



IRqA
Millenium
integral requisite analyzer

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IBM Software Architect

Integration

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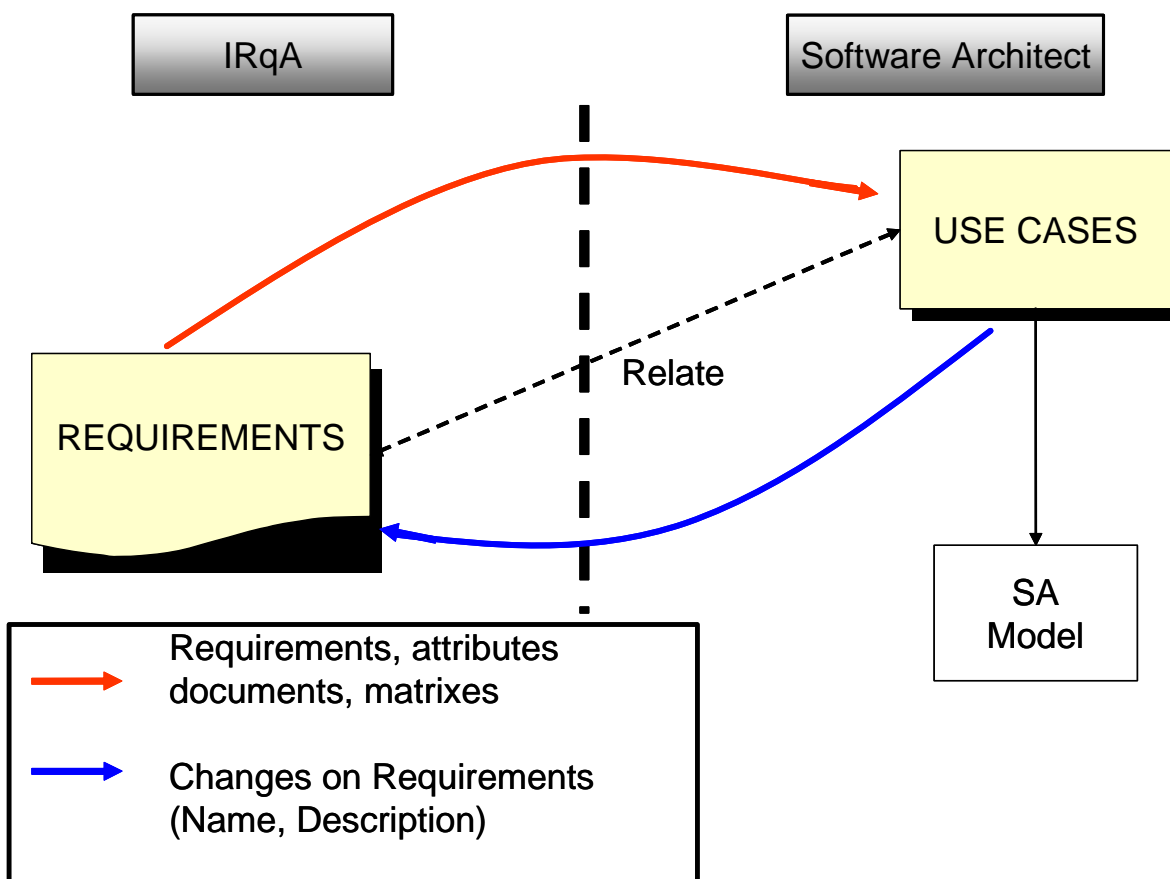
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1. Introduction

This document describes how to use the IRqA plug-in for IBM Rational Software Architect. The IRqA Plug-in allows the user to associate his requirements from his IRqA projects to the use cases of IBM Rational Software Architect. The user will also be able to see the Traceability Matrices saved in the IRqA project, check the information associated to the requirements or modify requirements directly from the Software Architect Framework.


All the changes made with the Plug-in are stored in the Software Architect project, with the exception of the changes made in the requirements which are stored within the IRqA project.

