

# **GCI'16 Documentation**

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# 1 Software requirements document

## 1.1 Functional model

### 1.1.1 Use case diagram

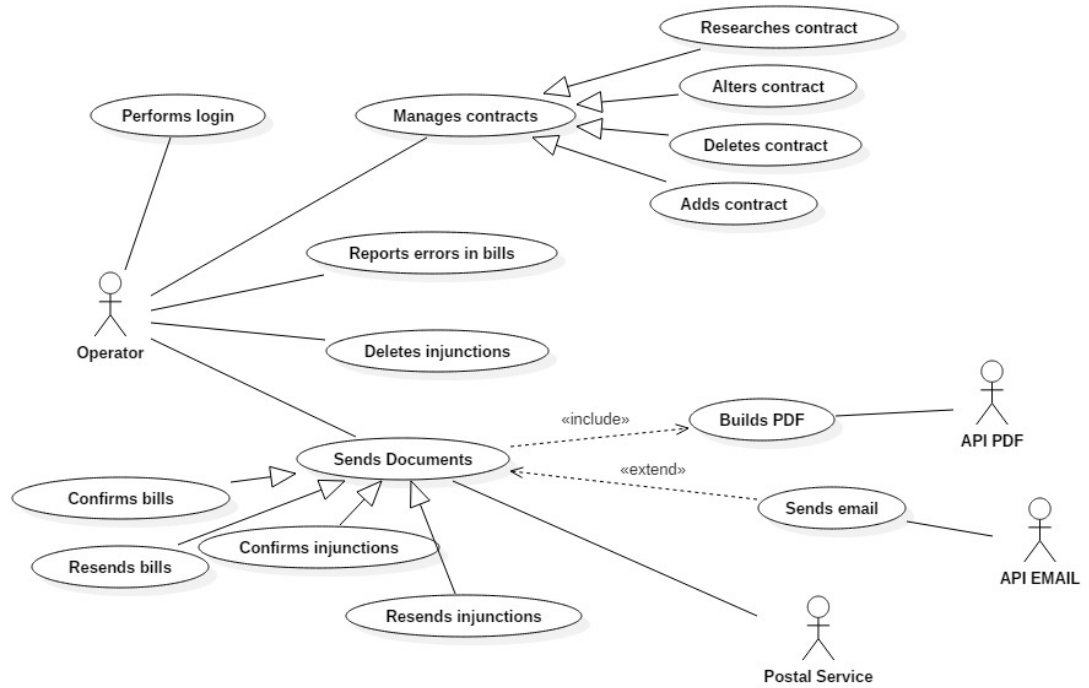


Figure 1: Use case diagram

### 1.1.2 Cockburn tables

<b>Use case</b>	Performs login
<b>Goal in context</b>	The operator wants to authenticate
<b>Preconditions</b>	The goal is to let the operator log into the system inserting the right credentials
<b>Success end condition</b>	The operator gets access to the system
<b>Failed end condition</b>	The operator can't access to the system
<b>Primary actor</b>	Operator
<b>Trigger</b>	The operator starts the program

MAIN SCENARIO		
Step n.	Operator	System
1	The operator starts the program	
2		The system shows the "Login" mockup
3	The operator fills all field in the "Login" mockup	
4		The system enables the "Login" button in the "Login" mockup
5	The operator presses the "Login" button in the "Login" mockup	
6		The system shows the "Home" mockup

EXTENSION n.1		
Step n.	Operator	System
6.1		The system shows the "Login - error" mockup
7.1	The operator presses the "ok" button in the "Login - error" mockup	
8.1		Go to step 3

<b>Use case</b>	Researches contract
<b>Goal in context</b>	The operator can be able to read information about the contract researched
<b>Preconditions</b>	The operator must be logged in and he has compiled almost one field in the “Registry management” mockup
<b>Success end condition</b>	The operator reads the informations about the contract researched
<b>Failed end condition</b>	There aren’t contracts in the system
<b>Primary actor</b>	Operator
<b>Trigger</b>	The operator clicks on “Search” button in the ”Registry management” mockup

MAIN SCENARIO		
Step n.	Operator	System
1	The operator clicks on “Search” button in “Registry management” mockup	
2		The system shows in the table the details of the contracts founded.

