

## The List of References

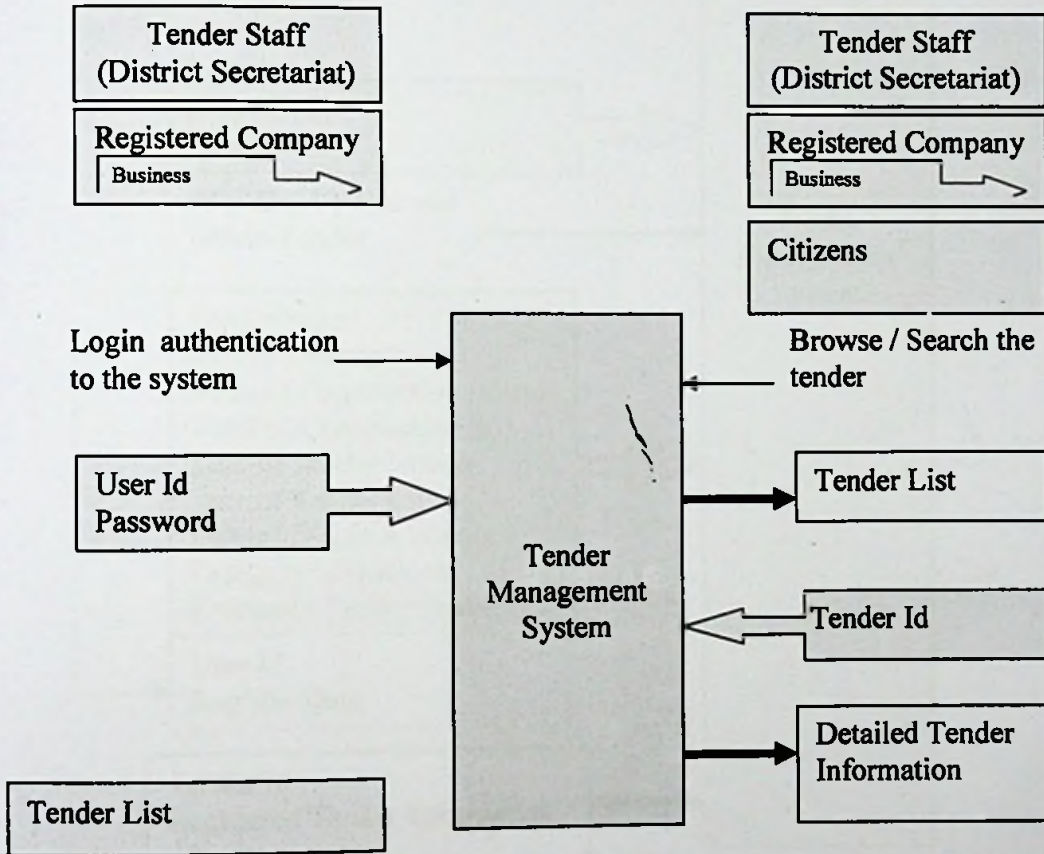
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## Appendix A

### Input / Output Information

#### Login to the system and Browse Tenders



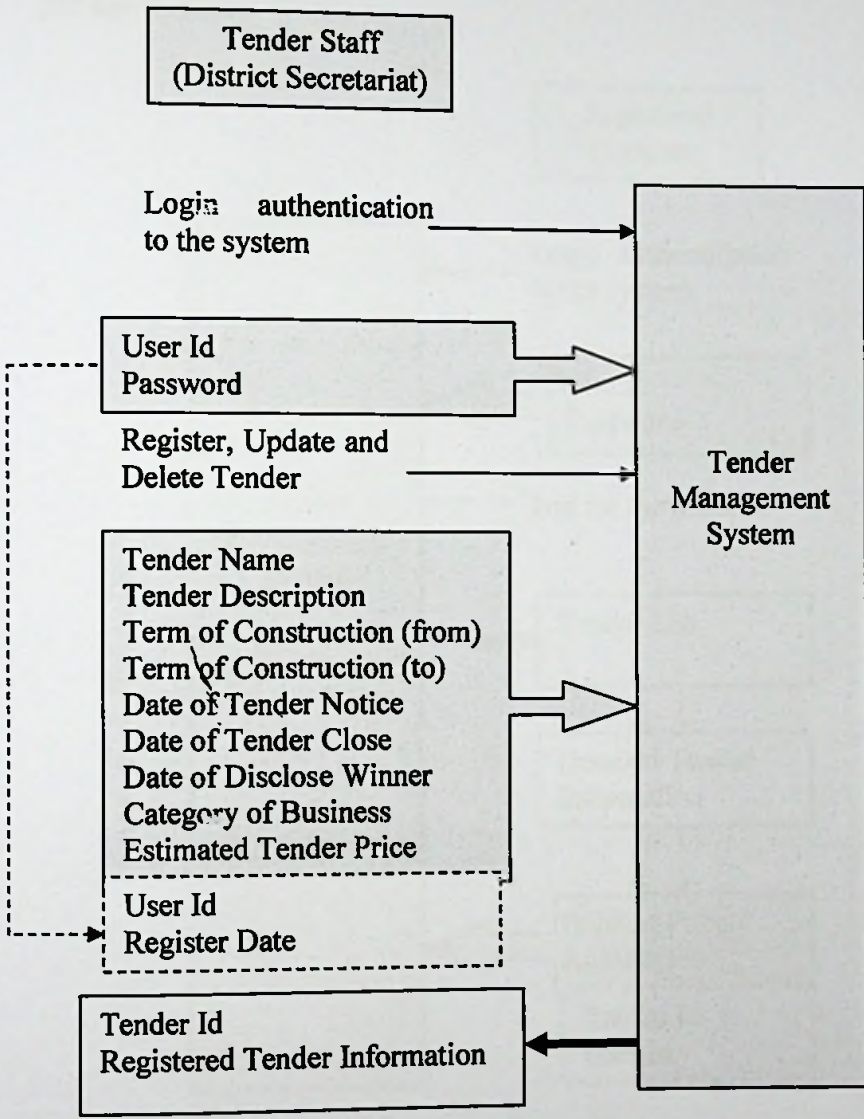
Tender List

Tender Id	Tender Name	Date of Tender Notice	Date of Tender Close	Date of Tender Disclose and select winner	Tender Status	Category of Business
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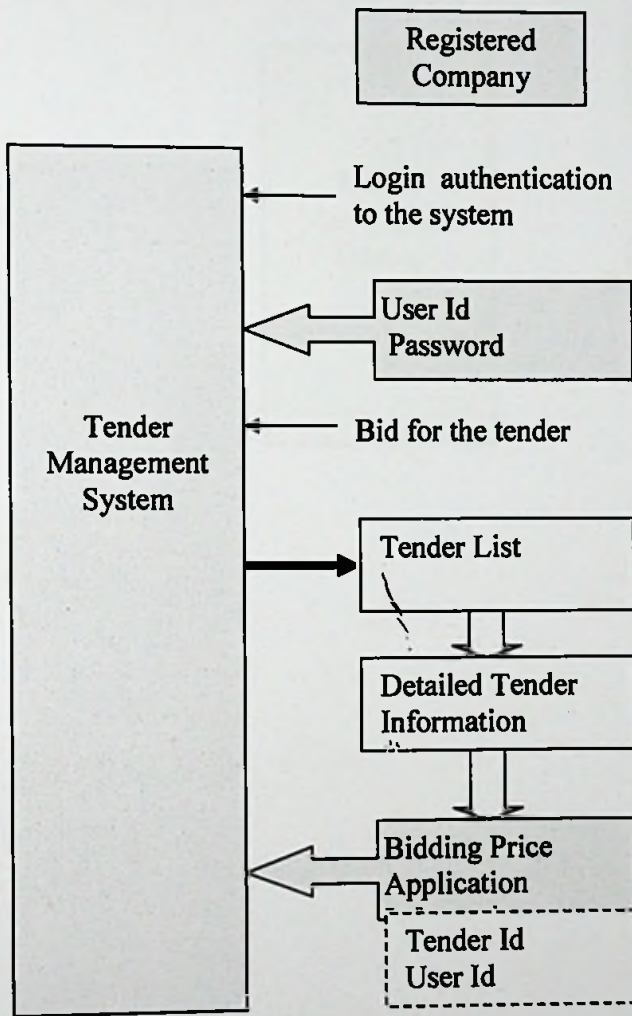
Detailed Tender Information

Tender Id	Estimated Tender Price
Tender Name	Date of Tender Notice
Staff Name	Date/Time of Tender Close
Tender Description	Date/Time of Disclosing Winner
Category of Business	Term of Construction(to)
Term of Construction(from)	

