

Guidelines for Requirements Itemization Template Usage

Version 1.0

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1. Purpose

The purpose of this document is to guide IGATE Corporate University participants in order to write good, understandable and effective requirements in learning environment during training period. This document establishes standard guidelines to be followed while writing requirements using IGATE's standard Requirements Itemization Template.

2. Introduction

Requirements, defined generally in natural language, are more often neglected during the software development process. This results in increasing the risk of the software development process. The requirements specified should be understood by everyone. This document will guide participants about how to make proper usage of the Requirements Itemization Template for writing requirements captured during requirements gathering phase of SDLC.

3. Standard Guidelines

3.1 Name of the template – Requirements Itemization Template

3.2 Usage – This template will be used by the participants to write requirements

3.3 The table 3.1 lists the standard approach for using Test Case Template – Project Profile sheet

Project Profile Sheet

Table 3.1

Sr. No	Column Name	Description	Example	Mandatory/ Optional
1	Project ID	This column will contain the id of the project.	PRJ_OnlineAirlineBooking_001	Mandatory
2	Project Name	This column will contain the name of the project.	FlyWithMe Online Airline Booking System	Mandatory
3	Prepared/Modified by	This column will contain the name of the person who has used this template for writing requirements or who has modified this template to	Amit Pandit	Mandatory

		incorporate changes in the template.		
4	Role	This column will contain the role of a person in the organization who has used this template for writing requirements or who has modified this template to incorporate changes in the template.	Test Engineer	Mandatory
5	Date of Preparation	This column will contain the preparation date of this template	20/07/2015	Mandatory
6	Reviewed by	This column will contain the name of the person who has reviewed the contents of this template.	Smita Kulkarni	Mandatory
7	Role	This column will contain the role of a person in the organization who has reviewed the contents of this template.	Test Team Lead\Test Manager Or Team Member Name	Mandatory
8	Date of Review	This column will contain the review date of this template.	21/07/2015	Mandatory
9	Approved by	This column will contain the name of the person who has	Manish Samant	Mandatory

		approved the reviewed changes in this template.		
10	Role	This column will contain the role of a person in the organization who has approved this template for the changes.	Project Manager\Program Manager Or Faculty Name\Batch Mentor Name	Mandatory
11	Date of Approval	This column will contain the date of approval of this template.	22/07/2015	Mandatory
12	Circulation List	This column will contain details about circulation list.	-	Optional
13	Version Number	This column will contain template version no.	1.0	Optional

Requirement Itemization Template – Description of Sections

The Requirement Itemization Template contains various sheets that can be used to specify requirements captured during requirement gathering phase.

Following is the detailed description on each section of Requirement Itemization Template and usage guidelines.

A. Security

Realizing security early, especially in the requirement phase, is important so that security problems can be tackled early enough before going further in the process and avoid rework. A more effective approach for security requirement engineering is needed to provide a more systematic way for eliciting adequate security requirements. The security related requirements include user access rights, user authentications etc. They specify which are the authentic users of the system and what are they authorized to do upon given access to the system.

Example:

Sr.No	Req. Id	Scenario	Description	Post Condition	Testable Y/N	Priority
1	REQ_1.1	Equipment Record Update	Only authorized users and systems shall update the equipment record	The equipment record is updated	Y	High
2	REQ_1.2	Product Catalog Update	Only the administrator of an online shopping website shall update the product catalog	The product catalog is updated	Y	High

B. Explicit Functional

The requirements that are stated by the business users in the different meetings and interviews are categorized as Explicit Requirements. These requirements are easiest requirements to capture.

Example:

Sr.No	Req. Id	Scenario	Description	Post Condition	Testable Y/N	Priority
1	REQ_2.1	Query Equipment's	The user shall have the ability to query for an equipment based on the "Machine Id"	The equipment details retrieved based on "Machine Id"	Y	High
2	REQ_2.2	Update Equipment	The system shall allow user to update comments section for the retired equipments	The comments section updated for the retired equipment	Y	High
3	REQ_2.3	Query Equipment	The user shall have an option to select search or query criterion to	The equipment details retrieved based on	Y	Medium

			query equipment	user selected criterion		
4	REQ_2.4	UI Customization	The user shall have the ability to customize his/her profile like theme, most frequently used menus as per his/her requirements	The user is able to customize his/her profile	Y	Low

C. Implicit Functional

Implicit Functional requirements are the hidden requirements. They are also termed as derived requirements. Business users expect these requirements to be delivered and hence may not feel the need to explicitly mention them during requirement gathering phase. Implicit requirement can include requirements related to performance, usability, availability, security etc.

Example:

Sr.No	Req. Id	Scenario	Description	Post Condition	Testable Y/N	Priority
1	REQ_3.1	Login	The system shall maintain a check on the password that the value entered by the user while logging process cannot be stored in the plain text format	The password value not stored in the plain text format	Y	High

D. Invocation

An application Invocation requirement specifies different ways of initiating or starting the application.