EXTENSION n.1		
Step n.	Operator	System
3.1		The system shows the “Registry management – Error” mockup
4.1	The operator clicks on the “Ok” button in the “Registry management – Error” mockup	

SUBVARIATION n.1		
Step n.	Operator	System
1.2	The operator leaves all field blank	
2.2		The system shows details of all contracts present in the system

<b>Use case</b>	Alters contract
<b>Goal in context</b>	Modify a pre-existing contract
<b>Preconditions</b>	The operator must be logged in, he has searched a contract and he has selected it from the table in the "Registry management" mockup
<b>Success end condition</b>	The operator has modified a pre-existing contract
<b>Failed end condition</b>	The operator fills the fields with invalid characters The operator cancels the operation and system shows the "Registry management" mockup
<b>Primary actor</b>	Operator
<b>Trigger</b>	The operator clicks on the "Alter holder" button in the "Registry management" mockup



MAIN SCENARIO		
Step n.	Operator	System
1	The operator clicks on the "Alter holder" button in "Registry management" mockup	
2		The system shows the "Alter holder" mockup
3	The operator edits one or more fields	
4		The system enables the "Alter" button associated with the field edited
5	The operator clicks on the "Alter" button	
6		The system shows the "Alter holder – Success" mockup
7	The operator clicks on the "Ok" button in the "Alter holder – Success" mockup	

EXTENSION n.1		
Step n.	Operator	System
6.1		The system shows the "Alter holder – Error" mockup with the reference to the form that contains the error
7.1	The operator clicks on the "Ok" button in the "Alter holder – Error" mockup	
8.1		Go to step 2

EXTENSION n.2		
Step n.	Operator	System
3.2	The operator clicks on the “Back” button in the “Alter holder” mockup	
4.2		The system shows the “Registry management” mockup

<b>Use case</b>	Deletes contract
<b>Goal in context</b>	The operator wants to delete a contract
<b>Preconditions</b>	The operator must be logged in and he has selected a contract from the table described in mockup “Registry management”
<b>Success end condition</b>	The operator deletes the selected contract
<b>Failed end condition</b>	The operator can't delete the selected contract The operator cancels the operation
<b>Primary actor</b>	Operator
<b>Trigger</b>	The operator clicks on the “Delete” button in the “Registry management” mockup

MAIN SCENARIO		
Step n.	Operator	System
1	The operator clicks on the “Delete” button in the “Registry management” mockup	
2		The system shows the “Delete contract” mockup
3	The operator clicks on the “Yes” button in the “Delete contract” mockup	
4		The system shows the “Delete contract - Success” mockup
5	The operator clicks on the “Ok” button in the “Delete contract - Success” mockup	
6		The system shows the mockup “Registry management” mockup

EXTENSION n.1		
Step n.	Operator	System
3.1		The system shows the “Delete contract - Error” mockup
4.1	The operator clicks on the “Ok” button in the “Delete contract - Error” mockup	
5.1		Go to step 6

EXTENSION n.2		
Step n.	Operator	System
3.2	The operator clicks on the “No” button in the “Delete contract” mockup	
4.2		Go to step 6

<b>Use case</b>	Reports errors in bills
<b>Goal in context</b>	The operator wants to report errors in bills
<b>Preconditions</b>	The operator must be logged in and he has selected a bill in the bills' table of the "Bills queue" mockup
<b>Success end condition</b>	The operator reports and error in a bill
<b>Failed end condition</b>	The operator clicks on the "Cancel" button
<b>Primary actor</b>	Operator
<b>Trigger</b>	The operator clicks on the "Report error" button in the "Bills" mockup

MAIN SCENARIO		
Step n.	Operator	System
1	The operator clicks on the “Report error” button in “Bills” mockup	
2		The system shows the “Report error” mockup
3	The operator fills the “Report’s specifications” field in the “Report error” mockup	
4		The system enables the “Send” button
5	The operator clicks on the “Send” button	
6		The system shows the “Send ” mockup

