



# **Software Design and Architecture**

**DEPARTMENT OF SOFTWARE ENGINEERING (SE)**

**SECTION: BS(SE)-Q**

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# **Final Report**

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## 1. Project Scope

Our Website is a Residence Complaint Portal which is named as **Resident Rave**, this website will allow the complainant to do the following activities:

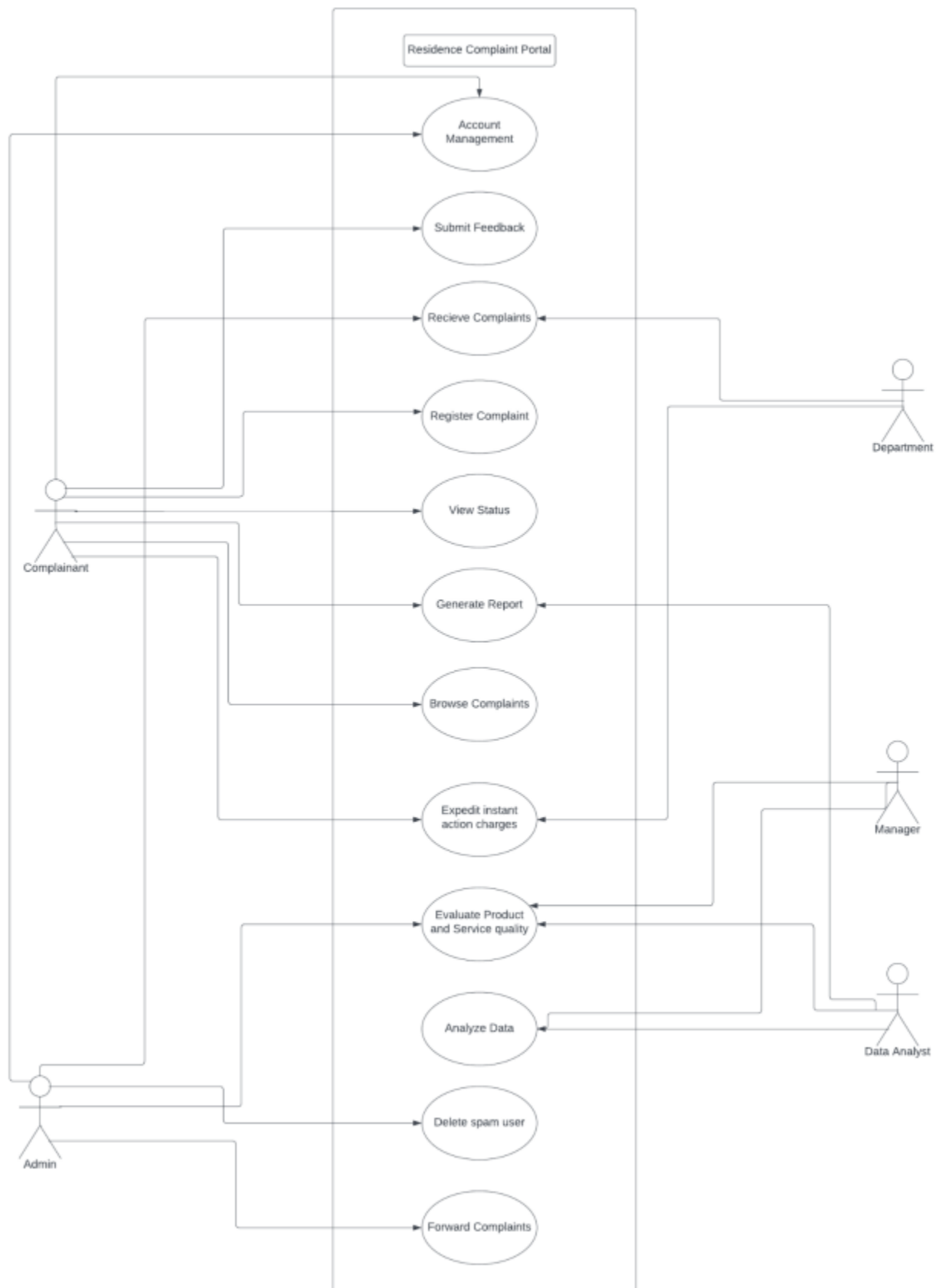
1. The website will file a complaint against the complainant regarding his local residence.
2. The website will allow the admin to forward the complaint to the local departments (e.g., landline, utility, etc.).
3. The website will allow the user to add pictures, if necessary, with the complaint.
4. The user will submit his complaint once he has written it.
5. The admin portal will see the complaints of the complainants.
6. Admin will forward the complaint to the concerned department.
7. Once the admin will send the problem to the local departments, the Department will resolve the issue.
8. The complainant will be able to see the progress(status) of the complaint.