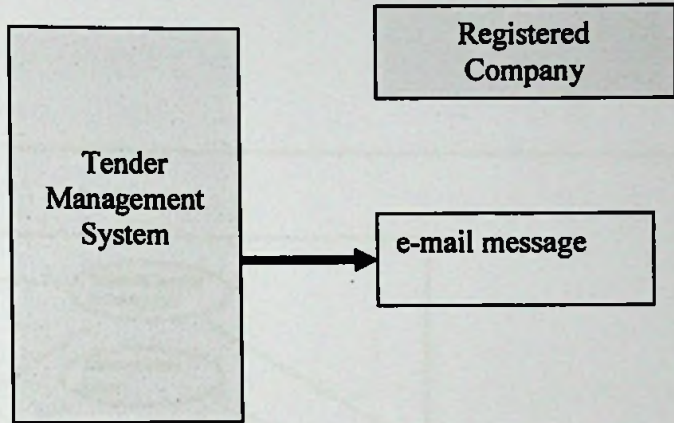
# Register, Update and Delete Tenders



# Bid for Tenders

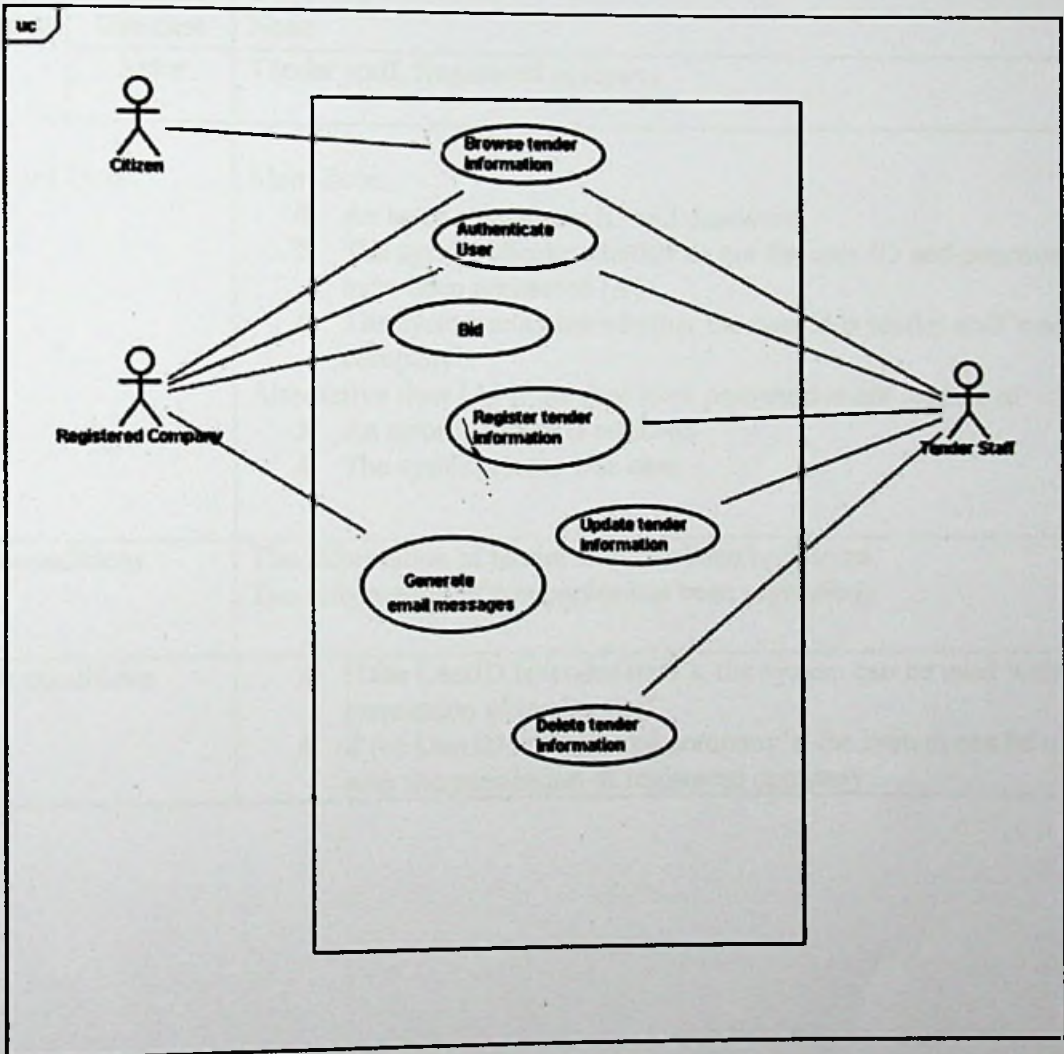


**e-mail message alert**



## Appendix B

### Use case Diagram



## Appendix C

### Use case Specifications

Name of Use case: Authenticate User		
<b>Overview</b>	Authenticate users of the system	
<b>Relationship</b>	<b>Use case</b>	None
	<b>Actor</b>	Tender staff, Registered company
<b>Event Flow</b>	<p><b>Main flow</b></p> <ol style="list-style-type: none"> <li>4. An actor enters user ID and password</li> <li>5. The system checks whether or not the user ID and password have been registered [A]</li> <li>6. The system examine whether the user id is tender staff's or company's</li> </ol> <p><b>Alternative flow [A] if the user id or password is not registered</b></p> <ol style="list-style-type: none"> <li>3. An error message is returned</li> <li>4. The system closes Use case</li> </ol>	
<b>Preconditions</b>	<p>The information of tender staff has been registered.</p> <p>The information of companies has been registered.</p>	
<b>Post conditions</b>	<ol style="list-style-type: none"> <li>3. If the UserID is tender staff's, the system can be used with the permission of tender staff.</li> <li>4. if the UserID is registered company's, the system can be used with the permission of registered company</li> </ol>	



Name of Use case: Register Tender Information		
Overview		Register each tender information to the system
Relationship	Use case	None
	Actor	Tender Staff
Event Flow	<p><b>Main flow</b></p> <ol style="list-style-type: none"> <li>Actor enters the tender information. <ul style="list-style-type: none"> <li>Tender name</li> <li>Tender description</li> <li>Term of construction (from)</li> <li>Term of construction (to)</li> <li>Date of tender notice</li> <li>Date of tender close</li> <li>Date of disclosing winner bidder</li> <li>Category of business</li> <li>Estimated tender price</li> <li>Is estimated tender price disclosed</li> </ul> </li> <li>The actor orders the system to register such information.[A][B]</li> <li>The system confirms to the actor if the data can be registered.</li> <li>The system generates TenderID, adds and registers tender information with UserID and system date.[C]</li> </ol> <p><b>Alternative flow [A] if there are omissions and /or mistakes in the data</b></p> <ol style="list-style-type: none"> <li>An error message is returned.</li> <li>The system does not register tender information and closes the use case.</li> </ol> <p><b>Alternative flow [B] if entered date are not as follows, Now &lt; Date of tender notice &lt; Date of tender close &lt; Date of disclose winner &lt; term of construction (from) &lt; term of construction (to)</b></p> <ol style="list-style-type: none"> <li>An error message is returned.</li> <li>The system does not register tender information and closes the use case.</li> </ol> <p><b>Alternative flow [C] if now &gt; date of tender notice</b></p> <ol style="list-style-type: none"> <li>An error message is returned.</li> <li>The system does not register tender information and closes the use case.</li> </ol>	
Preconditions	The information of tender staff have been registered.	
Post conditions	The tender information is registered	

Name of Use case: Bid

<b>Overview</b>		Bid for selected tender
<b>Relationship</b>	<b>Use case</b>	None
	<b>Actor</b>	Registered Company
<b>Event flow</b>	<p><b>Main flow</b></p> <ol style="list-style-type: none"> <li>1. An actor asks the system to search the tender information</li> <li>2. The system displays tender information list             <ol style="list-style-type: none"> <li>a. TenderID</li> <li>b. Tender name</li> <li>c. Date of tender notice</li> <li>d. Date of tender close</li> <li>e. Date of disclosing winner bidder</li> <li>f. Category of business</li> <li>g. Tender Status</li> </ol> </li> <li>3. The actor selects one tender information</li> <li>4. The system displays detailed tender information which is select by actor             <ol style="list-style-type: none"> <li>a. TenderID</li> <li>b. Tender name</li> <li>c. Tender description</li> <li>d. Term of construction (from)</li> <li>e. Term of construction (to)</li> <li>f. Date of tender notice</li> <li>g. Date of tender close</li> <li>h. Date of disclosing winner bidder</li> <li>i. Category of business</li> <li>j. Estimated tender price</li> <li>k. Staff Name</li> </ol> </li> <li>5. The actor inputs budding price and application document.</li> <li>6. The actor orders the system to register the bidding information.[A]</li> <li>7. The system confirms to the actor if the data can be registered.</li> <li>8. the system registers the bidding information together with TenderID and UserID.[B]</li> </ol> <p><b>Alternative flow [A] if there are omissions and /or mistakes in the data</b></p> <ol style="list-style-type: none"> <li>1. An error message is returned.</li> <li>2. The system does not register bidding information and closes the use case.</li> </ol> <p><b>Alternative flow [B] if now &gt; date of tender close</b></p> <ol style="list-style-type: none"> <li>1. An error message is returned.</li> <li>2. The system does not register bidding information and closes the use case.</li> </ol> <p><b>Remarks:</b> An actor can not bid for the tenders if the company has bid for the tender already</p>	
<b>Preconditions</b>	Users have already been authenticated. Tender is already registered	
<b>Post conditions</b>	The bidding information has been registered	

**Name of Use case: Generate e-mail messages**

<b>Overview</b>		<b>Generate e-mail messages</b>
<b>Relationship</b>	<b>Use case</b>	<b>Registered Company</b>
	<b>Actor</b>	<b>None</b>
<b>Event flow</b>		<ol style="list-style-type: none"><li>1. When (Now = Tender Notice date and time) , system generate an e-mail message.</li><li>2. System select suitable companies from company categories,</li><li>3. Transfer e-mail messages in to email addresses of registered companies</li></ol>
<b>Preconditions</b>		<b>Tender is already registered</b>
<b>Post conditions</b>		<b>Registered company received email message about new tender</b>

Name of Use case: Delete Tender Information		
Overview		Delete the tender which is selected
Relationship	Use case	None
	Actor	Tender Staff
Event flow	<p><b>Main flow</b></p> <ol style="list-style-type: none"> <li>1. An actor asks the system to search the tender information</li> <li>2. The system displays tender information list               <ol style="list-style-type: none"> <li>a. TenderID</li> <li>b. Tender name</li> <li>c. Date of tender notice</li> <li>d. Date of tender close</li> <li>e. Date of disclosing winner bidder</li> <li>f. Category of business</li> <li>g. Tender Status</li> </ol> </li> <li>3. The actor selects one tender information</li> <li>4. The system displays detailed tender information which is select by actor               <ol style="list-style-type: none"> <li>a. TenderID</li> <li>b. Tender name</li> <li>c. Tender description</li> <li>d. Term of construction (from)</li> <li>e. Term of construction (to)</li> <li>f. Date of tender notice</li> <li>g. Date of tender close</li> <li>h. Date of disclosing winner bidder</li> <li>i. Estimated tender price</li> <li>j. Is estimated tender price disclosed</li> <li>k. Category of business</li> <li>l. Staff Name</li> </ol> </li> <li>5. The Actor delete tender information</li> <li>6. The actor orders the system to delete tender information.</li> <li>7. The system confirms to the actor if the data can be deleted.</li> <li>8. The system deletes tender information.[A]</li> <li>9. The system displays the delete confirmation message.</li> </ol> <p><b>Alternative flow [A] if now &gt; date of tender notice</b></p> <ol style="list-style-type: none"> <li>1. An error message is returned.</li> <li>2. The system does not delete tender information and closes the use case.</li> </ol> <p><b>Remarks:</b>            An actor who registered the tender can see in the tender list.            An actor can see the tenders in the list where date of tender notice &gt; now</p>	
Preconditions	Users have already been authenticated. Tender is already registered.	
Post conditions	Tender information has been deleted from database.	

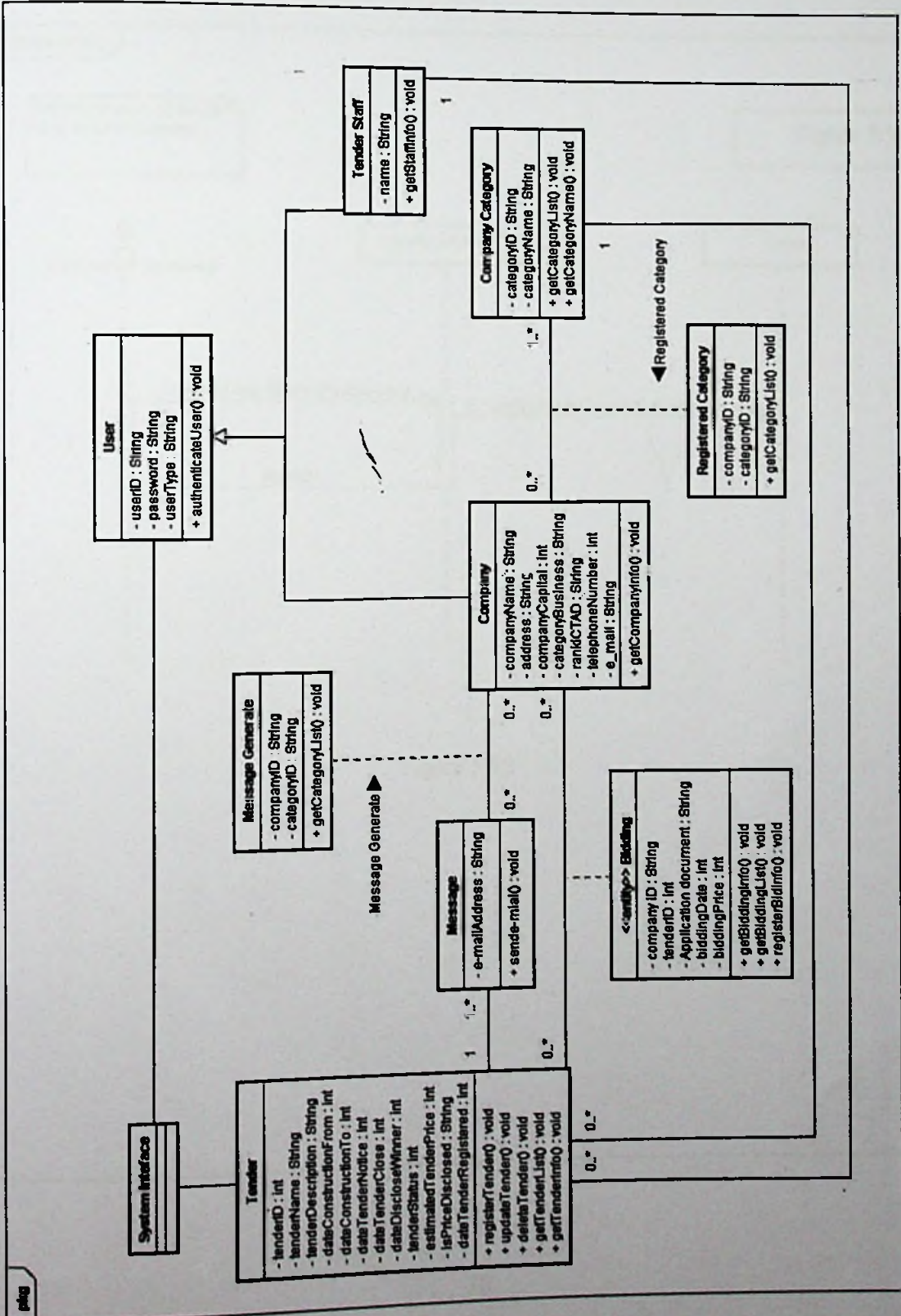
**Name of Use case: Update Tender Information**