EXTENSION n.1		
Step n.	Operator	System
3.1	The operator clicks on the “Cancel” button	
4.1		Go to step 8

EXTENSION n.2		
Step n.	Operator	System
5.2	The operator clicks on the “Cancel” button	
6.2		Go to step 8

<b>Use case</b>	Deletes injunction
<b>Goal in context</b>	The operator wants to delete an injunction that has the “non-issued” state
<b>Preconditions</b>	The operator must be logged in and has selected an injunction from the injunctions’ table in “Injunctions queue” mockup
<b>Success end condition</b>	The operator deletes one or more injunctions from the injunctions’ table in “Injunctions queue” mockup
<b>Failed end condition</b>	The operator doesn’t delete the injunction from the table
<b>Primary actor</b>	Operator
<b>Trigger</b>	The operator clicks on the “Delete” button in the “Injunctions queue” mockup

MAIN SCENARIO		
Step n.	Operator	System
1	The operator clicks on the “Delete” button in the “Injunctions queue” mockup	
2		The system shows the “Delete Injunction - Success” mockup
3	The operator clicks on the “Ok” button	
4		The system shows the “Injunctions queue” mockup

EXTENSION n.1		
Step n.	Operator	System
2.2		The system shows the “Delete Injunction – Error” mockup
3.2	The operator clicks on the “Ok” button	



<b>Use case</b>	Confirms bills
<b>Goal in context</b>	The operator wants to confirm a single or a group of bills
<b>Preconditions</b>	The operator must be logged in and he has selected a bill/s in the bills' table of the "Bills queue" mockup
<b>Success end condition</b>	The operator confirms a bill
<b>Failed end condition</b>	The operator cancels the operation
<b>Primary actor</b>	Operator
<b>Trigger</b>	The operator clicks on the "Confirm" button in the "Bills queue" mockup

MAIN SCENARIO		
Step n.	Operator	System
1	The operator clicks on the “Confirm” button in the “Bills queue” mockup	
2		The system shows the “Build PDF” mockup
3	The operator clicks on the “Send PDF” button in the “Build PDF” mockup	
4		The system shows the “Send PDF” mockup
5	The operator clicks on the “Ok” button	
6		The system shows the “Bills queue” mockup

EXTENSION n.1		
Step n.	Operator	System
3.1	The operator clicks on the “Cancels” button in the “Build PDF” mockup	
4.1		Go to step 6

EXTENSION n.2		
Step n.	Operator	System
4.2		The system shows the “Send PDF” mockup in which the field “Log address’ Error” is visible
5.2	Go to step 5	

SUBVARIATION n.1		
Step n.	Operator	System
1.3	The operator clicks on the “Confirm” button in the “Bills queue” mockup after he has selected multiple rows from the table or has clicked on the “Select All” button	
2.3		The system shows the “Build PDF - Multiple” mockup
3.3	The operator clicks on the “Send PDFs” button in the “Build PDF - Multiple” mockup	
4.3		The system shows the “Send PDF - Multiple” mockup
5.3	Go to step 5	

<b>Use case</b>	Resends bills
<b>Goal in context</b>	The operator wants to resend a bill that has the “Issued” state
<b>Preconditions</b>	The operator must be logged in and he has selected a bill in the bills’ table of the “Bills” mockup
<b>Success end condition</b>	The operator must be logged in and he has selected a bill in the bills’ table of the “Bills” mockup
<b>Failed end condition</b>	The operator cancels the operation The PDF interface is not available
<b>Primary actor</b>	Operator
<b>Trigger</b>	The operator clicks on “Build PDF” button in the “Bills” mockup

MAIN SCENARIO		
Step n.	Operator	System
1	The operator clicks on the “Build PDF” button in the “Bills” mockup	
2		The system shows the “Build PDF” mockup
3	The operator clicks on the “Send PDF” button in the “Build PDF” mockup	
4		The system shows the “Send PDF” mockup
5	The operator clicks on the “Ok” button	
6		The system shows the “Registry management” mockup