## 2. Actor Goal List

Actors	Goals
<b>System Administrator</b>	<ol style="list-style-type: none"><li>1. Handle Complaints.</li><li>2. Send Complaints to relevant departments.</li><li>3. Check authenticity of complaints.</li><li>4. Check Feedbacks.</li><li>5. Add users.</li><li>6. Delete users.</li><li>7. Modify users.</li></ol>
<b>Complainant</b>	<ol style="list-style-type: none"><li>1. Register Complaints.</li><li>2. Views the status of the complaint.</li><li>3. Create Account</li><li>4. Manage Account</li></ol>
<b>Departments</b>	<ol style="list-style-type: none"><li>1. Receive the complaints from the admin.</li><li>2. Work on the complaints to fulfill them.</li><li>3. Charges some amount for Instant Action on the Complaint.</li></ol>
<b>Data Analyst/Business Analyst</b>	<ol style="list-style-type: none"><li>1. Get current trends of the problems people are facing and make recommendations for improvements.</li><li>2. Analyze where people are facing more problems and inform the manager about it.</li></ol>
<b>Managers</b>	<p>Provide guidance and direction to administrators and customer service representatives.</p> <p>Oversee the Complaint portal and take necessary measures to improve the complaint portal.</p>

### 3. Use Cases Diagram

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## 4. High Level Use Case

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### UC-1:

Use Case:	Account Management
Actors:	Admin, Complainant
Type:	Primary
Description:	An <b>Admin</b> can add, delete, modify <b>Complainant</b> Accounts. <b>Complainants</b> can modify their own Accounts.

### UC-2:

Use Case:	Register Complaint
Actors:	Complainant
Type:	Primary
Description:	When a <b>Complainant</b> wants to file a complaint, he/she enters their credentials, a brief description of the problem, Add picture of the problem(optional) and sends it.

### UC-3:

Use Case:	Forward Complaints
Actors:	Admin,Department
Type:	Primary
Description:	<b>Admin</b> forwards the registered complaints after reading its description to the concerned <b>Department</b> .

### UC-4:

Use Case:	View Complaint Status
Actors:	Complainant, Admin
Type:	Primary
Description:	The <b>Complainant</b> and <b>Admin</b> can view the Updated Status of the Complaint. The Status are “Complaint received by Admin” , “Complaint forwarded to concerned department”, “Complaint Resolved”.



**UC-5:**

<b>Use Case:</b>	<b>Submit Feedback</b>
<b>Actors:</b>	<b>Complainant,Data Analyst</b>
<b>Type:</b>	<b>Secondary, Primary</b>
<b>Description:</b>	A <b>complainant</b> can submit the feedback in the portal, which will be received by a <b>Data Analyst</b> .

**UC-6:**

<b>Use Case:</b>	<b>Generate Report</b>
<b>Actors:</b>	<b>Complainant, Data Analyst</b>
<b>Type:</b>	<b>Primary, Primary, Secondary, Secondary.</b>
<b>Description:</b>	A report can be generated by the <b>Complainant</b> and the <b>Data Analyst</b> in order to check and save the record.

**UC-7:**

<b>Use Case:</b>	<b>Browse Complaints</b>
<b>Actors:</b>	<b>Admin,Complainant</b>
<b>Type:</b>	<b>Primary</b>
<b>Description:</b>	<b>Admin</b> can browse Complaints with accordance to specific Complainant, Complaint type, solved Complaint, Complaint under process etc. <b>Complainants</b> can browse complaints with respect to previously registered complaints.

**UC-8:**

<b>Use Case:</b>	<b>Delete Spam User</b>
<b>Actors:</b>	<b>Admin</b>
<b>Type:</b>	<b>Primary</b>
<b>Description:</b>	<b>Admin</b> deletes the spam User Account from the system, whose complaints are unsolicited.

**UC-9:**

<b>Use Case:</b>	<b>Analyze Data</b>
<b>Actors:</b>	<b>Data Analyst</b>
<b>Type:</b>	<b>Secondary</b>
<b>Description:</b>	<b>Data Analyst</b> responsible for analyzing the data collected through the complaint portal, identifying trends, and making recommendations to the <b>Manager</b> for improvements.