<b>Overview</b>		Update tender information which is selected
<b>Relation ship</b>	<b>Use case</b>	None
	<b>Actor</b>	Tender Staff
		<p><b>Main flow</b></p> <ol style="list-style-type: none"> <li>1. An actor asks the system to search the tender information</li> <li>2. The system displays tender information list               <ol style="list-style-type: none"> <li>a. TenderID</li> <li>b. Tender name</li> <li>c. Date of tender notice</li> <li>d. Date of tender close</li> <li>e. Date of disclosing winner bidder</li> <li>f. Category of business</li> <li>g. Tender Status</li> </ol> </li> <li>3. The actor selects one tender information</li> <li>4. The system displays detailed tender information which is select by actor               <ol style="list-style-type: none"> <li>a. TenderID</li> <li>b. Tender name</li> <li>c. Tender description</li> <li>d. Term of construction (from)</li> <li>e. Term of construction (to)</li> <li>f. Date of tender notice</li> <li>g. Date of tender close</li> <li>h. Date of disclosing winner bidder</li> <li>i. Category of business</li> <li>j. Estimated tender price</li> <li>k. Is estimated tender price disclosed</li> <li>l. Staff Name</li> </ol> </li> <li>5. The Actor update tender information</li> <li>6. The actor orders the system to update tender information.[A][B]</li> <li>7. The system confirms to the actor if the data can be updated.</li> <li>8. The system updates tender information.[C]</li> </ol> <p><b>Alternative flow [A] if there are omissions and /or mistakes in the data</b></p> <ol style="list-style-type: none"> <li>1. An error message is returned.</li> <li>2. The system does not update tender information and closes the use case.</li> </ol> <p><b>Alternative flow [B] if entered date are not as follows, Now &lt; Date of tender notice &lt; Date of tender close &lt; Date of disclose winner &lt; term of construction (from) &lt; term of construction (to)</b></p> <ol style="list-style-type: none"> <li>1. An error message is returned.</li> <li>2. The system does not update tender information and closes the use case.</li> </ol> <p><b>Alternative flow [C] if now &lt; date of tender notice</b></p> <ol style="list-style-type: none"> <li>1. An error message is returned.</li> <li>2. The system does not register tender information and closes the use case.</li> </ol> <p><b>Remarks:</b>            An actor who registered the tender can see in the tender list.            An actor can see the tenders in the list where date of tender notice &gt; now.</p>
<b>Preconditions</b>		Users have already been authenticated. Tender is already registered.
<b>Post – condition</b>		Tender information has been updated.

Name of Use case: Browse Tender information		
Overview		Browse Tender information
Relationship	Use case	None
	Actor	Tender Staff, Registered Company, Citizen
Event flow	<p><b>Main flow</b></p> <ol style="list-style-type: none"> <li>1. An actor asks the system to search the tender information</li> <li>2. The system displays tender information list               <ol style="list-style-type: none"> <li>a. TenderID</li> <li>b. Tender name</li> <li>c. Date of tender notice</li> <li>d. Date of tender close</li> <li>e. Date of disclosing winner bidder</li> <li>f. Category of business</li> <li>g. Tender Status</li> </ol> </li> <li>3. The actor selects one tender information</li> <li>4. The system displays detailed tender information which is select by actor.               <ol style="list-style-type: none"> <li>a. TenderID</li> <li>b. Tender name</li> <li>c. Tender description</li> <li>d. Term of construction (from)</li> <li>e. Term of construction (to)</li> <li>f. Date of tender notice</li> <li>g. Date of tender close</li> <li>h. Date of disclosing winner bidder</li> <li>i. Category of business</li> <li>j. Staff Name</li> </ol> </li> </ol> <p><b>Remarks:</b></p> <ul style="list-style-type: none"> <li>• An actor who is not tender staff can not see the tenders in the list where now &lt; date of tender notice.</li> <li>• An actor who is not tender staff can not see Application document information.</li> </ul>	
Preconditions	None	
Post condition	None	

# Appendix D

## Class Diagram



Appendix E

Sequence Diagrams

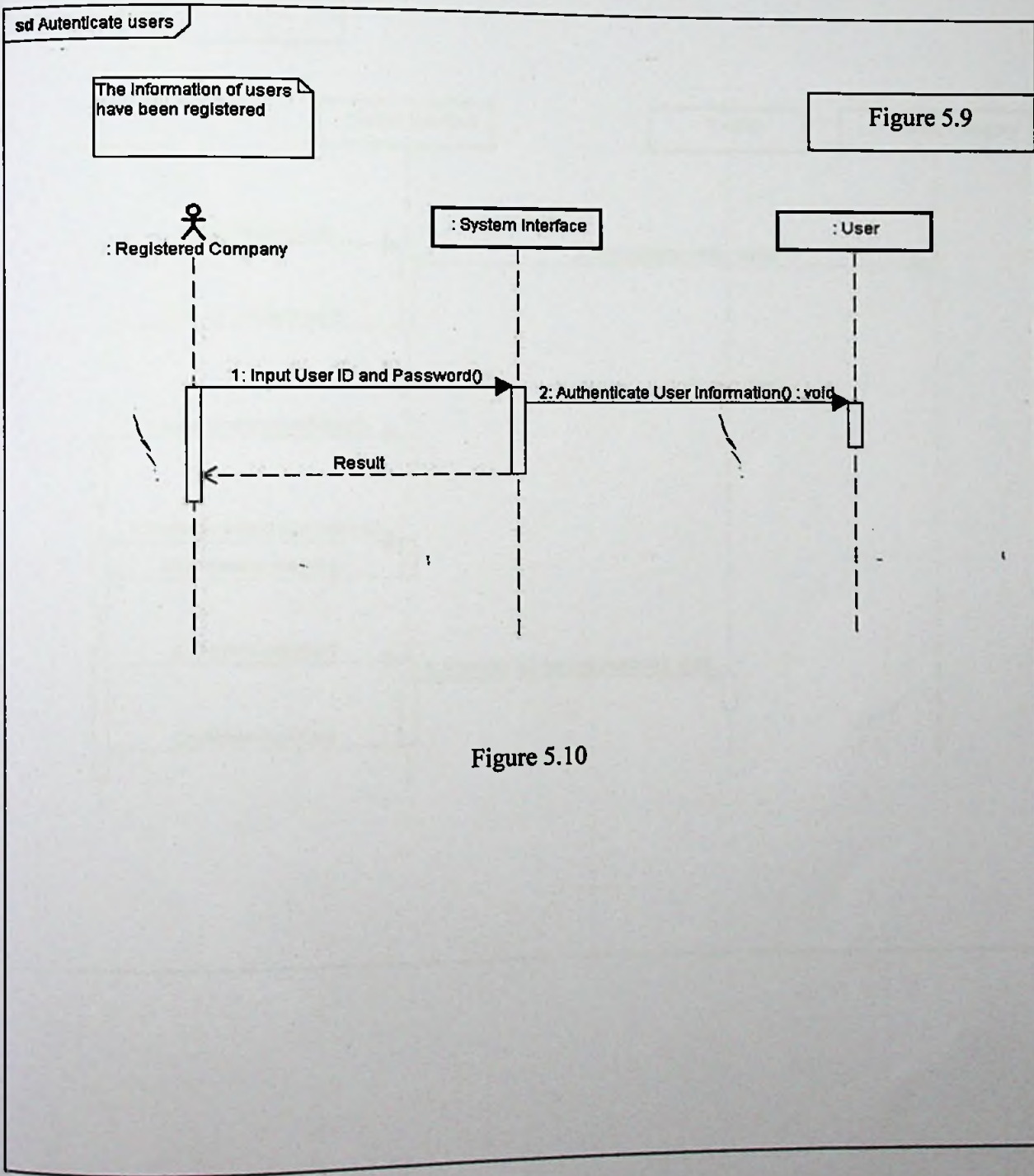
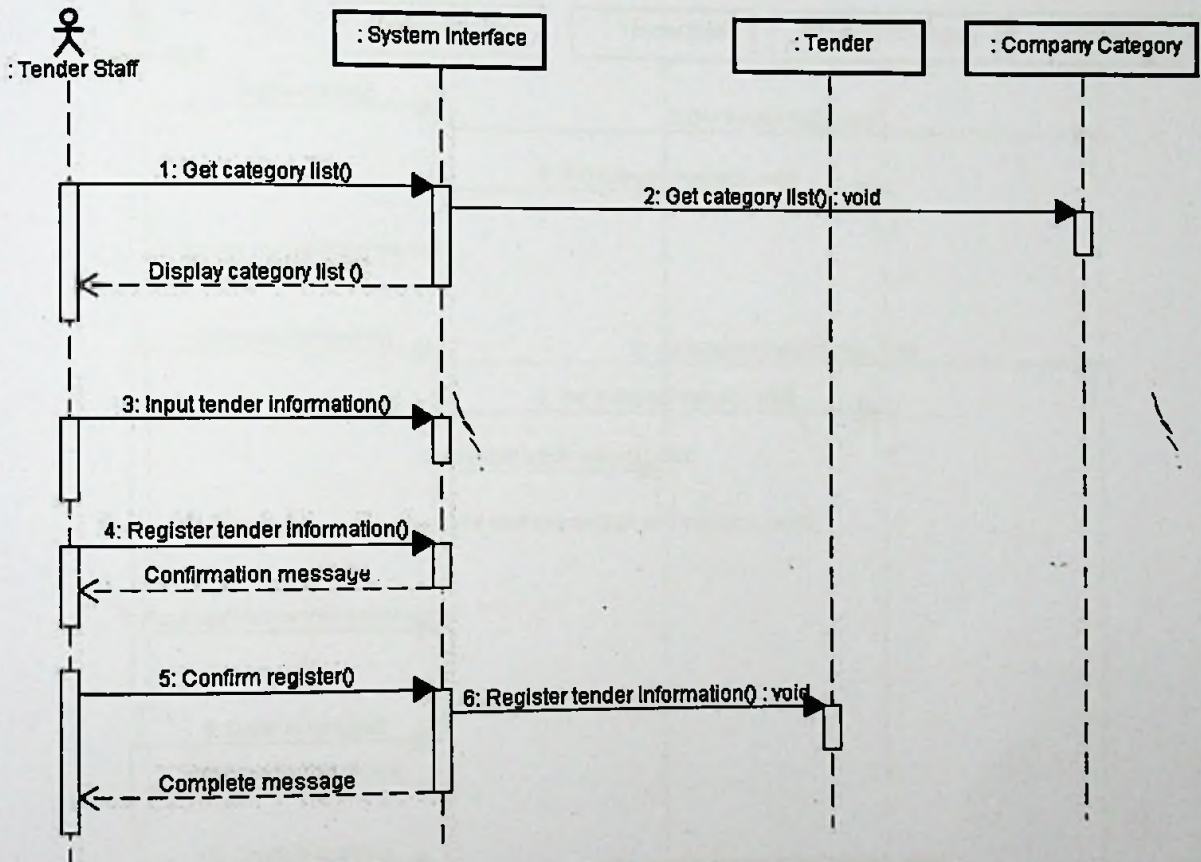