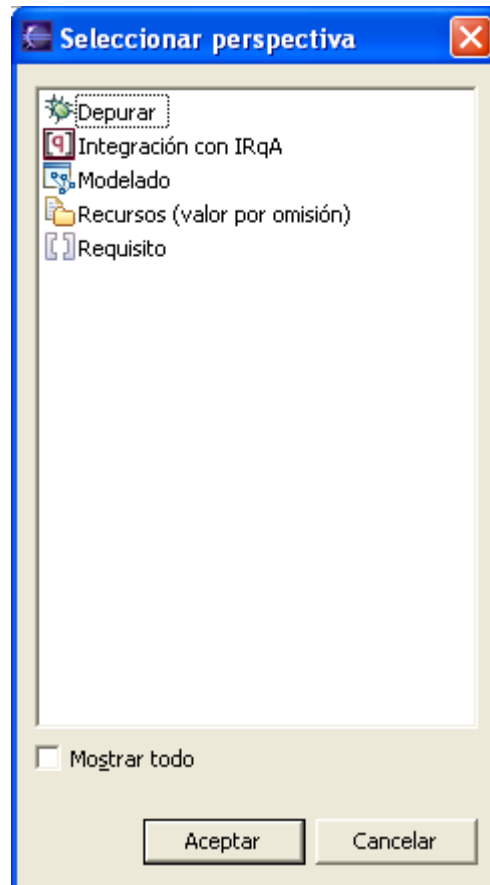


2. How to install the IRqA Plug-in

To install the IRqA plug-in, decompress the "IRqA Plugin.rar" file and copy it into the folder "eclipse\plugins\IRqA Plugin" in your IBM Rational Software Architect installation directory.

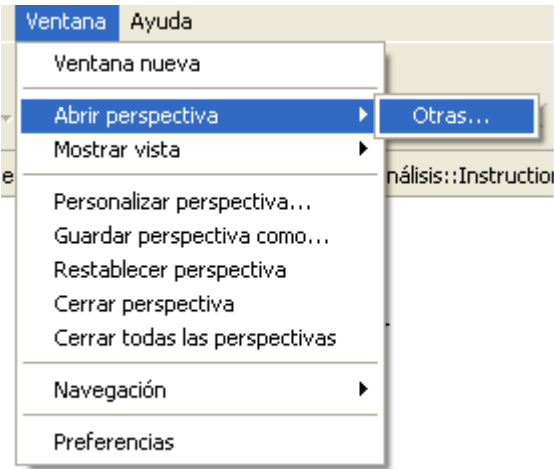
3. How to run the IRqA Plug-in

To run the IRqA Plug-in, click on the “Open a perspective” icon  in the top right corner of your IBM Rational Software Architect main window, choose others and then “Integration with IRqA”.



Additionally, the plug-in can also be opened in the *Open perspective* option, in the *Window* menu.

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4. How to use the IRqA Plug-in

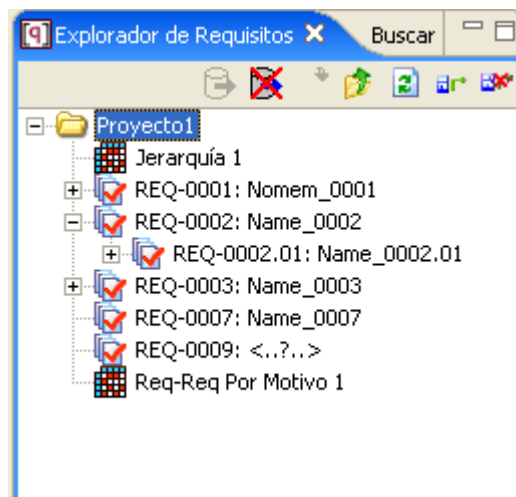
4.1. Elements in the Plug-in

There are 5 different views in the IRqA plug-in:

4.1.1. The requirements explorer view








This Tree view contains all the elements (projects, requirements in a hierarchical view and traceability matrices) associated with the open repository. From this view the user can:

- Open or close a repository,
- Open, close, update or synchronize a project
- Add or remove a relation between a requirement and a use case
- Form the requirement view
- Modify a requirement








Buttons in the explorer view:

- Toolbar:




-  : Open a repository
-  : Close a repository
-  : Open a project
-  : Close a project
-  : Update
-  : Relate
-  : Unrelate

o Contextual Menu:

▪ Over a project:

-  Abrir proyecto IRqA Open a project
-  Cerrar proyecto IRqA Close a project
-  Actualizar Update
-  Configurar vista información requisito Setup requirement information view
-  Sincronización Synchronization

▪ Over a requirement:

-  Modificar Requisito Modify requirement
-  Relacionar con casos de uso seleccionados Relate with selected use case
-  Quitar relación con casos de uso seleccionados Remove relation with selected use case

4.1.2. The requirements information view

From this view the user can check the information associated to a specific requirement. The attributes which are showed here can be formed by the user or loaded from an IRqA configuration.

Atributo	Valor
Nombre	Name_0001.01
Fecha de la creación del elemento	Wed Sep 21 16:51:38 CEST 2005
::rq1	value1.3
::rq2	

4.1.3. The traceability matrices view

This view allows the user to see the traceability matrices which have been previously saved in IRqA. The user will not be able to modify the matrices from the IRqA Plug-in, but only visualize the relationships.