**UC-10:**

<b>Use Case:</b>	<b>Expedite (Instant Action Charges)</b>
<b>Actors:</b>	<b>Admin, Complainant, Department</b>
<b>Type:</b>	<b>Primary, Primary, Secondary</b>
<b>Description:</b>	A <b>Complainant</b> wants to expedite actions on the problem he is facing, the Complainant pays a small fee, which will be received at the <b>Admin</b> end.

**UC-11:**

<b>Use Case:</b>	<b>Evaluate product and service quality.</b>
<b>Actors:</b>	<b>Data Analyst</b>
<b>Type:</b>	<b>Secondary</b>
<b>Description:</b>	<b>Data Analyst</b> monitors the complainant's satisfaction over time by analyzing complaint data, feedback surveys etc.

## 5. Expanded Use Case

### UC-1: Register Complaint

Section	Content												
Use Case Name	Register Complaint												
Scope	Resident Complaint Portal												
Level	User Goal												
Primary Actor	Complainant												
Stakeholders and interests	<ul style="list-style-type: none"><li>- <b>Complainant</b>: Wants fast entry, easy-to-use portal, and no payment errors, as if he wants expedited actions, he can send the amount told.</li><li>- <b>Admin</b>: Wants his section of complaints updated as the complainant sends his complaint, and receives the payable amount if the complainant wants to expedite actions.</li></ul>												
Pre-Condition	The complainant will write his credentials for authentication and then register his complaint.												
Post-Condition	The complaint will be sent to the admin and the complaint will be added to his browser history.												
Main Success Scenario	<table><tr><th>Actor Action</th><th>System Response</th></tr><tr><td>1. The complainant will open the portal and enter his credentials, (e.g his CNIC and password).</td><td></td></tr><tr><td></td><td>2. The system will allow the complainant to log in if the correct credentials are entered.</td></tr><tr><td>3. The complainant will then go to the Register complaint site.</td><td></td></tr><tr><td>4. The complainant will then select the type of complaint.</td><td></td></tr><tr><td>5. He will then enter the problem he is facing.</td><td></td></tr></table>	Actor Action	System Response	1. The complainant will open the portal and enter his credentials, (e.g his CNIC and password).			2. The system will allow the complainant to log in if the correct credentials are entered.	3. The complainant will then go to the Register complaint site.		4. The complainant will then select the type of complaint.		5. He will then enter the problem he is facing.	
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	6. The complainant will then register the complaint.	
		7. The system will then forward the complaint to the admin.
		8. The system will then notify the complainant about his complaint when it is forwarded.
<b>Alternative Flows / Extensions</b>	a. If the system fails to log in a complainant. <ol style="list-style-type: none"> <li>1. He can print the complaint form which will be present on the login page and fill and submit it manually.</li> <li>2. The telephone number will be provided and he can call the Complaint site directly.</li> </ol> b. If the complainant loses all his data whilst he was <ol style="list-style-type: none"> <li>1. There will be a save option, which will save his complaint in a draft box.</li> </ol>	

## UC-2:Forward Complaint

Section	Content
<b>Use Case Name</b>	Forward Complaints.
<b>Scope</b>	Resident Complaint Portal.
<b>Level</b>	User Goal.
<b>Primary Actor</b>	Admin
<b>Stakeholders and interests</b>	- <b>Admin:</b> Wants the complaints to be forwarded to their respective departments on which the complaint is based. - <b>Department:</b> Wants the complaint of their type to be received from the admin and not of any other department.
<b>Pre-Condition</b>	The admin will check the complaints which he received and then forward them to their respective departments.
<b>Post-Condition</b>	The complaint will be forwarded to the respective departments and will be removed from the complaints section of the admin.

Main Scenario	Actor Action	System Response
	1. The admin will log in to his system.	
		2. The system will allow the admin to log in if the correct credentials are entered.
	3. The admin will revise the complaints.	
	4. The admin will then check the type of complaints.	
	5. The admin will then select the department to which the complaint will be sent.	
	6. The admin will then send the complaint to the respective department.	
		7. The system will update the complaint and remove the complaint which is sent.
		8. The complainant will be notified when his complaint is forwarded.
Alternative Scenario	a. If the system fails to send the complaint to the respective department. <ol style="list-style-type: none"> <li>1. The complaint will be stored in a checked section from which it will be sent after the issue is resolved.</li> <li>2. A hard copy of that complaint is printed which will be submitted to the respective department via email or physically.</li> </ol>	