Figure 5.10



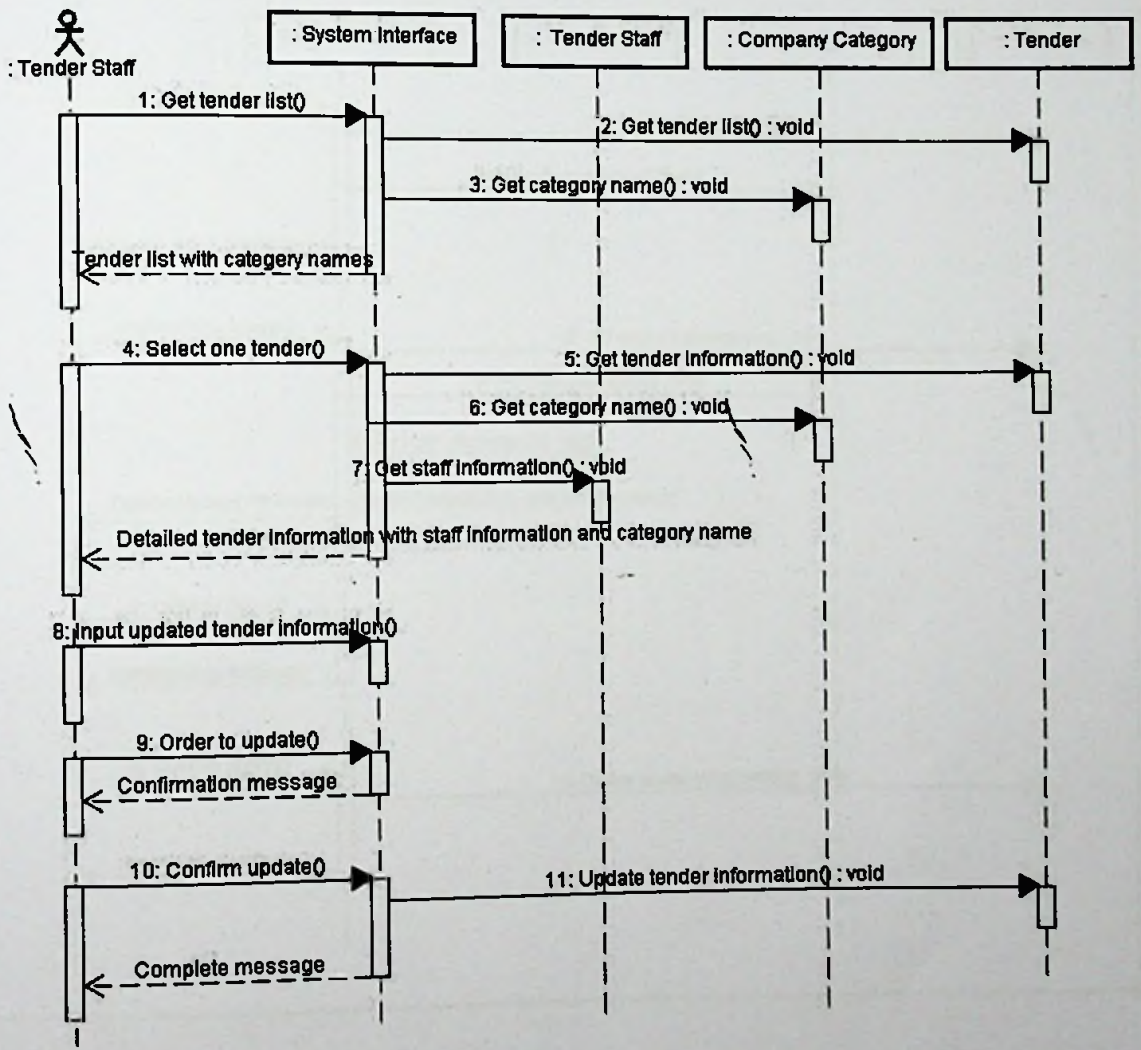
sd Register Tender Information

User has been already authenticated



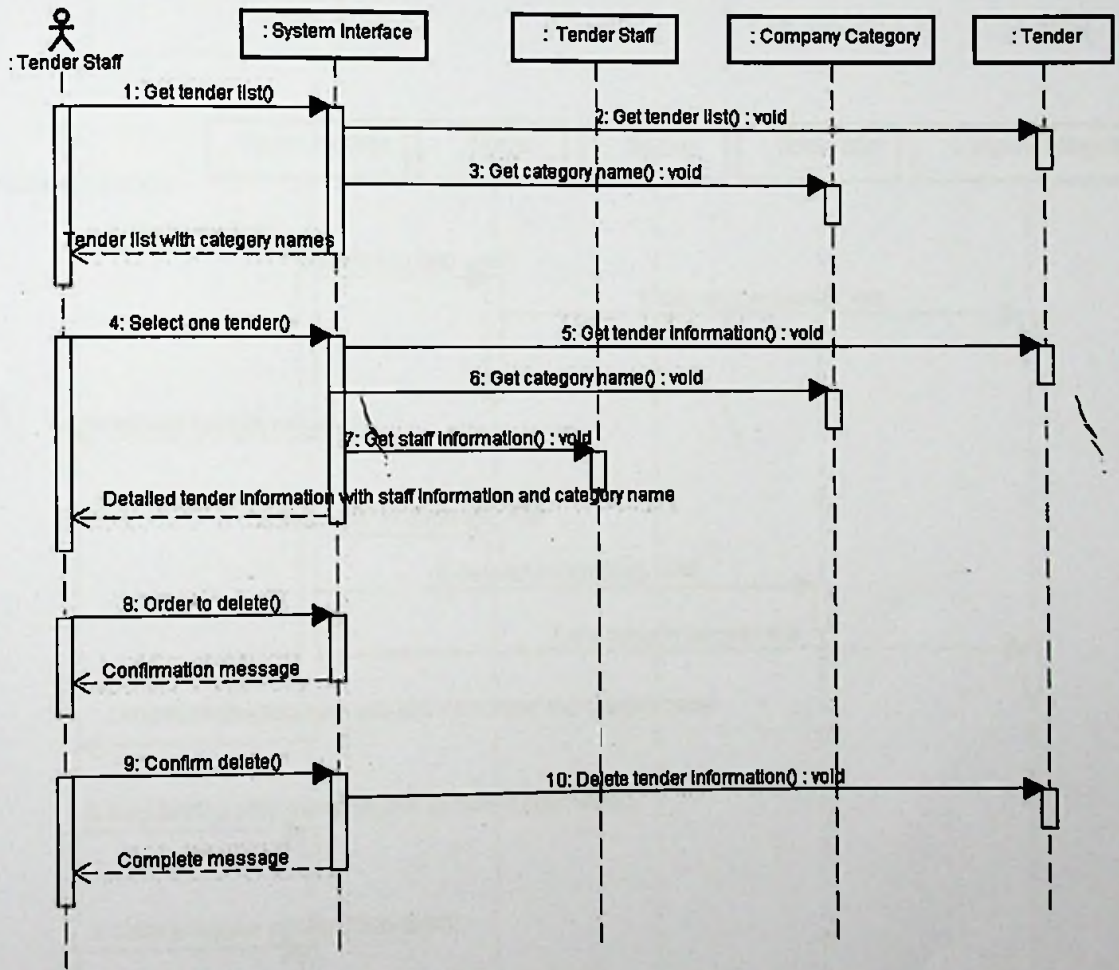
sd Update tender information

User has been already authenticated and tender has been already registered

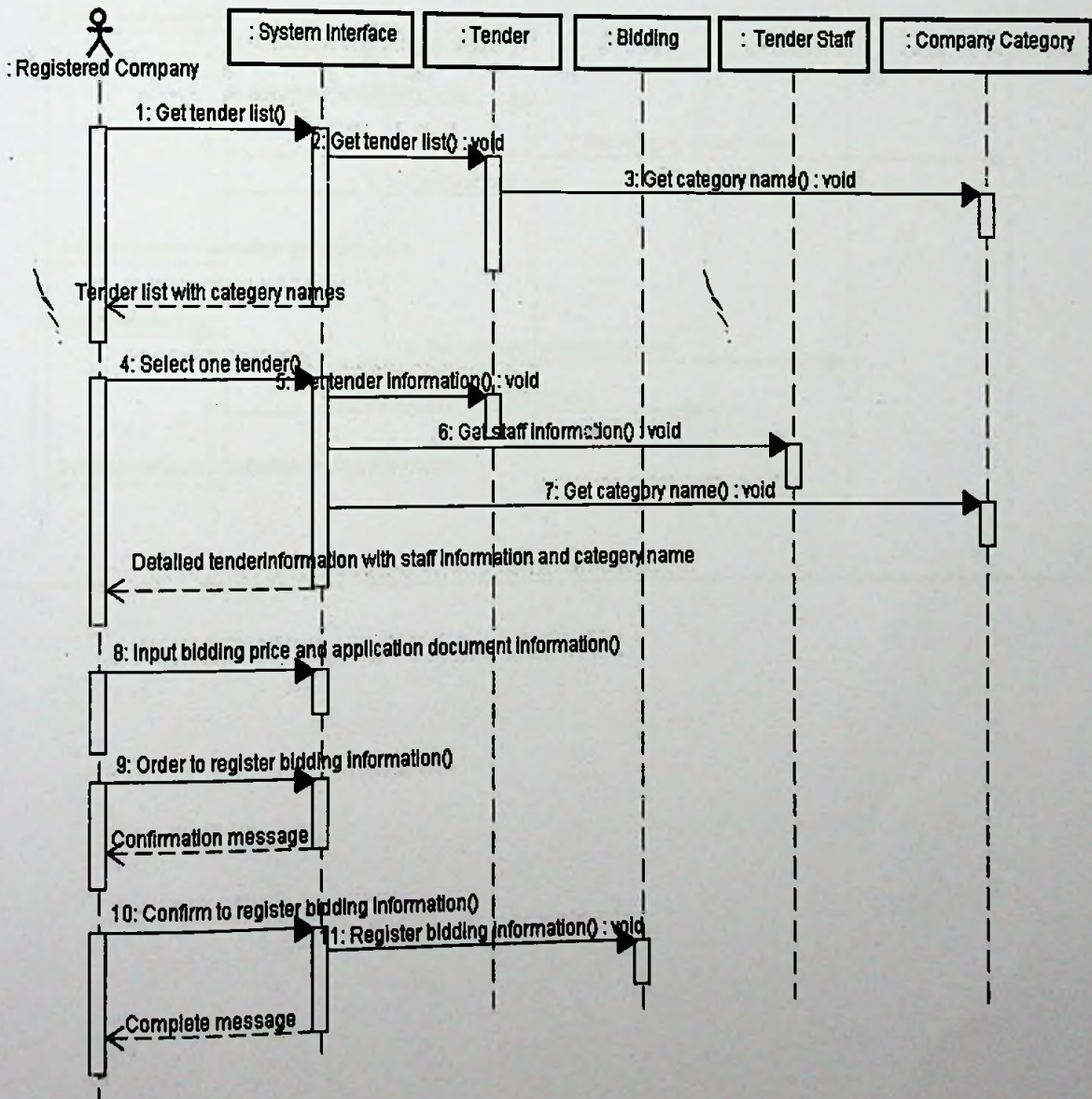


sd Delete tender information

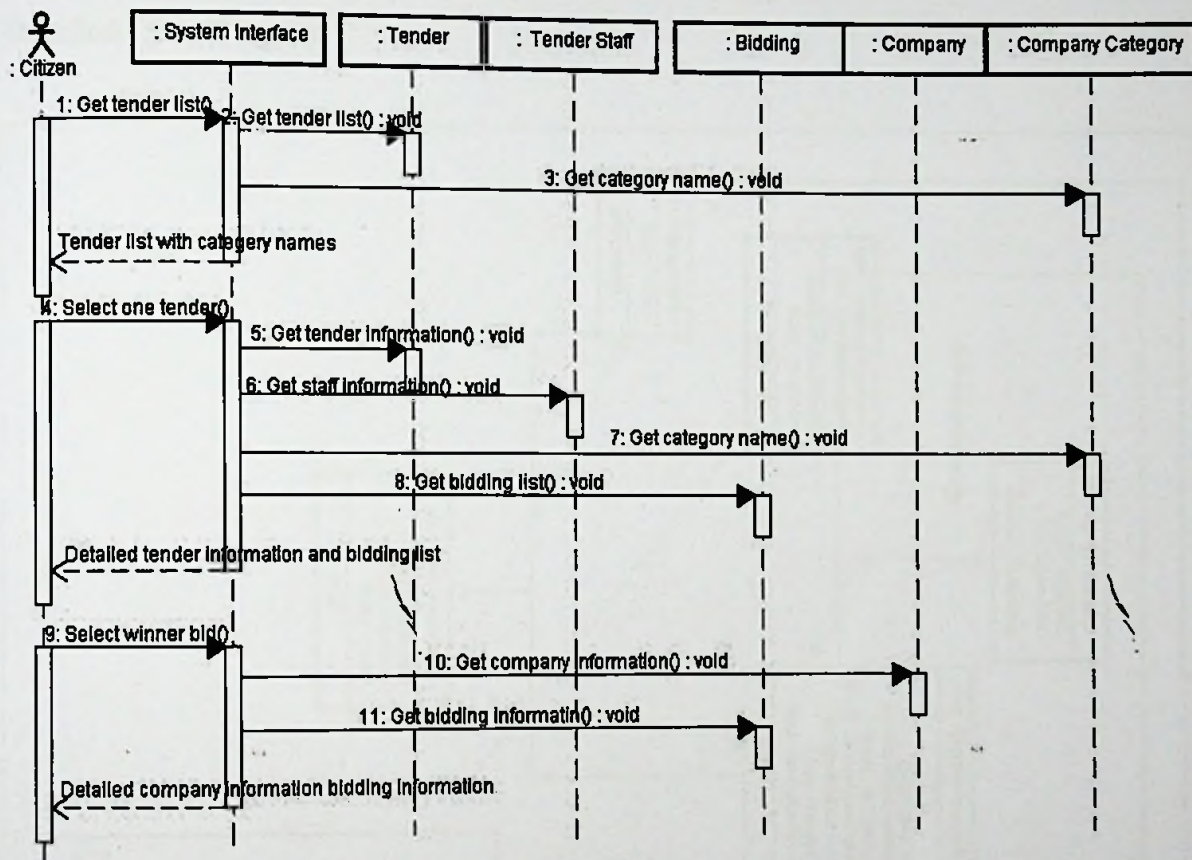
User has been already authenticated and tender has been already registered