	REQ-...	REQ-...	REQ-...	REQ-...	REQ-...	REQ-...	REQ-...	REQ-...	REQ-...	REQ-...	REQ-...
REQ-0001: Nomem_0001			↗	↗							
REQ-0001.01: Name_0001.01											
REQ-0001.01.01: Name_0001...	↙							↗			
REQ-0001.02: Name_0001.02	↙										↗
REQ-0001.02.01: Name_0001...											
REQ-0001.02.02: Name_0001...											
REQ-0002: Name_0002											
REQ-0002.01: Name_0002.01			↙								
REQ-0002.01.01: Name_0002...											
REQ-0002.01.02: Name_0002...											
REQ-0002.01.03: Name_0002...				↙							
REQ-0003: Name_0003							↙				
REQ-0004: Name_0004									↙		
REQ-0005: Name_0005				↙							
REQ-0006: Name_0006											
REQ-0007: Name_0007						↙					
REQ-0009: <...?..>											

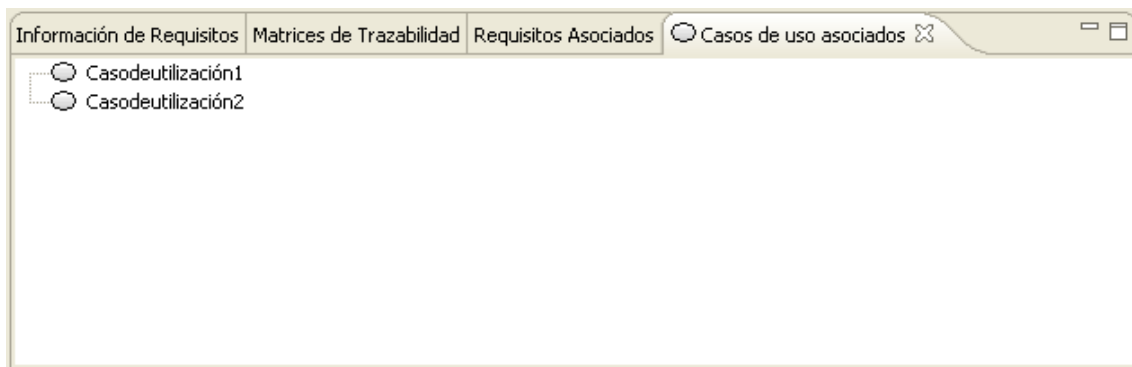
4.1.4. The associated requirements view

After selecting a use case from the UML diagram the user can check which requirements are associated with the selected use case.



4.1.5. The associated use case view

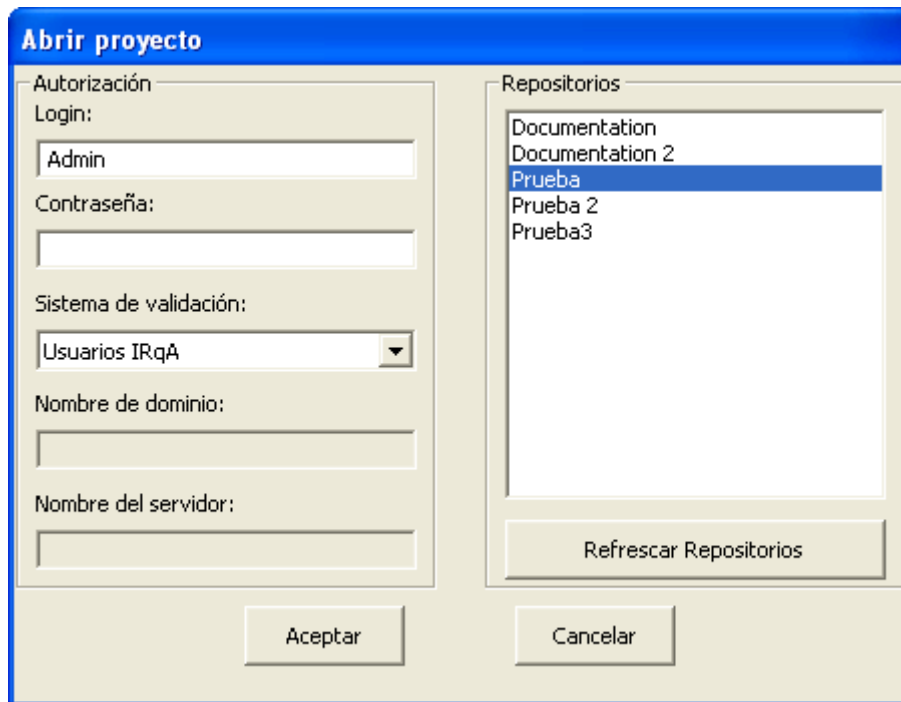
Similar to the associated requirements view, this view allows the user to see to what use cases the selected requirement is associated to.