EXTENSION n.1		
Step n.	Operator	System
3.1	The operator clicks on the “Cancel” button in the “Build PDF” mockup	
4.1		The system shows the “Bills” mockup

EXTENSION n.2		
Step n.	Operator	System
4.2		The system shows the “Send PDF” mockup in which the “Log address’ error” form is visible
5.2	Go to step 5	

EXTENSION n.3		
Step n.	Operator	System
2.3		The system shows the “Build PDF – Error” mockup
3.3	The operator clicks on the “Ok” button in the “Build PDF – Error” mockup	
4.3	Go to step 6	

<b>Use case</b>	Confirms injunctions
<b>Goal in context</b>	The operator wants to send the injunction to the customer
<b>Preconditions</b>	The operator must be logged in and he has selected an injunction from the table described in “Injunctions queue” mockup
<b>Success end condition</b>	The system creates and sends the PDF
<b>Failed end condition</b>	The operator cancels the operation The PDF interface is not available
<b>Primary actor</b>	Operator
<b>Trigger</b>	The operator clicks on the “Confirm” button in “Injunctions queue” mockup

MAIN SCENARIO		
Step n.	Operator	System
1	The operator clicks on the “Confirm” button in “Injunctions queue” mockup	
2		The system shows the “Build PDF” mockup
3	The operator clicks on the “Send PDF” button in “Build PDF” mockup	
4		The system shows the “Send PDF” mockup
5	The operator clicks on the “Ok” button in the “Send PDF” mockup	
6		The system shows the “Registry management” mockup

EXTENSION n.1		
Step n.	Operator	System
3.1	The operator clicks on the “Cancel” button in “Build PDF” mockup	
4.1		The system shows the “Injunctions queue” mockup

EXTENSION n.2		
Step n.	Operator	System
4.2		The system shows the “Send PDF” mockup in which the “Log address’ error” form is visible
5.2	Go to step 5	



EXTENSION n.3		
Step n.	Operator	System
2.3		The system shows the “Build PDF – Error” mockup
3.3	The operator clicks on the “Ok” button in the “Build PDF – Error” mockup	
4.3		Go to step 6

<b>Use case</b>	Resends injunctions
<b>Goal in context</b>	The operator wants to resend an injunction that has the “Issued” state
<b>Preconditions</b>	The operator must be logged in and he has selected an injunction in the injunctions’ table of the “Injunctions” mockup
<b>Success end condition</b>	The operator resends an injunction that has the “Issued” state
<b>Failed end condition</b>	The operator cancels the operation
<b>Primary actor</b>	Operator
<b>Trigger</b>	The operator clicks on the “Build PDF” button in “Injunctions” mockup

MAIN SCENARIO		
Step n.	Operator	System
1	The operator clicks on the “Build PDF” button in “Injunctions” mockup	
2		The system shows the “Build PDF” mockup
3	The operator clicks on the “Send PDF” button in the “Build PDF” mockup	
4		The system shows the “Send PDF” mockup
5	The operator clicks on the “Ok” button in the “Send PDF” mockup	
6		The system shows the “Registry management” mockup

EXTENSION n.1		
Step n.	Operator	System
3.1	The operator clicks on the “Cancel” button in “Build PDF” mockup	
4.1		The system shows the “Injunctions” mockup

EXTENSION n.2		
Step n.	Operator	System
4.2		The system shows the “Send PDF” mockup in which the “Log address’ error” form is visible
5.2	Go to step 5	

EXTENSION n.3		
Step n.	Operator	System
2.3		The system shows the “Build PDF – Error” mockup
3.3	The operator clicks on the “Ok” button in the “Build PDF – Error” mockup	
4.3		Go to step 6

<b>Use case</b>	Adds contract
<b>Goal in context</b>	Create a new contract
<b>Preconditions</b>	The operator must be logged in and clicks on the “Registry management” button from the “Home” mockup
<b>Success end condition</b>	The operator adds a new contract
<b>Failed end condition</b>	The operator doesn’t fill all fields - The operator cancels the operation
<b>Primary actor</b>	Operator
<b>Trigger</b>	The operator clicks on the “Add” button in the “Registry management” mockup