User has already been authenticated

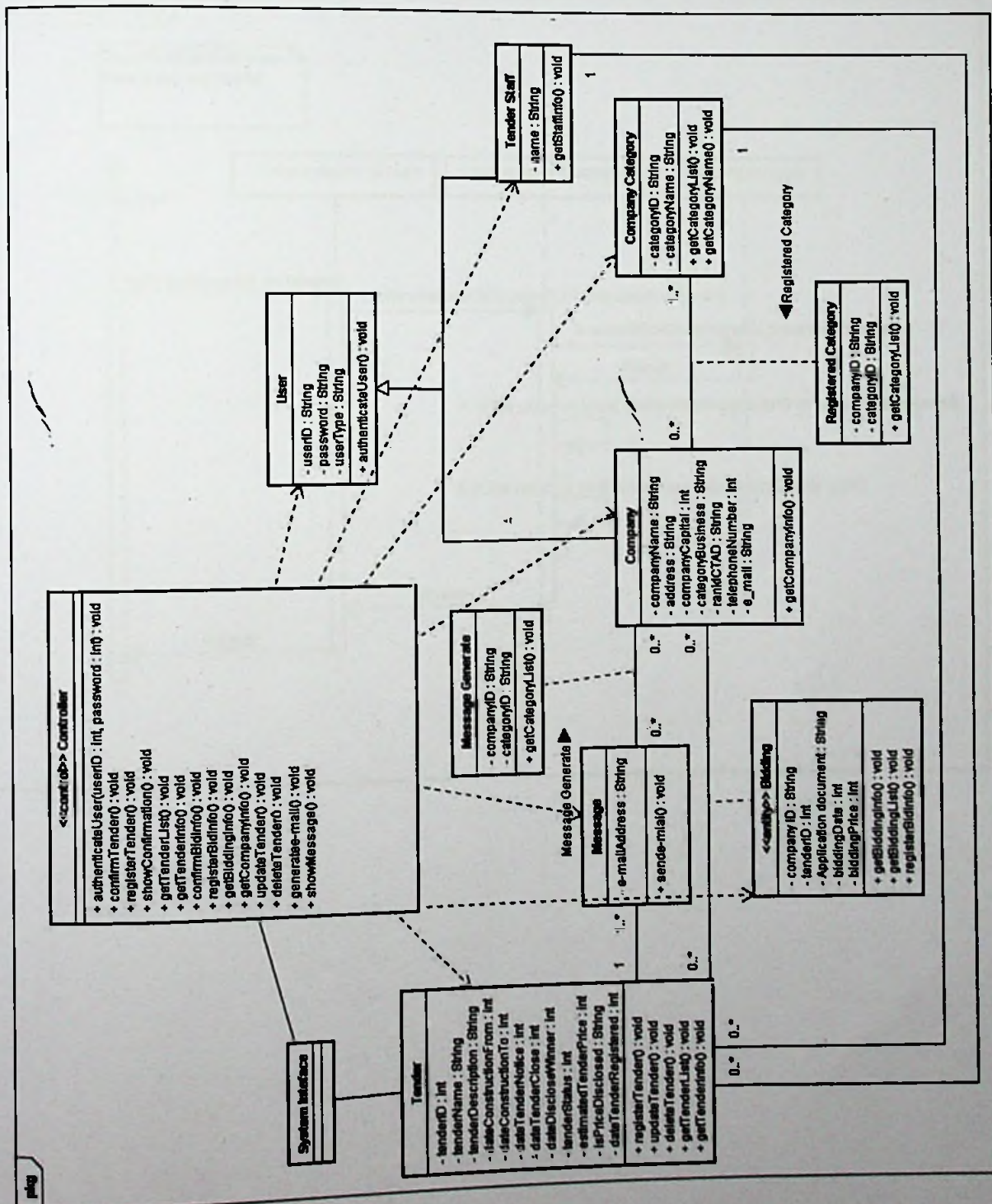


sd Browse tender information



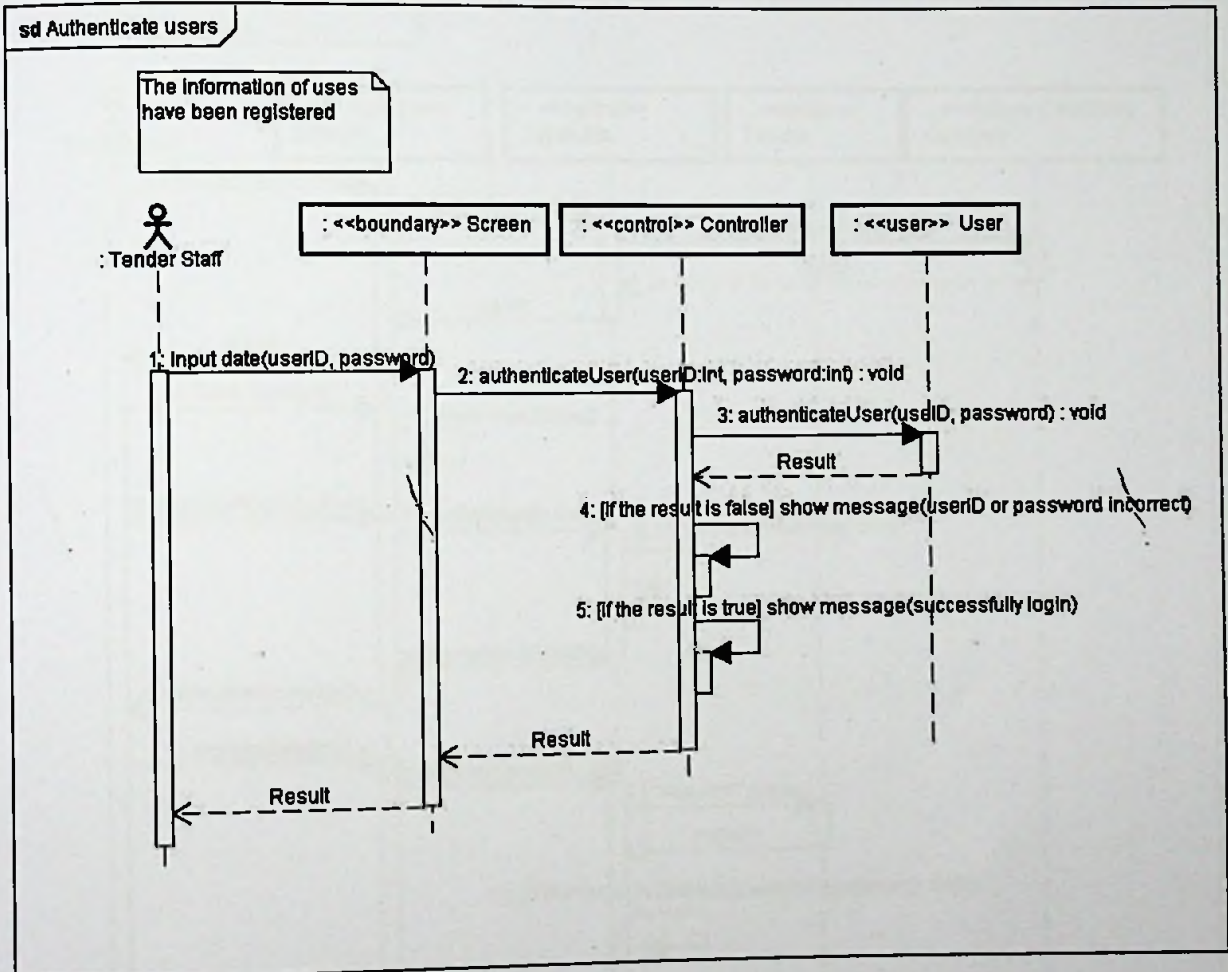
# Appendix F

## Detailed Class Diagram



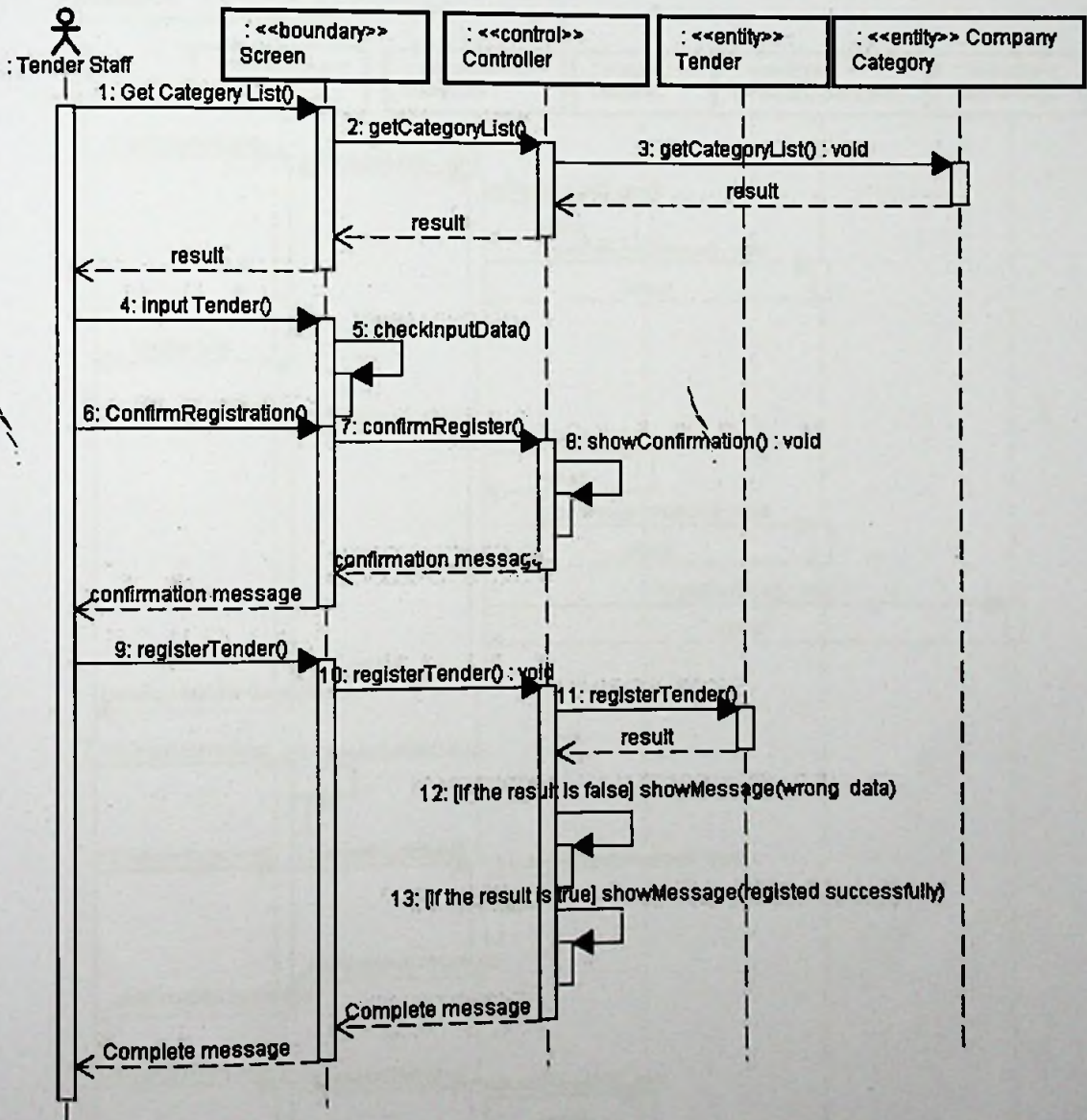
## Appendix G

### Detailed Sequence Diagram



sd Register tender information