4.2. Opening a project

To open a project click on the "Open repository" icon on the requirement view toolbar. This will open the following dialog:

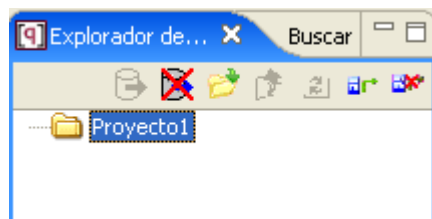
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In this dialog the user must enter the login and password and select the desired repository.

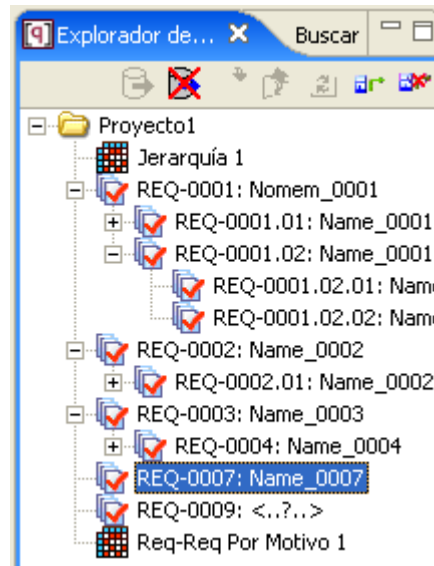
This dialog works like the open project dialog in IRqA with the exception that no project is chosen.

Opening a repository will lead you to the following requirements view





To open a project simply select the desired project and then click on the open project icon . This can also be done with the “open project” option in the contextual menu by left click over the project folder

Once the project is opened, the *Requirements explorer* view will look like this



From this tree the user is able to view the requirements of the selected project and the traceability matrixes saved in your project.

The user may close the project by clicking on the “close project” icon  in the toolbar. This can also be done by right clicking on the project and choosing close project from the contextual menu.

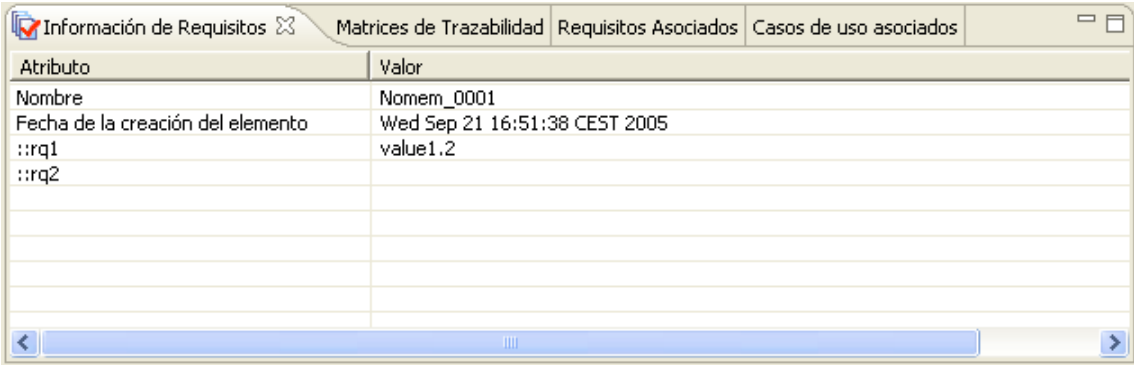
In the same way, the user can update the project with the information from the DB so the changes that have been made since the user has the project opened can be applied. To do this, the user must click on the “update” icon  in the toolbar. This can also be done by right clicking on the project and choosing update project from the contextual menu.

4.3. Checking requirements information

The requirement info can be checked by selecting a requirement and choosing the “requirement information view”.

