



SCENARIO - PRODUCT MANAGER

PRODUCT MANAGER

This perspective should plan the characteristics and business value of SPL's current and future products. To do this, you must ensure that the use cases are clear with the functionalities based on the defined domain and that the features that will be common and variable for the SPL are correctly defined to be passed on to the client and the development team.

To diagrams correctly express the user requirements without inconsistencies, you must review such diagrams and elements. To achieve your goal, perform the steps outlined below to inspect each of the informed diagrams. When you find a defect in one of the steps, fill in the Defect Identification Form indicating the diagram, the step item (number question), and the element and the defect found.

LOCATE FEATURES DIAGRAM AND REQUIREMENTS SPECIFICATION

Step 1

inspection of class diagram

Step 2

LOCATE USE CASE DIAGRAM AND REQUIREMENTS SPECIFICATION

Step 3

inspection of use case diagram

Step 4



LOCATE FEATURES DIAGRAM AND REQUIREMENTS SPECIFICATION

The features diagram hierarchically describes the characteristics of all products that can be generated from an SPL, identifying the common and variable characteristics of current and future products. Read the requirements specification carefully. While reading, make a list of all the characteristics specified in the document, placing a notation with the type of stereotype of the element (mandatory, optional, etc.) and their possible relationships. Compare the list made with the feature diagram to ensure that there is no inconsistency between them. To do this, answer the questions that follow.

Step 1	1.1	Does the root node correctly represent the Domain?
	For each feature described in the features diagram, analyze it and check its relationships to answer the questions that follow. Mark the element after its analysis, to prevent it from being analyzed again.	
	1.2	Does the name of the feature correctly express the characteristic it represents?
	1.3	Does the feature represent a feature that was not defined in the requirements document? If so, disregard it with your relationships for the next steps and move on to the next element.
	1.4	Has the feature described by this feature already been specified by another element? If so, disregard it with your relationships for the next Steps and move on to the next element.
	1.5	Check the edge that arrives at this feature and answer the following questions:
		1.5.1 Is there really a relationship between this characteristic and the previous node?
		1.5.2 Is the mandatory characteristic defined with a filled circle?
		1.5.3 Is the optional feature defined with a empty circle?
		1.5.4 If cardinality has been described, is it correct according to the requirements specification?
	1.6	If the edge belongs to a empty or filled arc, analyze and answer the following questions:
		1.6.1 Is this feature really an alternative feature to the previous node's feature?
		1.6.2 Are alternative features inside empty arcs or with XOR relation?
		1.6.3 Are inclusive features within filled arcs or with an OR relationship?
	1.7	If there is a line connecting this feature to another and it has not been analyzed yet. Check and answer the following questions:
		1.7.1 Is there really an inclusion/exclusion relationship between these features?
		1.7.2 If the feature requires another, is the line defined as a directed arrow?
		1.7.3 If the feature excludes another, is the line defined as a bidirectional arrow?
	1.8	Was there any lack of inclusion/exclusion relationship with another one for this feature?
Step 2	When all the features are already analyzed (all marked as visited), check if there was no missing feature important for the SPL domain under inspection. Review the following questions:	
	2.1	Are there any optional or mandatory features for the SPL that are not described in the diagram?
	2.2	Check the empty or filled arches. Missing an alternative feature for the feature?



LOCATE USE CASE DIAGRAM AND REQUIREMENTS SPECIFICATION

The use case diagram in Domain Engineering must correctly describe the set of features of all products that can be configured from SPL. Read the requirements specification carefully. While reading, make a list of all the requirements and actors specified in the document, placing a notation with the type of stereotype of the element (mandatory, optional, etc.) and their possible relationships. Compare the list made with the use case diagram to ensure that there is no inconsistency between them. To do this, answer the questions that follow.

Step 3	Consider the actors and use cases as elements in this Step. For each element in the use-case diagram, check for matching elements in the list made. Mark the element after its analysis, to prevent it from being analyzed again.	
	3.1	Does the name of the element correctly express functionality?
	3.2	Does this element correspond to a feature/actor that was not defined in the requirements document? If so, please disregard it and its relationship for the next step and go to the next element.
	3.3	Has the functionality described by that element already been specified by another element? If so, please disregard it and its relationship for the next steps and go to the next element.
	3.4	Is the element in the use-case diagram stereotyped?
	3.5	In the use-case diagram, if the element is optional or mandatory, has it been specified with the correct stereotype (<<optional>> or <<mandatory>>)?
	3.6	Were the use cases that are variation points marked with the <<variationPoint>> stereotype?
	For each element of the diagram, check and analyze their relationships to answer the questions that follow. Remember to mark the relationships already verified to avoid re-analysis.	
	3.7.1	Does the relationship comply with the requirements specification? Check if there is really a relationship between the elements for the context.
	3.7.2	Was the relationship identified as an extension (<<extend>>) or inclusion (<<include>>) erroneously according to the requirements specification?
	3.7	Were the inclusion relationships between the elements specified with the <<include>> stereotype?
	3.7.3	Note: SMarty suggests that inclusion relationships are associated with mandatory (<<mandatory>>) or optional (<<optional>>) variants.
	3.7.4	If the element requires another, has the relationship between them been stereotyped with <<requires>>?
	3.7.5	If the relationship is mutual exclusion, is the relationship stereotyped in the diagram with <<mutex>>?
	3.8	Was there any relationship missing for this element that was not specified in the use case diagram?
Step 4	When you have already visited all elements of the use case diagram (all are marked as visited), check and review the following questions:	
	For each element of the optional type or point of variation (<<optional>> or <<variationPoint>>), check and analyze their relationships and stereotypes to answer the questions that follow.	
	4.1	Do the variants specified for this variability have the correct variant notation (<<OR>>, <<XOR>> or <<optional>>)?
	4.1.1	Do the <<OR>> and <<XOR>> variants related to the variation point have the relationship <<extend>> to the associated variation point?
	4.2	Are there still items on your list that were not specified by any elements? That is, it is missing from the use case diagram. (If they are variants that have already been identified in the previous step, disregard)