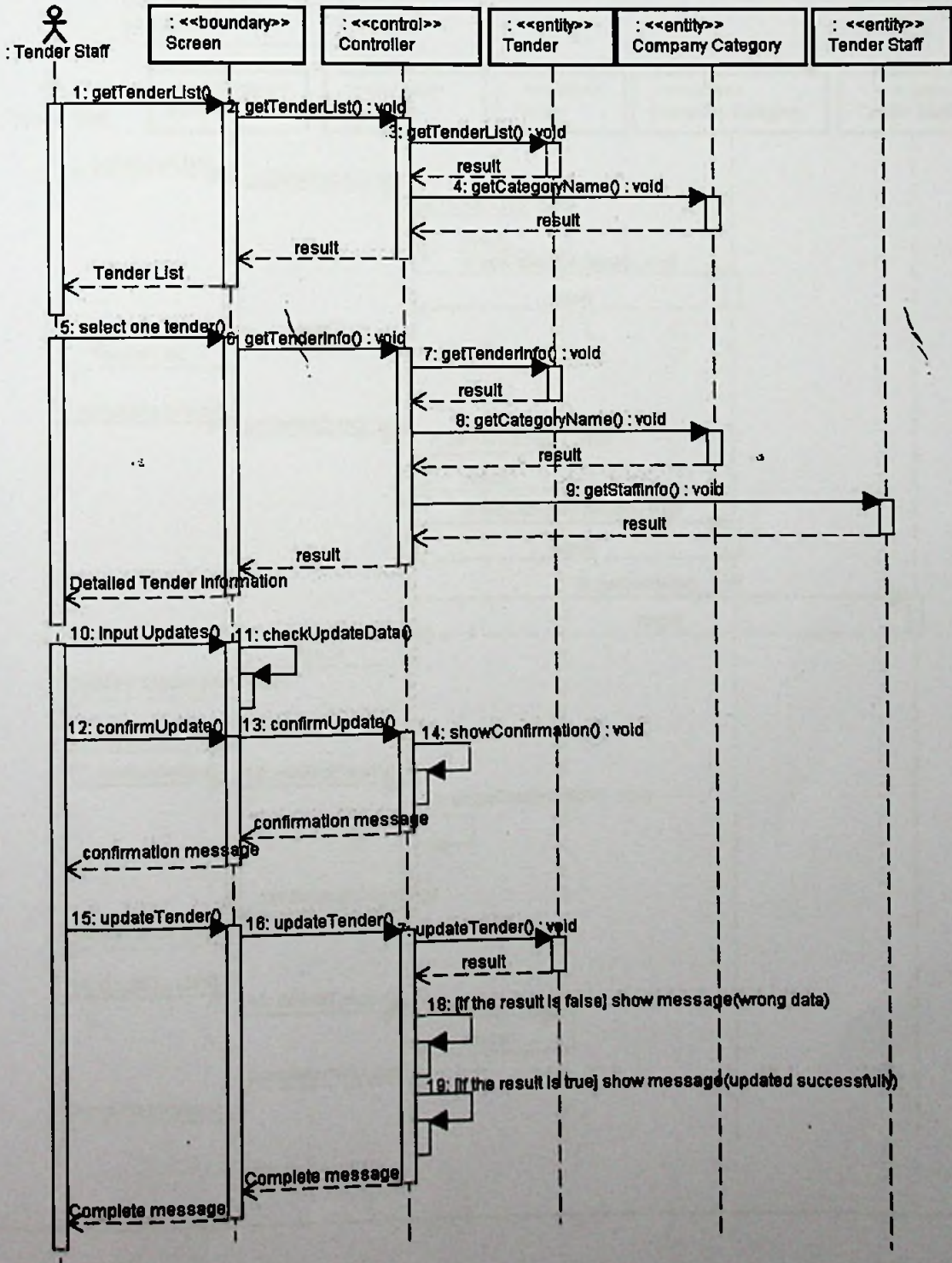
User has been already authenticated





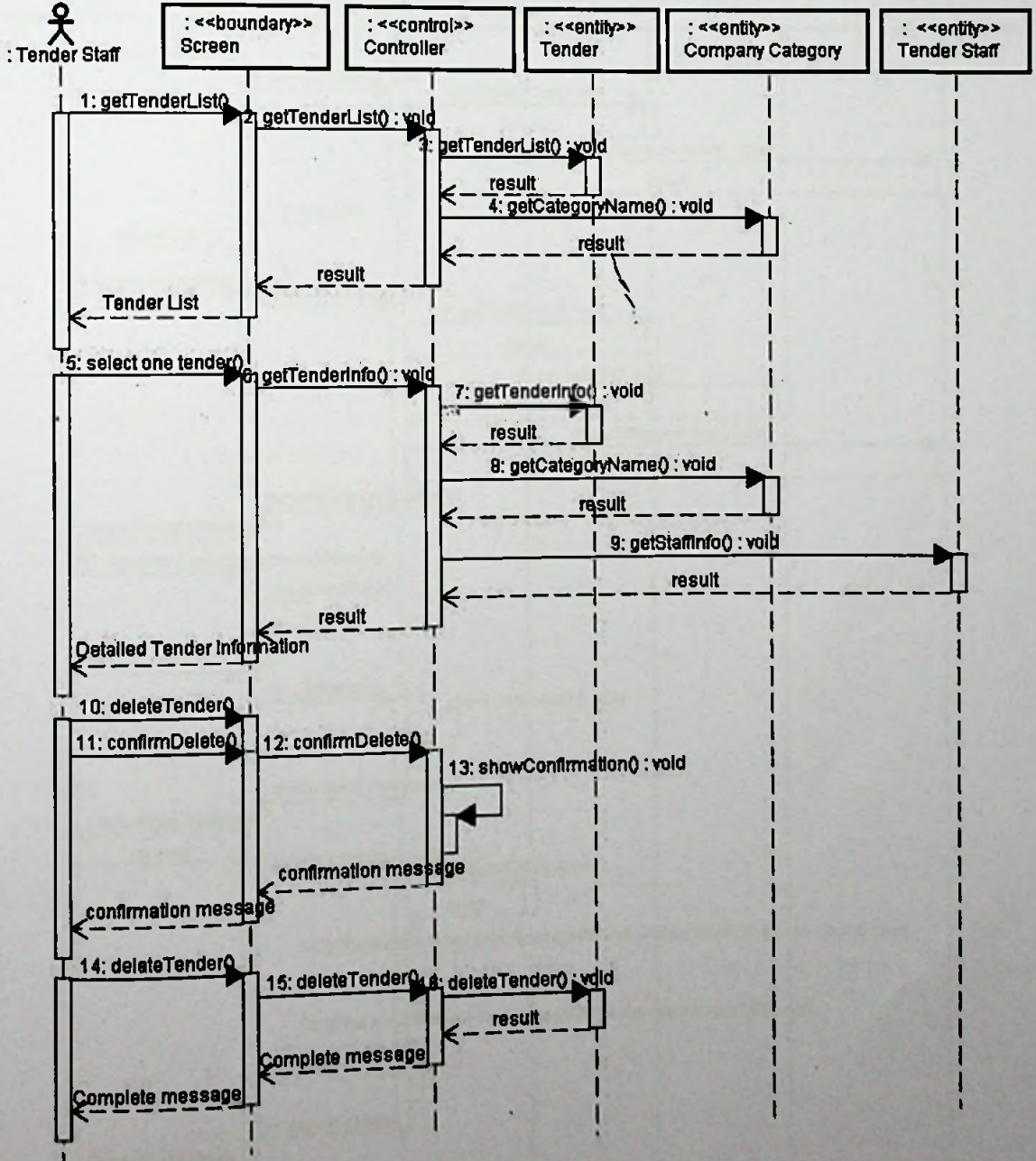
sd Update Tender Information

User has been already authenticated and tender has been already registered



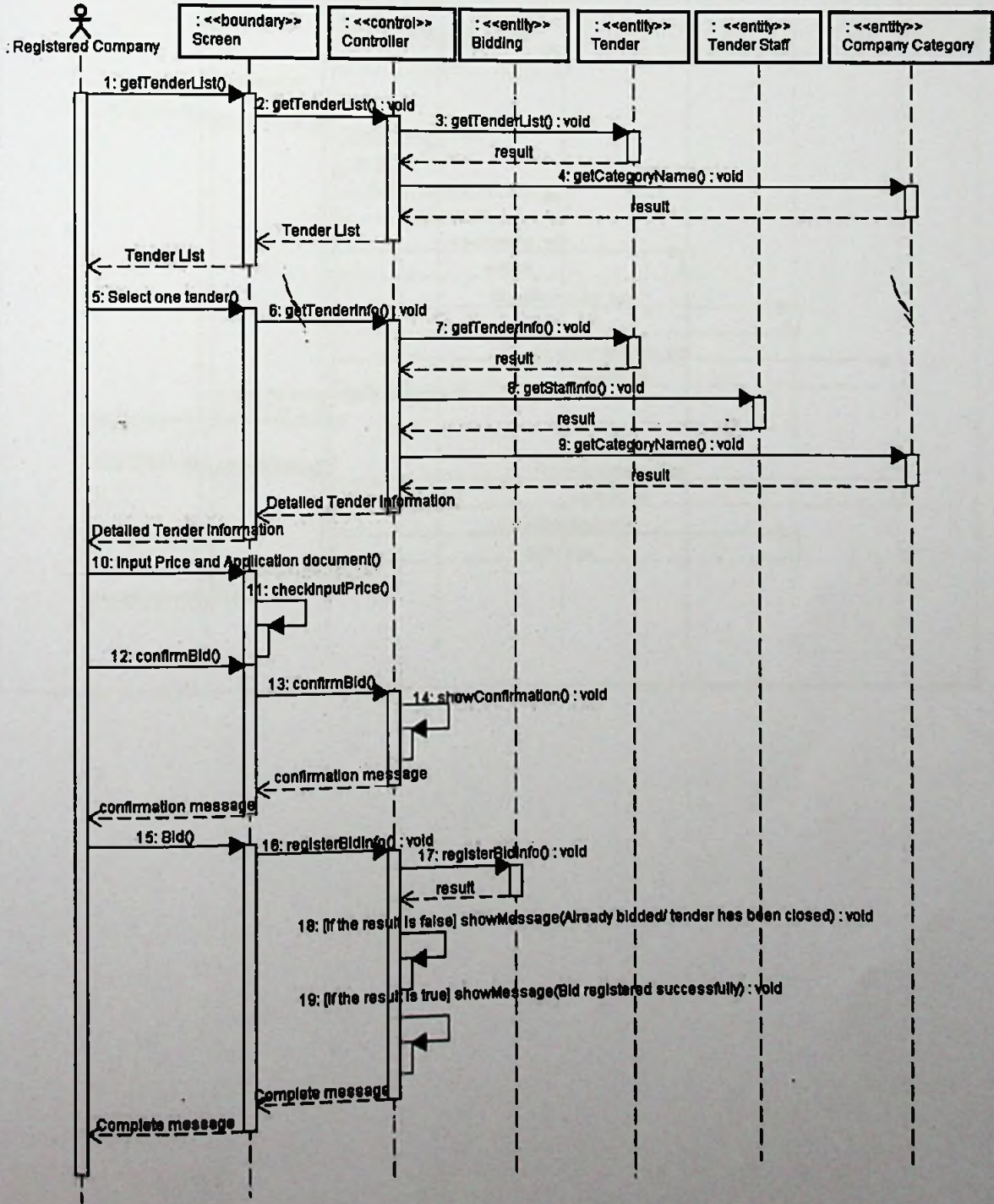
sd Delete Tender Information

User has been already authenticated and tender has been already registered