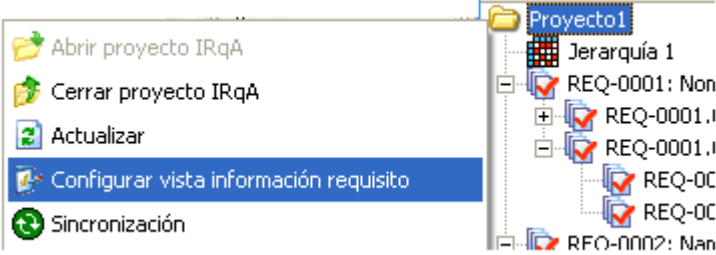
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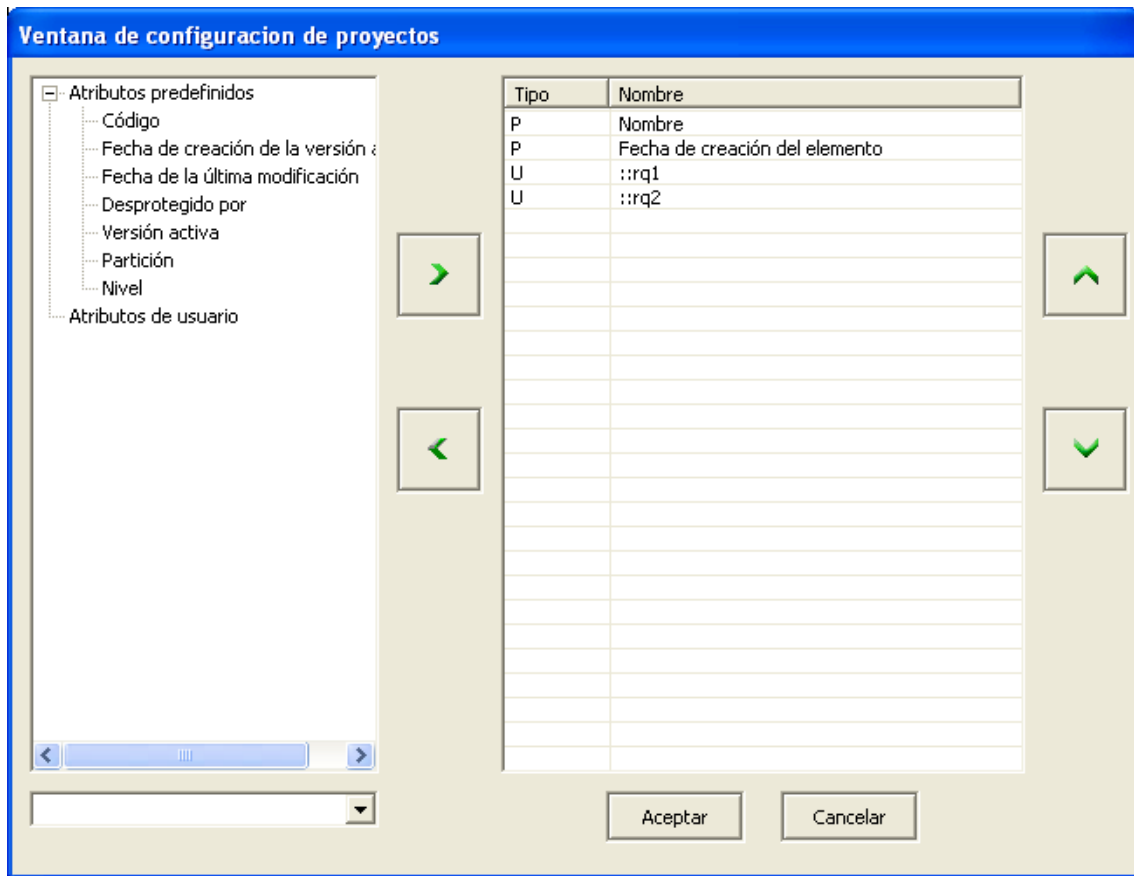
Atributo	Valor
Nombre	Nomem_0001
Fecha de la creación del elemento	Wed Sep 21 16:51:38 CEST 2005
::rq1	value1.2
::rq2	

From this view the user can check the attributes associated with the selected requirement and its values. The list of attributes shown can be modified by just right clicking on the project folder in the "requirement explorer view" and choosing "setup requirement information view".



This will lead to the following dialog

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In this dialog the user can add or remove predefined or user defined attributes to the "requirements information view". To do this, the user must select the desired attributes (one by one or a multiple selection with the CTRL key) and click on the



right arrow key

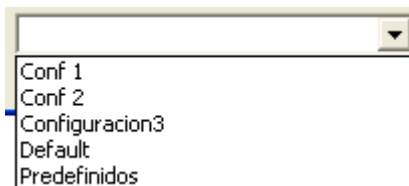
In the same way attributes can be removed from the view by selecting them and



then left click on the left arrow

You can also order your selected attributes using the up and down arrows.