MAIN SCENARIO		
Step n.	Operator	System
1	The operator clicks on the “Add” button in the “Registry management” mockup	
2		The system shows the “Add holder” mockup
3	The operator fills all fields and clicks on the “Add” button in the “Add holder” mockup	
4		The system shows the “Add holder – Success” mockup
5	The operator clicks on the “Ok” button in the “Add holder – Success” mockup	
6		The system shows the “Add holder” mockup

EXTENSION n.1		
Step n.	Operator	System
4.1		The system shows the “Add holder – Error” mockup with reference to the field that contains the error
5.1	The operator clicks on the “Ok” button in the “Add holder – Error” mockup	
6.1		Go to step 2

EXTENSION n.2		
Step n.	Operator	System
3.2	The operator clicks on the “Back” button in the “Add holder” mockup	
4.2		The system shows the “Registry management” mockup

## 2 Testing document

### 2.1 System Testing

#### 2.1.1 Performs login test

<b>Test ID</b>	1
<b>Test name</b>	Performs login
<b>Test goal</b>	The goal is to let the operator log into the system inserting the right credentials
<b>Note</b>	In this case we consider these credentials: <i>"User1", "Psw1": right credentials (stored into the DBMS), "User2", "Psw2": wrong credentials (non-stored into the DBMS)</i>

<b>Input</b>	<b>Desired Output</b>	<b>Obtained Output</b>
The operator fills the form with credentials: <i>"User1", "Psw1"</i>	System shows the "Registry Management" view	System shows the "Registry Management" view
The operator fills the form with credentials: <i>"User1", "Psw2"</i>	System shows the error's popup with message "Invalid ID and/or Password!"	System shows the error's popup with message "Invalid ID and/or Password!"
The operator fills the form with credentials: <i>"User2", "Psw1"</i>	System shows the error's popup with message "Invalid ID and/or Password!"	System shows the error's popup with message "Invalid ID and/or Password!"
The operator fills the form with credentials: <i>"User2", "Psw2"</i>	System shows the error's popup with message "Invalid ID and/or Password!"	System shows the error's popup with message "Invalid ID and/or Password!"

### 2.1.2 Researches contract test

<b>Test ID</b>	2
<b>Test name</b>	Researches contract
<b>Test goal</b>	The goal is to let the operator research contracts using forms
<b>Note</b>	In this case we consider these credentials: <i>"Name1", "Surname1", "ContractID1", "TaxC/VAT1": right credentials (stored into the DBMS), "Name2", "Surname2", "ContractID2", "TaxC/VAT2": wrong credentials (non-stored into the DBMS)</i>

Input	Desired Output	Obtained Output
The operator fills the form with credentials: <i>"Name1"</i> , <i>"Surname1"</i> , <i>"ContractID1"</i> , <i>"TaxC/VAT1"</i>	System shows the results into the table	System shows the results into the table
The operator fills the form with credentials: <i>"Name2"</i>	System shows the error's popup with message "No result found"	System shows the error's popup with message "No result found"
The operator fills the form with credentials: <i>"Surname2"</i>	System shows the error's popup with message "No result found"	System shows the error's popup with message "No result found"
The operator fills the form with credentials: <i>"ContractID2"</i>	System shows the error's popup with message "No result found"	System shows the error's popup with message "No result found"
The operator fills the form with credentials: <i>"TaxC/VAT2"</i>	System shows the error's popup with message "No result found"	System shows the error's popup with message "No result found"



### 2.1.3 Alters contract test

<b>Test ID</b>	3
<b>Test name</b>	Alters contract
<b>Test goal</b>	The goal is to let the operator alter a contract selected from the table
<b>Note</b>	

<b>Input</b>	<b>Desired Output</b>	<b>Obtained Output</b>
The operator fills the form with new credentials	System shows a popup with message "Contract altered"	System shows a popup with message "Contract altered"

#### 2.1.4 Deletes contract test

<b>Test ID</b>	4
<b>Test name</b>	Deletes contract
<b>Test goal</b>	The goal is to let the operator delete contracts selected from the table
<b>Note</b>	We consider three cases: " <i>Contract1</i> ": <i>this contract can be removed</i> ; " <i>Contract2</i> ": <i>this contract can't be removed because it has some pendant bills</i> ; " <i>Contract3</i> ": <i>this contract can't be removed because is already closed</i> .

