, Test Reports and Tested program	Approved by Project Technical Leader
Implementation condition		
	Test tool, if needed	Verified before use
	Test environment and resources	Follow test plan
Performance criteria		
	Percentage of executed test cases before releasing	= 100%
	Percentage between post-release defects and pre-release defects (found by test process)	<= 5%
	Number of Fatal/Serious defects found by customer	= 0
Related processes		
	Software contract management	Customer acceptance criteria
	Software project management	Test plan Problem and requirements
	Software development processes	Deliverables and test requirements Test report

4. STEPS AND ACTIVITIES

4.1 Plan

No	Activity	Deliverable	Doer	Reference
1.	Identifying the requirements for test, include: <ul style="list-style-type: none"> - Study customer requirements, acceptance criteria, user requirement specification, design (if existed), customer constraints on the conduct of test - Define what will be tested - Define scope of test (constrains of work, effort, schedule, period of regression test) 	List of items to be tested, including functional and non-functional items	Tester	05e-HD/PM/HDCV/FPT 02e-BM/PM/HDCV/FPT
2.	Review and approve the requirements for test	Approved list of items to be tested	Project Technical leader	05e-HD/PM/HDCV/FPT 02e-BM/PM/HDCV/FPT
3.	Assess risk and priority <ul style="list-style-type: none"> - Assess test related risks - Define and set priority for test requirements base on risk, user requirements, importance/using frequency of requirement/function 	Test related risks Prioritized test requirements	Test leader	05e-HD/PM/HDCV/FPT 02e-BM/PM/HDCV/FPT
4.	Develop test strategy, include: Testing method Exit criteria and measurement for test Special considerations, resources and conditions for performing test.	Method, exit criteria and measurement, consideration, resources and conditions for performing test	Test leader	05e-HD/PM/HDCV/FPT 02e-BM/PM/HDCV/FPT
5.	Identify resources and environment, include: Human resources (number of persons and skills) Test environment (includes hardware and software) Tools Type of Test data	Resources	Test leader	05e-HD/PM/HDCV/FPT 02e-BM/PM/HDCV/FPT

No	Activity	Deliverable	Doer	Reference
6.	Create schedule, include: Estimate test effort Generate test schedule and milestones	Test schedule and effort	Test leader	
7.	Generate test plan	Test plan	Test leader	02-BM/PM/HDCV/FSOFT
8.	Review and approve test plan	Approved test plan	Project Technical leader	03e-HD/PM/HDCV/FPT 08ae-CL/PM/HDCV/FSOFT 28e-BM/PM/HDCV/FPT

4.2 Design test

No	Activity	Deliverable	Doer	Reference
1.	Create list of test type, assure for establish correctness and fulfillment of products requirements	List of test type	Test leader, Tester	05e-HD/PM/HDCV/FPT
2.	Create test cases, include: Analyze business process Analyze use cases, design, requirements, test plan Identify test cases: test condition, scenario, expected result Identify test case data	Test case, test data requirement	Test leader, Tester	02ce-BM/PM/HDCV/FSOFT 02ae-BM/PM/HDCV/FSOFT
3.	Identify and structure test procedures, include: Analyze test cases Identify test procedures Structure test procedures: identify relationship and performing sequence of test procedures, starting and ending conditions, relation of test procedures and test cases Define test procedure: instructions for execution, data values entered, expected result	Test procedures	Test leader, Tester	05e-HD/PM/HDCV/FPT 03e-BM/PM/HDCV/FPT

No	Activity	Deliverable	Doer	Reference
4.	Review test cases and test procedures, measure requirement coverage of test design	Review notes	Project Technical leader ¹ , developer ²	03e-HD/PM/HDCV/FPT 08be-CL/PM/HDCV/FSOFT 28e-BM/PM/HDCV/FPT
5.	Approve test design	Approved test design	Project Technical Leader	08be-CL/PM/HDCV/FSOFT

4.3 Implement test

No	Activity	Deliverable	Doer	Reference
1.	Create test script for implementation test cases/test procedures by: - Creating - Generating - Test test-scripts	Test scripts	Test leader /Tester	05e-HD/PM/HDCV/FPT
2.	Prepare test data including new data and reused data	Test data	Tester	05e-HD/PM/HDCV/FPT
3.	Prepare test environment including facilities, equipment, tools, others conditions required	Environment is ready for testing	Tester	05e-HD/PM/HDCV/FPT
4.	Review Test scripts and inspect test tools	Inspection note	Tester	28e-BM/PM/HDCV/FPT
5.	Review test environment, conditions and data	Review note (if needed)	Test leader	28e-BM/PM/HDCV/FPT

4.4 Execute test, create test log and evaluate test result

No	Activity	Deliverable	Doer	Reference
1.	Receive products for test: documents, software package...	Test products	Tester	
2.	Setup environment and install programs for test	Test system is ready	Tester	

¹ Project leader reviews generally and requirement-based test coverage

² Developer reviews the test cases and test procedures relate to their work

No	Activity	Deliverable	Doer	Reference
3.	Conducts test based on test design and/or test scripts, record actual data regarding to test environment, test data, test activities and results,	As-run procedure log (or test log)	Tester	28e-BM/PM/HDCV/FPT 05e-HD/PM/HDCV/FPT 09e-CL/PM/HDCV/FSOFT
4.	Conduct causal analysis if actual test results are deviated from the expected ones Coordinate with other team to define corrective action: log defects, make change requests to test design or test environment.	Test report Defect list	Test leader, Tester, Project Technical Leader, QA (if needed)	28e-BM/PM/HDCV/FPT 05e-HD/PM/HDCV/FPT
5.	Follow-up the defined corrective actions	Updated test case, defect list, test coverage report	Test leader, Project Leader, QA (if needed)	05e-HD/PM/HDCV/FPT

4.5 Sum up and report

No	Activity	Deliverable	Doer	Reference
1.	Collect defect data, verify exit criteria	Collected data	Test leader	05e-HD/PM/HDCV/FPT
2.	Create test summary report	Test summary report ³	Test Leader, QA	05e-HD/PM/HDCV/FPT
3.	Review test summary report	Reviewed test summary report	Project Manager, Project Technical Leader, QA	05e-HD/PM/HDCV/FPT
4.	Maintain test documents, records	Records	Tester	01e-TC/PM/HDCV/FPT 04e-HD/PM/HDCV/FPT

5. RECORDS

No	Record	Creator	Retention period (year)	Severity
1.	Test plan	Test leader	5	Medium

⁶ Test report can be a part of the progress report

⁷Test summary report can be a part of milestone or post mortem report

2.	Test cases, test procedures, test program	Test leader, Tester	5	Medium
3.	Inspection note	Tester	5	Medium
4.	As-run procedure log	Tester	5	Medium
5.	Defect list	Tester	5	Medium
6.	Test coverage report	Test leader	5	Medium
7.	Test summary report	Test leader	5	Medium
8.	Review note	Project Leader, Test leader, QA	5	Medium
9.	Test data	Tester	5	Medium

Approver	Reviewer	Creator
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