### UC-3:Delete a user

Section	Content														
Use Case Name	Delete a user.														
Scope	Resident Complaint Portal														
Level	User Goal														
Primary Actor	Admin														
Stakeholders and interests	<ul style="list-style-type: none"><li>- <b>Admin:</b> Wants to delete a user for various reasons such as spamming complaints, inappropriate language, etc.</li><li>- <b>Complainant:</b> The admin will delete the complainant and the complainant will lose his account and will not be logged in.</li></ul>														
Pre-Condition	The admin will search for the complainant and will then delete his account.														
Post-Condition	The account of the complainant will be deleted and he will not be able to log in back to his account.														
Main Success Scenario	<table><tr><th>Actor Action</th><th>System Response</th></tr><tr><td>1. The admin will log in to the system.</td><td></td></tr><tr><td></td><td>2. The system will allow the admin to log in if the correct credentials are entered.</td></tr><tr><td>3. The admin will then check for the complainant which to delete for a reason.</td><td></td></tr><tr><td>4. The admin will then delete the complainant by selecting the delete option.</td><td></td></tr><tr><td></td><td>5. The system will then remove his account from the list.</td></tr><tr><td></td><td>6. The system will then not allow the complainant to log in to his account which was deleted.</td></tr></table>	Actor Action	System Response	1. The admin will log in to the system.			2. The system will allow the admin to log in if the correct credentials are entered.	3. The admin will then check for the complainant which to delete for a reason.		4. The admin will then delete the complainant by selecting the delete option.			5. The system will then remove his account from the list.		6. The system will then not allow the complainant to log in to his account which was deleted.
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	6. The system will then not allow the complainant to log in to his account which was deleted.														

<b>Alternative Flows / Extensions</b>	<ol style="list-style-type: none"> <li>a. If the system fails to delete an account. <ol style="list-style-type: none"> <li>1. The admin will change his account details without him knowing to NULL, when the issue is resolved he will delete the account.</li> <li>2. The admin will save his account in the checked list and will delete it later once the issue is resolved.</li> </ol> </li> </ol>

#### UC-4: Submit Feedback.

Section	Content						
<b>Use Case Name</b>	Submit Feedback						
<b>Scope</b>	Resident Complaint Portal						
<b>Level</b>	User Goal						
<b>Primary Actor</b>	Complainant, Data Analyst						
<b>Stakeholders, and interests</b>	<p>- <b>Complainant:</b> Interest is in having a safe, comfortable, and pleasant living environment. They want their feedback to be heard and addressed in a timely manner.</p> <p>- <b>Data Analyst:</b> Use the resident complaint portal's data to identify common themes and trends in resident feedback.</p>						
<b>Pre-Condition</b>	<ul style="list-style-type: none"> <li>• The resident has access to the resident complaint portal</li> <li>• The resident is logged in to their account on the portal</li> </ul>						
<b>Post-Condition</b>	<ul style="list-style-type: none"> <li>• The feedback has been submitted successfully</li> <li>• The feedback is assigned to the appropriate staff member or department for review and action</li> <li>• The resident receives a confirmation message that their feedback has been submitted</li> </ul>						
<b>Main Success Scenario</b>	<table> <tr> <th>Actor Action</th><th>System Response</th></tr> <tr> <td>1. The resident navigates to the Submit Feedback page within the resident complaint portal.</td><td></td></tr> <tr> <td></td><td>2. The system will show him the Submit Feedback page</td></tr> </table>	Actor Action	System Response	1. The resident navigates to the Submit Feedback page within the resident complaint portal.			2. The system will show him the Submit Feedback page
Actor Action	System Response						
1. The resident navigates to the Submit Feedback page within the resident complaint portal.							
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	3. The resident selects the category that best matches their feedback (e.g. Maintenance, Noise Complaint, Safety, etc.).	
	4. The resident fills out the feedback form, including any relevant details such as the location of the issue, date and time of occurrence, and any supporting evidence.	
	5. The resident reviews their submission and confirms that the information is accurate and complete.	
	6. The resident submits the feedback by clicking on the "Submit" button.	
		7. The system sends a confirmation message to the resident that their feedback has been received and will be reviewed by the appropriate staff member or department.
<b>Alternative Flows / Extensions</b>	<p>1a. If the resident encounters any issues while submitting their feedback, such as a technical error, they can <i>contact the support team for assistance</i>. The support team helps to troubleshoot the issue and ensures that the feedback is submitted successfully.</p> <p>2a. If the resident is <i>unsure about which category to select</i> for their feedback, they can select the "Other" category and provide more details in the description field. The staff member or department responsible for reviewing the feedback will categorize it appropriately during the review process.</p>	