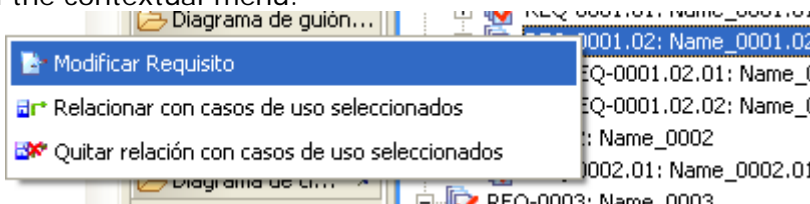
Finally, the IRqA plug-in can import the user view configuration from IRqA. Selecting one of these views in the combo box on the bottom left corner of the dialog



will add the attributes within the saved configuration to the user view.

4.4. Modifying requirements

The user may modify the requirements from the “requirement explorer view” by right clicking on the desired requirement and choosing the “modify requirement” option from the contextual menu.



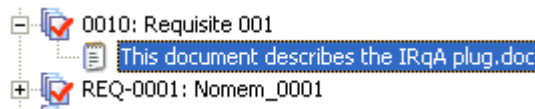
This will lead to the following dialog window



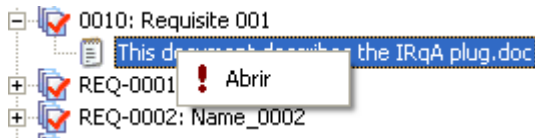
From here the user can modify the name or the description of the selected requirement. The changes will be also exported to your IRqA project.

4.5. Working with associated files in S.A.


The IRqA Plug-In allows the user to see the documents associated with a requirement from the "Requirement explorer view" as shown in the image:

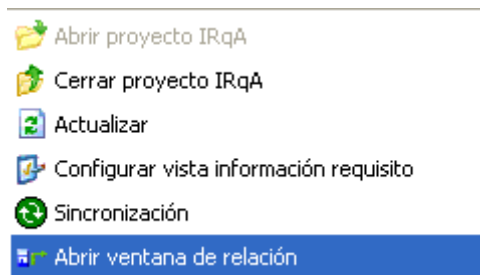


Additionally, the user may open these documents by double clicking over the document or by left clicking on the desired document and selecting "Open" from the contextual menu