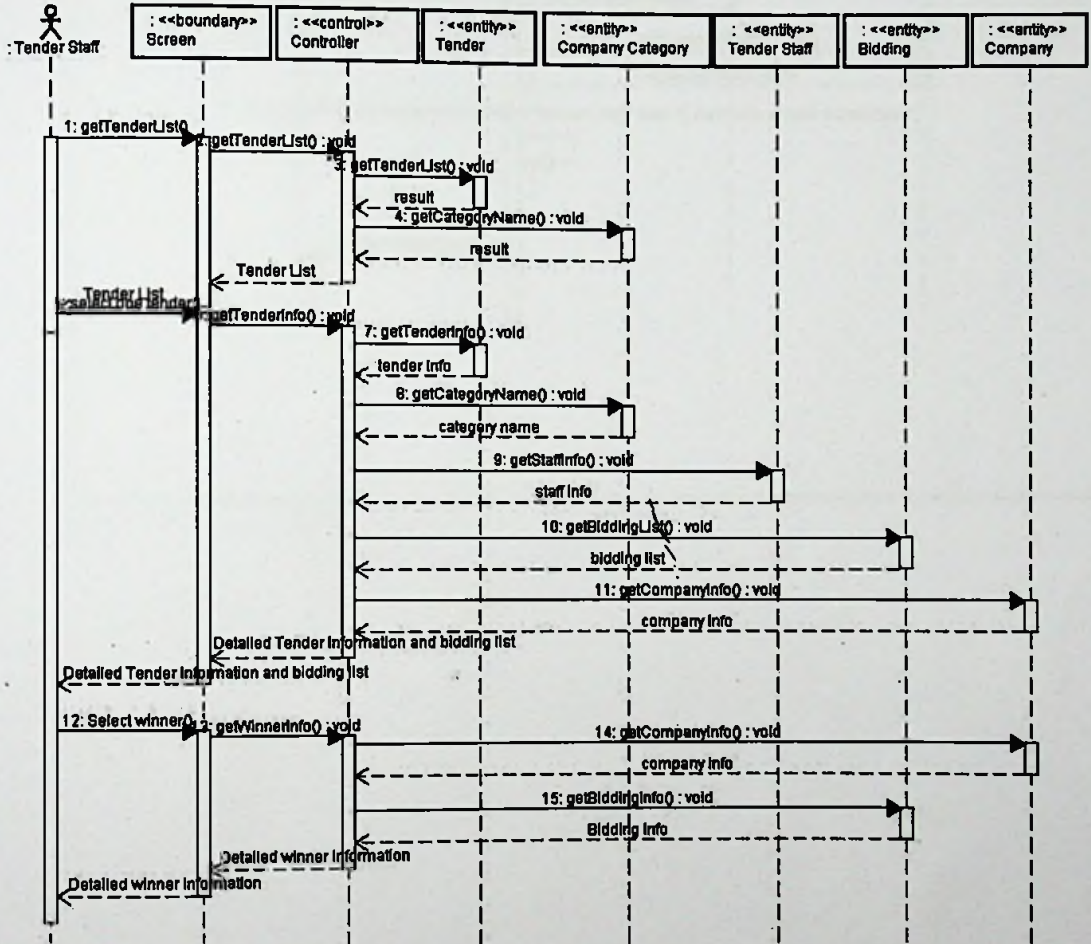
sd Bid

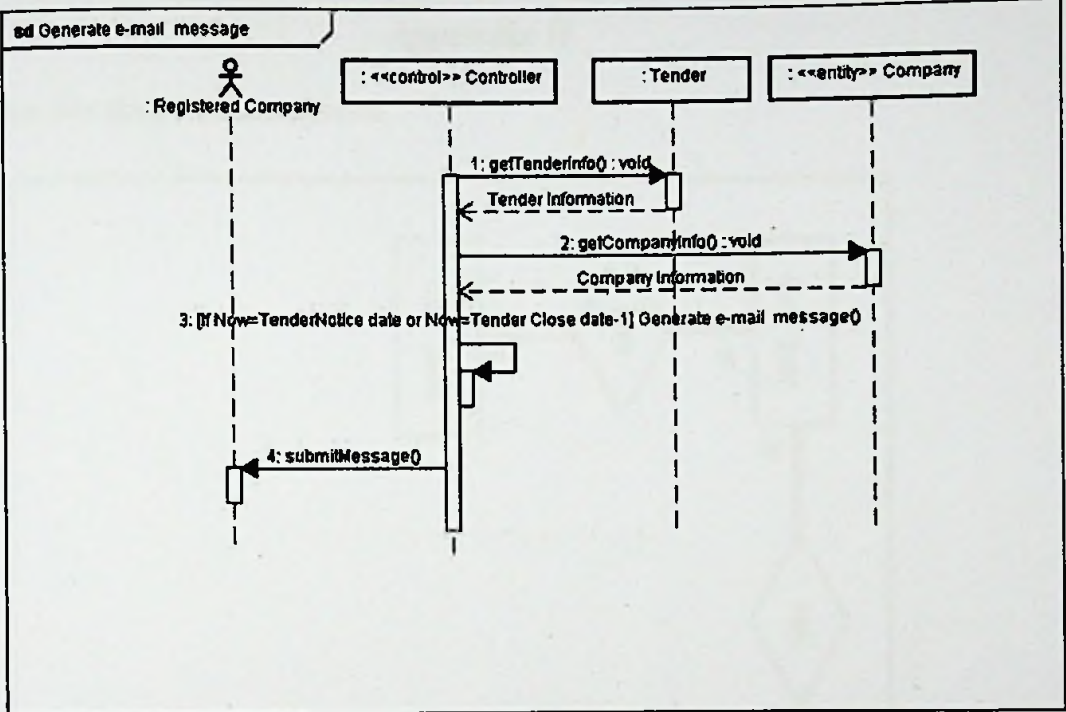
User has already been authenticated



sd Browse Tender Information

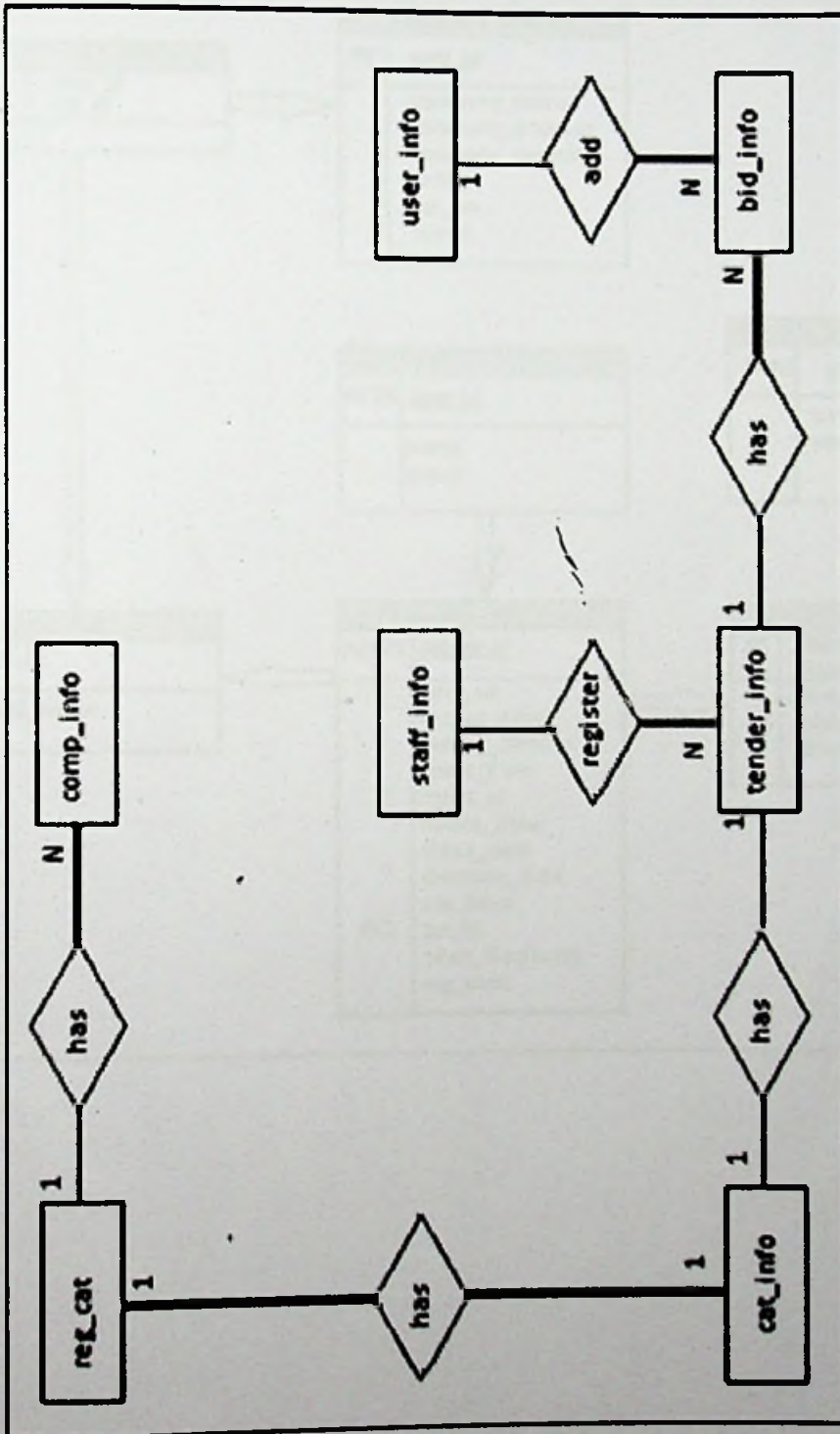
Tender has been already registered





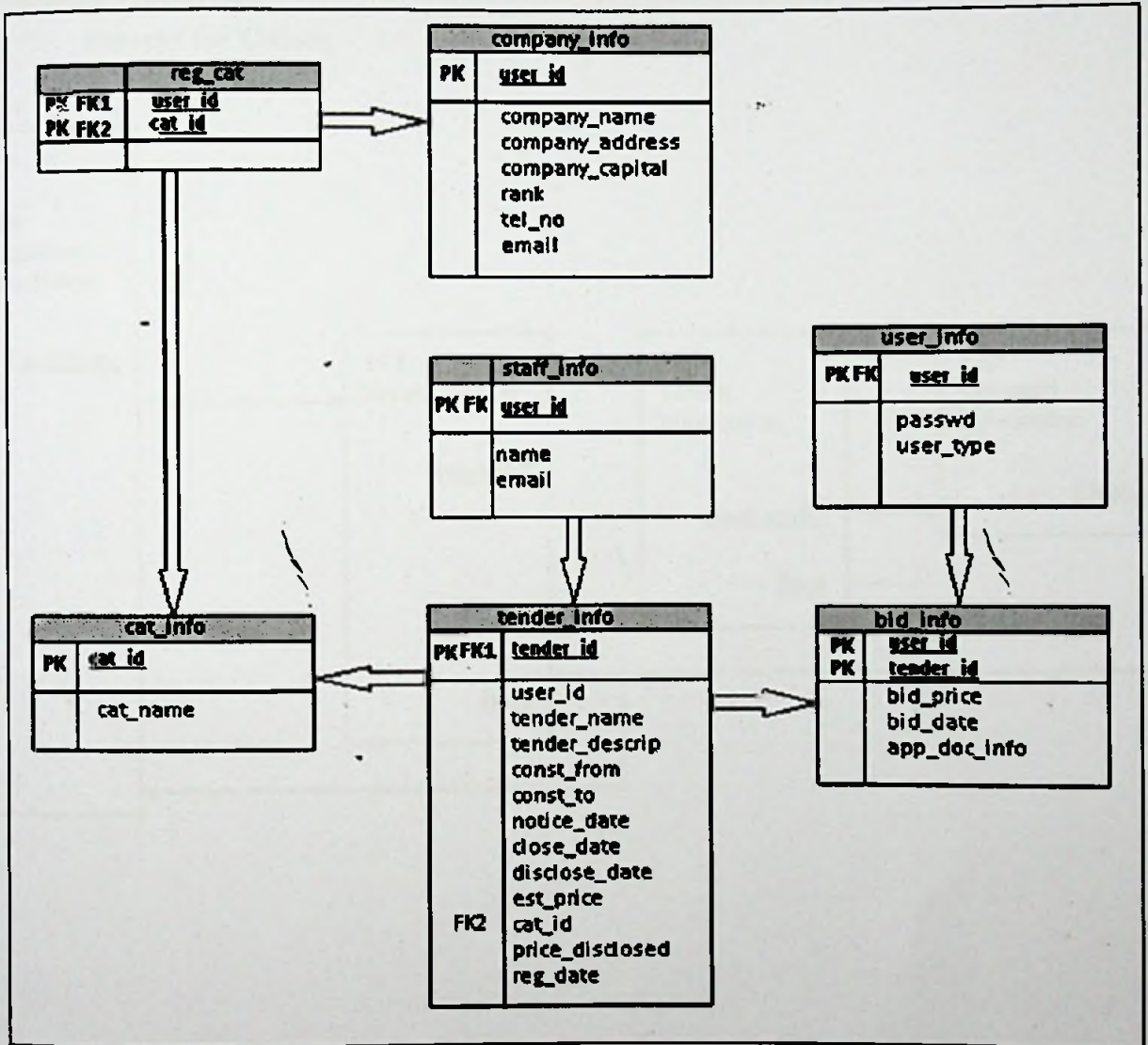