Example:

Sr.No	Req. Id	Scenario	Description	Post Condition	Testable Y/N	Priority
1	REQ_4.1	Application Invocation	The website shall be loaded through Internet Explorer browser after entering the URL	The website is loaded through Internet Explorer browser home page gets displayed on the screen	Y	High

Few more examples

Myntra.com

1. Site can be open by clicking on icon on mobile
2. Site can be open by entering URL in the browser.

Microsoft Word

1. Application can be opened after entering word.exe Run command
2. Application can be opened after clicking on any word document.
3. Application can be opened after selecting start -->All Programs -->MS Word-2010

E. Termination

There can be number of ways in which the application can be terminated. E.g. using the mouse, using hot keys etc. Termination of application will involve shutdown process for the application

Sr.No	Req. Id	Scenario	Description	Post Condition	Testable Y/N	Priority
1	REQ_5.1	Application Termination	The website shall be closed by clicking on the close button (X) through Internet Explorer	The website is closed	Y	High

			browser			
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Few More examples:-

1. Application ends after clicking on Logout
2. Application ends after clicking on File --> Exit
3. Application ends after clicking on Exit link provided by Applications

F. File Handling

There are some files which are required to be present while application Invocation. If any of the files is not present or is invalid then Application will not invoke. Similarly there are some files which are created or updated as the application executes. All these files must be separately documented in File Handling part from the requirements document.

Example:

Sr.No	Req. Id	Scenario	Description	Post Condition	Testable Y/N	Priority
1	REQ_5.1	Store equipment details in a flat file	The system shall supply the detailed information of equipments received in the month in a comma separated flat file format to statistical department on last day of every month excluding the retired equipments	The equipment information written to flat file	Y	High
2	REQ_5.2	Update Equipment	The details of unsuccessful attempt to update the equipment record by the system user will be logged by the application in a separate log file	Information about failed equipment record updation written to a log file	Y	High

G. Error Handling

Error handling requirements specifies expected and unexpected error conditions based on user input to the system.

Example:

Sr.No	Req. Id	Scenario	Description	Post Condition	Testable Y/N	Priority
1	REQ_6.1	Update Equipment	The system shall display an error message if stock location is not specified while updating equipment if use status of the equipment is "In Stock"	Error "Stock location field cannot be left empty when equipment use status is in stock"	Y	High
2	REQ_6.2	Update Equipment	The system shall display an error message if install date is not specified while updating equipment if use status of the equipment is "In Stock"	Error "Install Date field cannot be left empty when equipment use status is in stock"	Y	High

H. System

The system requirements represent the complete hardware and software requirements for the system. They are special requirements related to operating system, hardware constraints like CPU, RAM and any other system requirement that needs to be fulfilled to execute the application successfully.

Sr.No	Req. Id	Scenario	Description	Post Condition	Testable Y/N	Priority
1	REQ_7.1	Software Installation	The Windows 7 operating system needs to be installed on the machine to run the application	The application is up and running	Y	High

			successfully			
2	REQ_7.2	Software Accessibility	The Internet Explorer 8.0 and above needs to be installed on user machine to browse through the website	The website is accessible	Y	High

I. Query

The project team can maintain a separate query log to mention the queries related to the requirements. A separate log can be maintained for the clients/business users and for the Subject Matter Expert (SME).

Example:

Client	Subject Matter Expert (SME)
Which functionality will be on FAT client and which on web?	If the equipment tag is all numeric then how 'AD' will be present in position 1 and 2 which needs to be removed
What is an external system?	How the users are categorized into Inventory personnel, equipment auditors, service personnel, maintenance personal and Equipment Tracking personnel?

4. Here are a few guidelines to keep in mind as you document software requirements:

1. Keep the requirement description short but meaning and explanatory enough.
2. Use proper grammar, spelling and punctuation.
3. Use terms consistently and define them in the glossary.
4. The requirement should be stated positively (“shall”) by avoiding negative scenarios like “shall not”.
5. Define one requirement at a time.
6. Don’t be tempted to use conjunctions like and, or, also while defining the requirements. This is particularly important because words like these can lead to developers and testers missing out on some of the requirements. One way to achieve this is by breaking the requirement down till it can be considered a discrete test case.
7. Avoid using let-out clauses like but, except and if necessary.
8. Every requirement statement should contain a user role that benefits from the requirement and a desirable state that the user role wants to achieve

9. Avoid describing how the system will do something while defining the requirement and only state what the system will do.
10. Avoid using unnecessarily long sentences or making references to unreachable documents.
11. Avoid duplication and contradictory statements.
12. Do not express suggestions or possibilities. You can identify these wherever you see statements with might, ought to etc.
13. “Shall” should be used where requirements are being stated, “Will” should be used to represent statements of facts; & “Should” represents a goal that needs to be achieved.