<b>Input</b>	<b>Desired Output</b>	<b>Obtained Output</b>
The operator selected the " <i>Contract1</i> "	System shows a popup with message "Contract removed"	System shows a popup with message "Contract removed"
The operator selected the " <i>Contract2</i> "	System shows the error's popup with a message that explains the reason why it can't be closed	System shows the error's popup with a message that explains the reason why it can't be closed
The operator selected the " <i>Contract3</i> "	System shows the error's popup with a message that explains the reason why it can't be closed	System shows the error's popup with a message that explains the reason why it can't be closed

### 2.1.5 Adds contract test

<b>Test ID</b>	5
<b>Test name</b>	Adds contract
<b>Test goal</b>	The goal is to let the operator add new contracts
<b>Note</b>	

<b>Input</b>	<b>Desired Output</b>	<b>Obtained Output</b>
The operator fills all forms interested for the contract's adding	System shows a popup with message "New contract added"	System shows a popup with message "New contract added"
The operator fills a form with invalid characters	System shows the error's popup with a message that explains the reason why it can't continue the operation	System shows the error's popup with a message that explains the reason why it can't continue the operation

### 2.1.6 Reports errors in bills test

<b>Test ID</b>	6
<b>Test name</b>	Reports errors in bills
<b>Test goal</b>	The goal is to let the operator reports errors in bills
<b>Note</b>	

<b>Input</b>	<b>Desired Output</b>	<b>Obtained Output</b>
The operator fill the form with the errors	System shows a popup with message "Operation successfully completed"	System shows a popup with message "Operation successfully completed"

### 2.1.7 Deletes injunctions test

<b>Test ID</b>	7
<b>Test name</b>	Deletes injunctions
<b>Test goal</b>	The goal is to let the operator delete injunctions
<b>Note</b>	

<b>Input</b>	<b>Desired Output</b>	<b>Obtained Output</b>

### 2.1.8 Confirms bill test

<b>Test ID</b>	8
<b>Test name</b>	Confirms bill
<b>Test goal</b>	The goal is to let the operator confirm a selected bill
<b>Note</b>	

<b>Input</b>	<b>Desired Output</b>	<b>Obtained Output</b>
The operator selects a bill from the bill's table and presses "Confirm" button	System shows the bill's preview (PDF)	System shows the bill's preview (PDF)

### 2.1.9 Resends bill test

<b>Test ID</b>	9
<b>Test name</b>	Resends bill
<b>Test goal</b>	The goal is to let the operator resend a selected bill
<b>Note</b>	

<b>Input</b>	<b>Desired Output</b>	<b>Obtained Output</b>
The operator selects a bill from the bill's table and presses "Confirm" button	System shows the bill's preview (PDF)	System shows the bill's preview (PDF)

#### 2.1.10 Confirms injunctions test

<b>Test ID</b>	10
<b>Test name</b>	Confirms injunctions
<b>Test goal</b>	The goal is to let the operator confirm an injunction
<b>Note</b>	

<b>Input</b>	<b>Desired Output</b>	<b>Obtained Output</b>
The operator selects an injunction from the injunction's table and presses "Confirm" button	System shows the bill's pre-view (PDF)	System shows the bill's pre-view (PDF)



### 2.1.11 Resends injunctions test

<b>Test ID</b>	11
<b>Test name</b>	Confirms injunctions
<b>Test goal</b>	The goal is to let the operator resends an injunction
<b>Note</b>	

<b>Input</b>	<b>Desired Output</b>	<b>Obtained Output</b>
The operator selects an injunction from the injunction's table and presses "Confirm" button	System shows the bill's pre-view (PDF)	System shows the bill's pre-view (PDF)