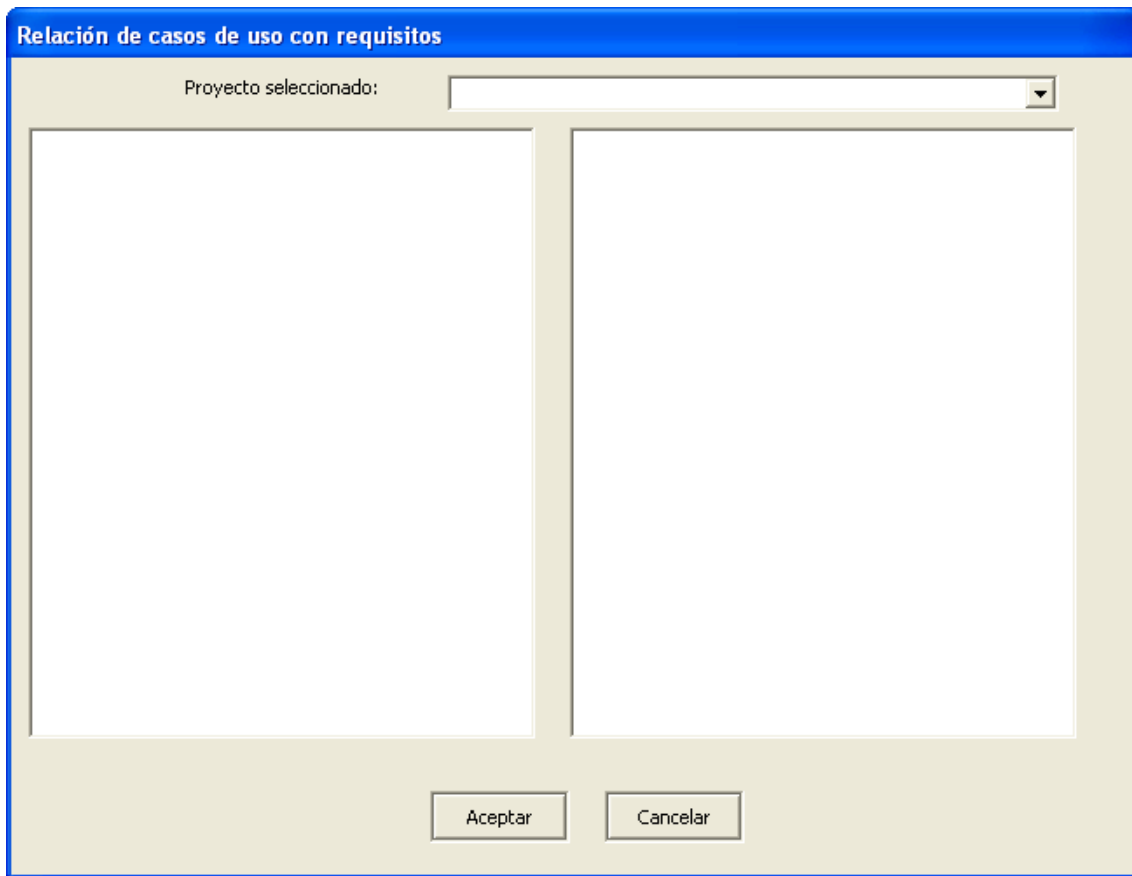
4.6. Relating Requirements to Use Cases

To relate an IRqA requirement with a Software Architect use case, the user must select the relate option from the IRqA Requirement Explorer toolbar  or right click on any project and choose "open the relationship window" from there after opening the project.

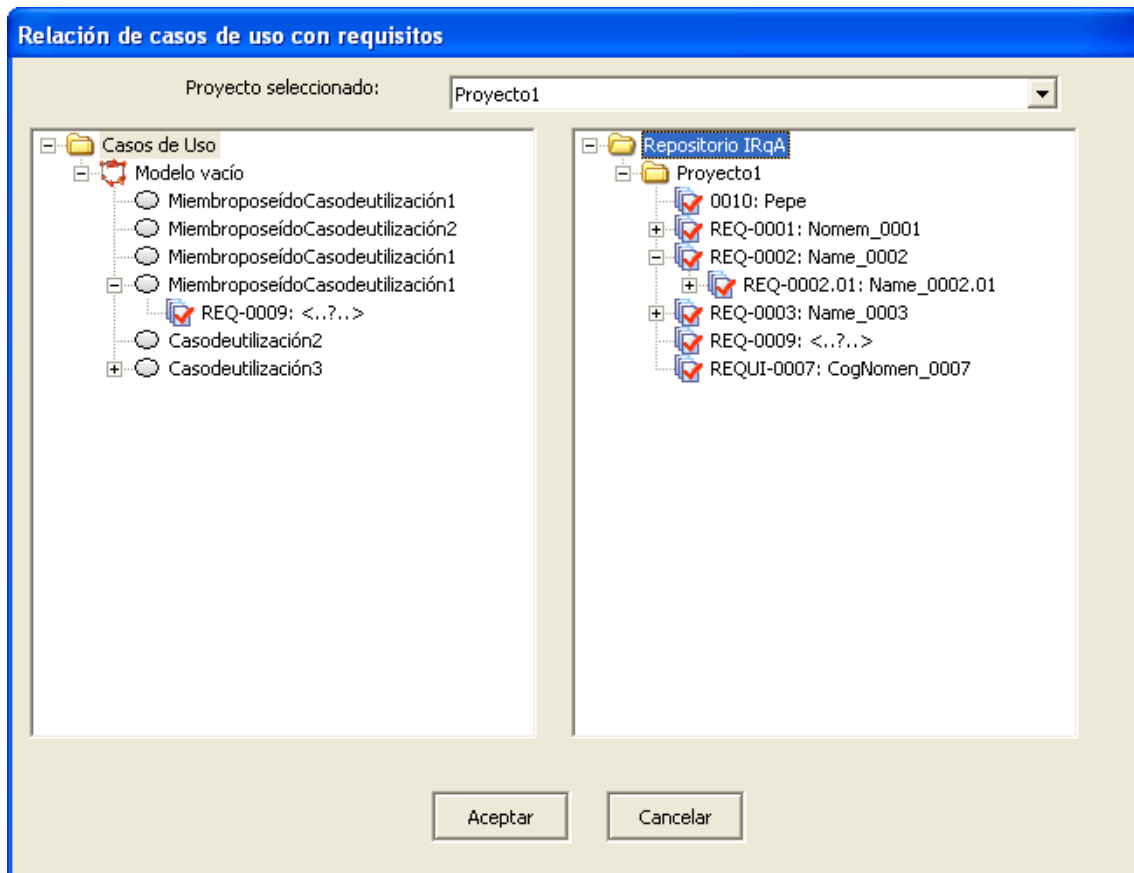


This will lead to the following window

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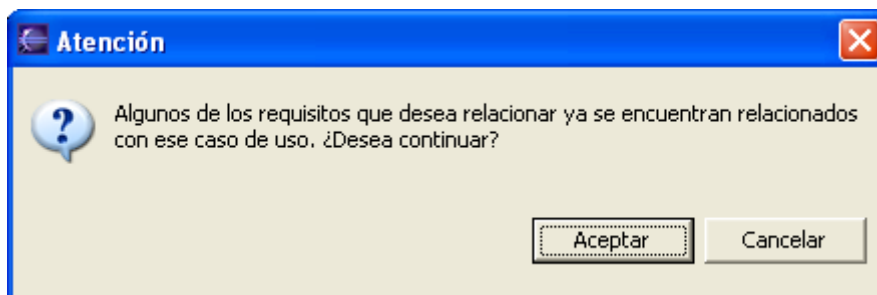