## Appendix H

### ER Diagram for the proposed system



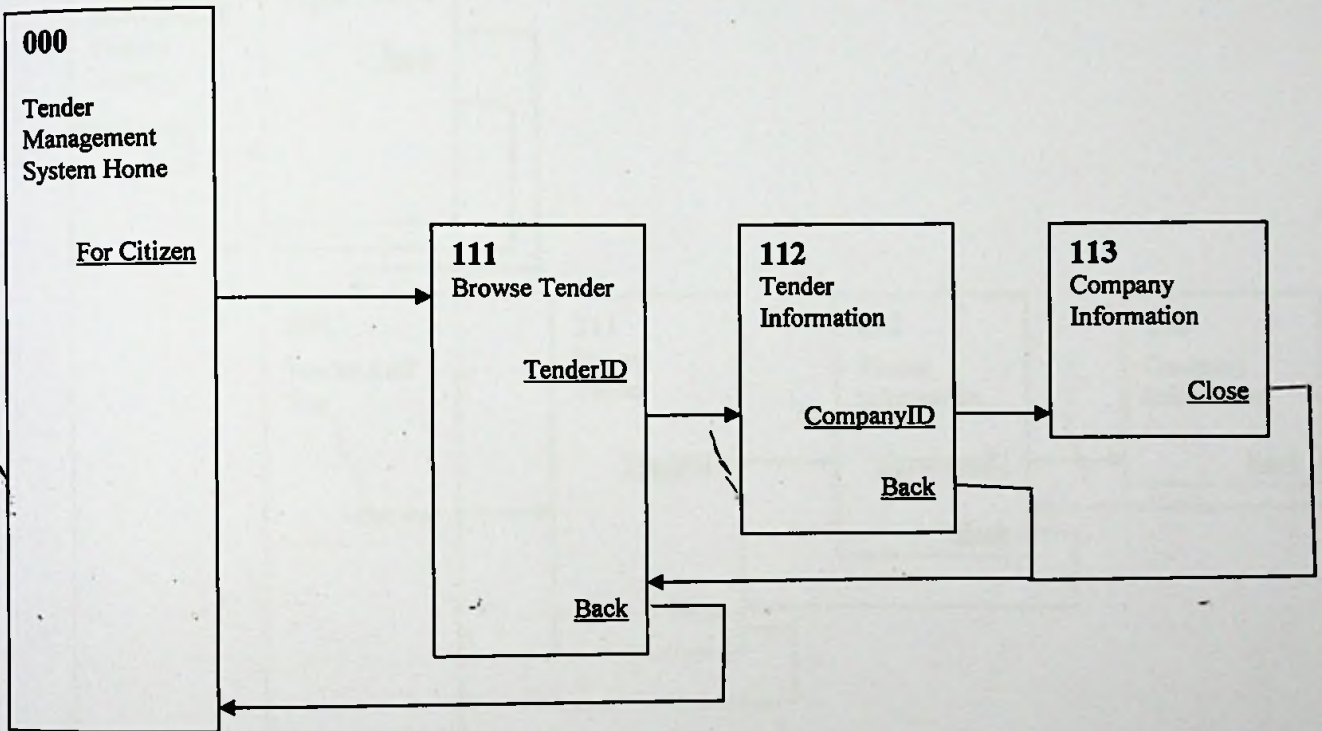
## Appendix I

### Relationship Diagram



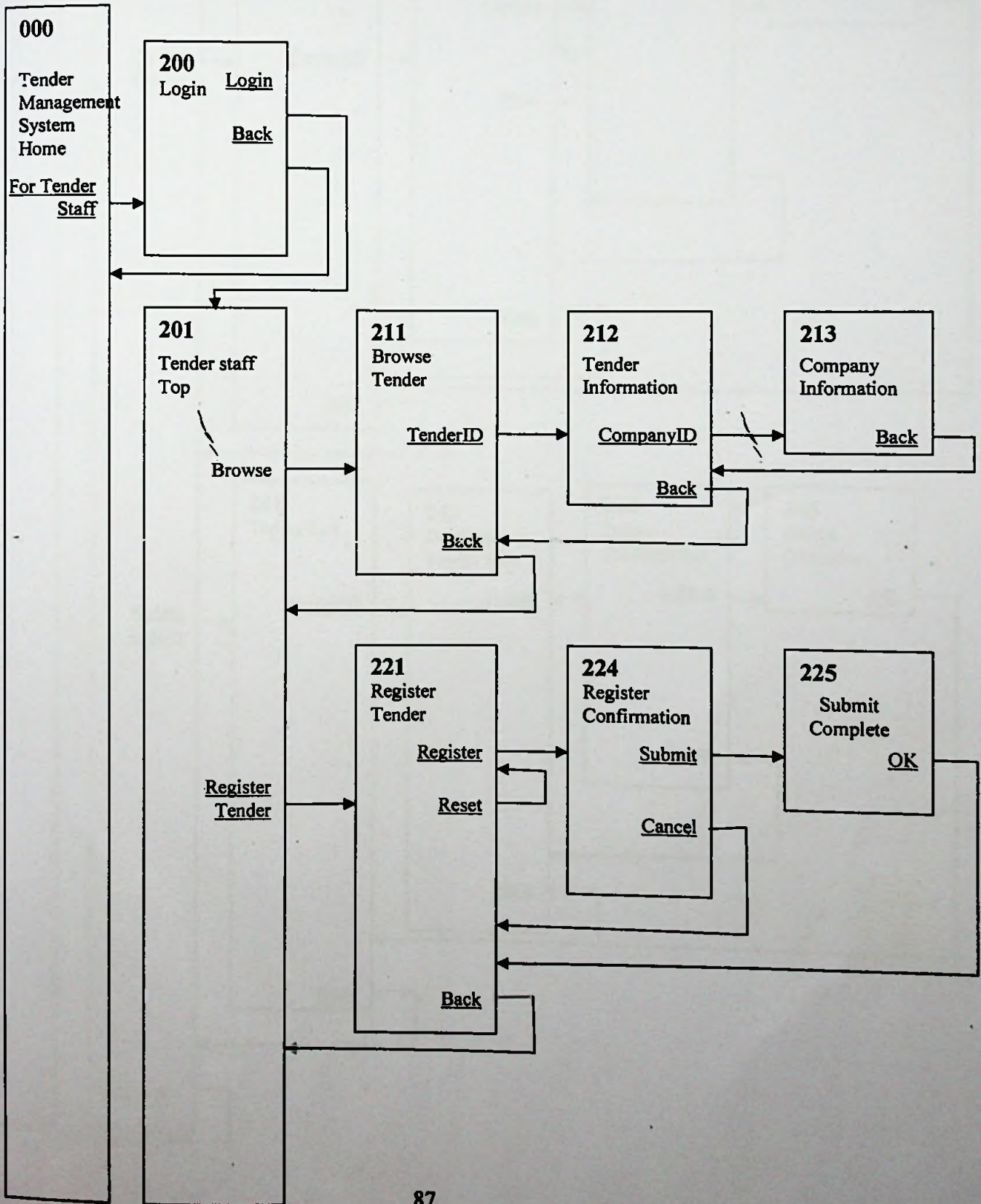
## Appendix J

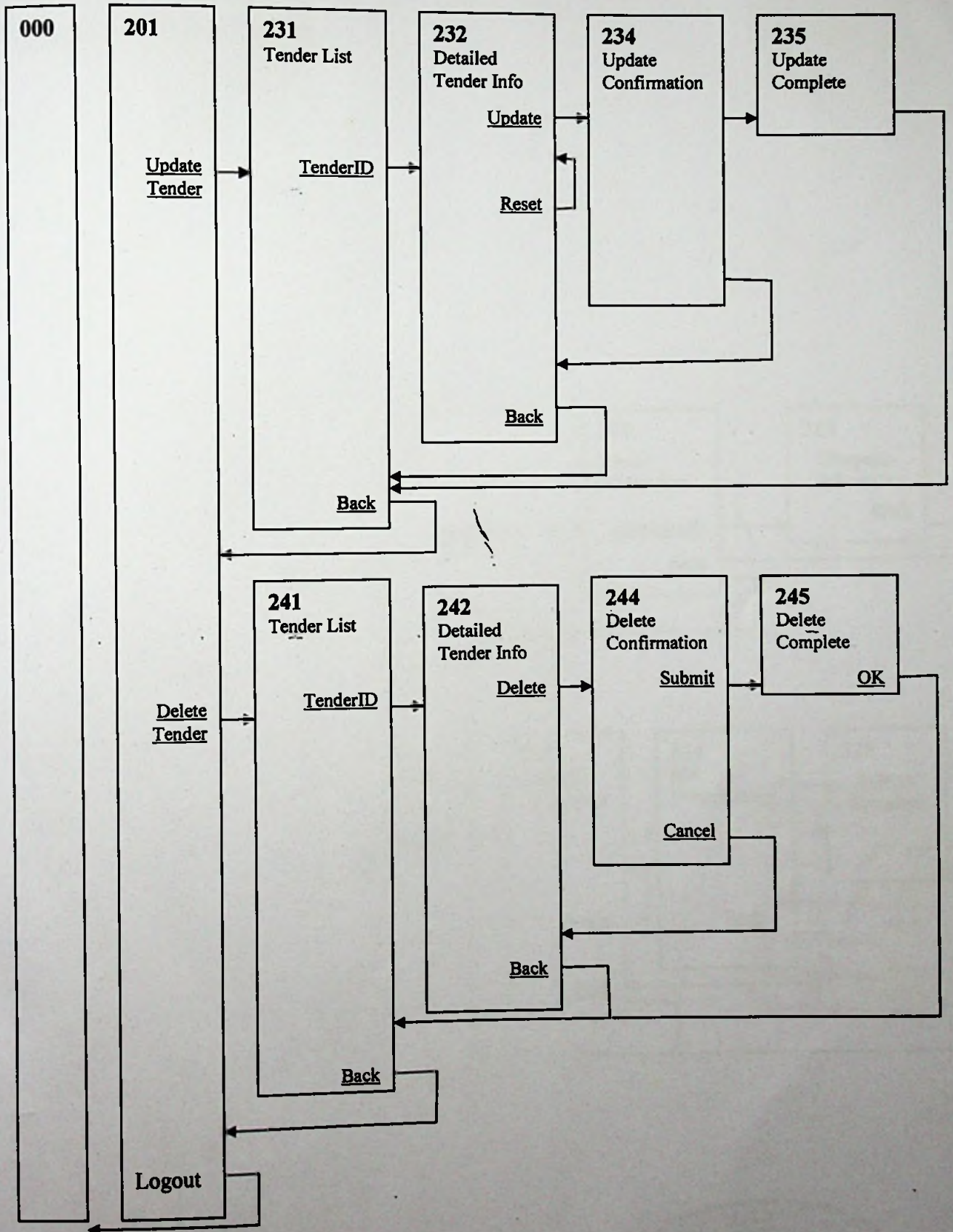
### Web page Transitions Screens for Citizen





## Screens for Tender Staff





# Screens for Registered Company