From this window, choose the desired IRqA project from the open repository or chose all projects in the combo Box. After choosing the desired project, the right panel will display all the requirements from the selected project in a tree view, and the left one will be filled with the use cases from the opened models in Software Architect.



Note that opening the project could take some minutes, depending on the number of requirements of the selected project. Also, the related requirements that the left panel will display are the ones that belong to the opened project, the rest of related requirements will be ignored. If the user wants to see all the requirements simply select the "all projects" option on the combo box.

With the project selected, the user is able to start relating requirements with use cases. In order to do this, simply drag and drop the chosen requirements from the right tree to the use cases on the left tree. If the selected requirements are already related with the chosen use case, the drag and drop won't be allowed. Also, if some of the requirements are already related a warning window will pop up and advise the user of this situation.

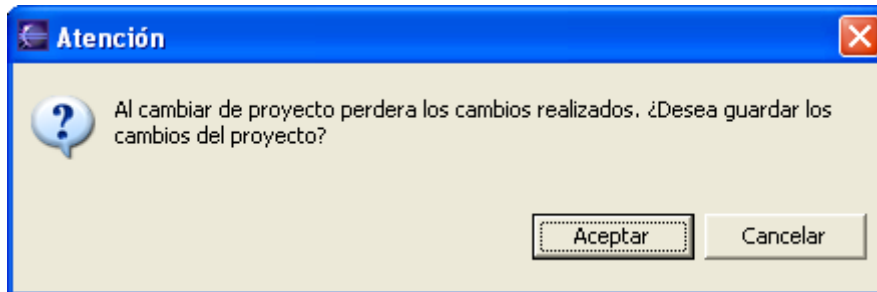


If the user clicks on the Accept button, the non related requirements will be related.

The user may also unrelated requirements from use cases. In order to do this, the user must select the chosen requirements from the left panel and press the delete key.


Finally, once the changes are made, click on the Accept button to save them or cancel to ignore them.

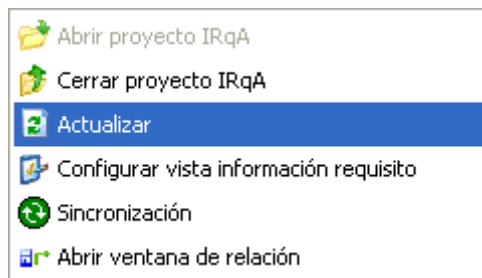
Note that changing the selected project from this window without clicking on the Accept button will cause the loss of all the changes made to the relationships. To avoid this, the IRqA Plug-In will ask the user if he wants to save the modifications before changing the project with the following dialog:



This dialog, however, will appear only if changes have been made on the relationships, this is, if a relationship has been added or deleted.

4.7. Updating and synchronizing requirements

The user is able to update his requirements in the IRqA project clicking on the Update button in the *Requirements explorer* toolbar  or by right clicking on the chosen project folder and choosing update from the contextual menu



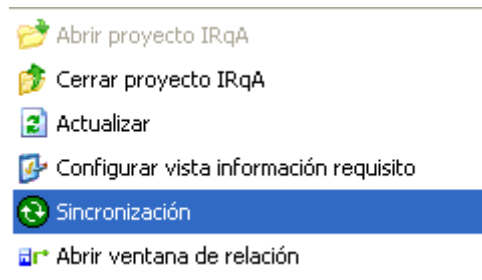
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this will cause the project to be closed and reopened, retrieving the information from your IRqA repository. However, this won't update the names of the requirements associated with the use cases. To do this, synchronization will be needed.

The Synchronization option from the contextual menu allows the user to update the requirements in his Software Architect project with the information in the IRqA repository in four different ways:

1. Synchronization notifies the user when a requirement has been deleted, deleting it also from the Software Architect project.
2. It also notifies when the version of a requirement has changed.
3. Synchronization lets the user know when a requirement has become "read only".
4. Finally, if the name of a requirement or the code has changed, the synchronization will notify the user and will update the names and codes of the requirements associated with the use cases.

To Synchronize the project, right click on the project and chose Synchronization from the contextual menu



this will lead to the following dialog window