## UC-5:Analyze Data

Section	Content												
Use Case Name	Analyze Data												
Scope	Resident Complaint Portal												
Level	User Goal												
Primary Actor	Data Analyst												
Stakeholders and interests	- <b>Data Analyst:</b> Use the resident complaint portal's data to identify common themes and trends in resident feedback and Generate a Report on it.												
Pre-Condition	<ul style="list-style-type: none"> <li>The data analyst has access to the resident complaint portal's database and analytics tools.</li> <li>The data analyst has been trained in the use of analytics tools.</li> </ul>												
Post-Condition	<ul style="list-style-type: none"> <li>The data analyst has identified key trends and insights from the data analysis.</li> <li>The data analyst has communicated the findings to relevant stakeholders.</li> <li>The data analyst has created a report on his insights and sent this report to the manager for him to take necessary measures.</li> </ul>												
Main Success Scenario	<table> <tr> <th>Actor Action</th><th>System Response</th></tr> <tr> <td>1. The data analyst logs into the resident complaint portal's analytics dashboard.</td><td></td></tr> <tr> <td>2. The data analyst selects the appropriate data filters and parameters for the analysis.</td><td></td></tr> <tr> <td></td><td>3. The analytics tool generates a report based on the selected parameters.</td></tr> <tr> <td>4. The data analyst reviews the report and identifies any key trends or insights.</td><td></td></tr> <tr> <td>5. The data analyst creates visualizations, charts, or graphs</td><td></td></tr> </table>	Actor Action	System Response	1. The data analyst logs into the resident complaint portal's analytics dashboard.		2. The data analyst selects the appropriate data filters and parameters for the analysis.			3. The analytics tool generates a report based on the selected parameters.	4. The data analyst reviews the report and identifies any key trends or insights.		5. The data analyst creates visualizations, charts, or graphs	
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	to communicate the findings to relevant stakeholders.	
	6. The data analyst prepares a summary report and communicates the findings to management and other stakeholders.	
	7. Based on the findings, management may identify areas for improvement, make decisions on process changes, or take action to address specific issues identified by the data analysis.	
<b>Alternative Flows / Extensions</b>	<p>1a. The data analyst encounters technical issues or errors with the analytics tool. They may need to troubleshoot or contact technical support to resolve the issue.</p> <p>2a. The data analyst encounters data quality issues that may impact the accuracy or completeness of the analysis. They may need to work with the relevant stakeholders to resolve the data quality issues before proceeding with the analysis.</p>	

#### UC-6: View Complaint Status

Section	Content
<b>Use Case Name</b>	View Complaint Status
<b>Scope</b>	Resident Complaint Portal
<b>Level</b>	User Goal
<b>Primary Actor</b>	Complainant
<b>Stakeholders and interests</b>	<p>- <b>Complainant</b>: Know the status of their complaints and any updates related to them.</p> <p>- <b>Admin</b>: View and manage the complaints assigned to them.</p>
<b>Pre-Condition</b>	<ul style="list-style-type: none"> <li>The user has logged in to the resident complaint portal using their credentials.</li> </ul>

	<ul style="list-style-type: none"> <li>• The user has submitted a complaint or has been assigned a complaint as an administrator.</li> <li>• The complaint has been registered in the system and assigned a unique ID.</li> </ul>												
<b>Post-Condition</b>	<ul style="list-style-type: none"> <li>• The user can view the status of their complaint.</li> <li>• The user can take appropriate action based on the status of the complaint.</li> </ul>												
<b>Main Success Scenario</b>	<table> <tr> <th>Actor Action</th><th>System Response</th></tr> <tr> <td>1. The admin logs in to the resident complaint portal using their credentials.</td><td></td></tr> <tr> <td>2. The admin navigates to the "Manage Complaints" section of the portal.</td><td></td></tr> <tr> <td>3. The admin selects the complaint they wish to view.</td><td></td></tr> <tr> <td></td><td>4. The portal displays the current status of the complaint, along with any relevant notes or comments from the complainant or other staff members who have worked on the complaint.</td></tr> <tr> <td>5. The admin can take appropriate action based on the status of the complaint, such as assigning the complaint to another staff member, adding notes or updates, or closing the complaint if it has been resolved.</td><td></td></tr> </table>	Actor Action	System Response	1. The admin logs in to the resident complaint portal using their credentials.		2. The admin navigates to the "Manage Complaints" section of the portal.		3. The admin selects the complaint they wish to view.			4. The portal displays the current status of the complaint, along with any relevant notes or comments from the complainant or other staff members who have worked on the complaint.	5. The admin can take appropriate action based on the status of the complaint, such as assigning the complaint to another staff member, adding notes or updates, or closing the complaint if it has been resolved.	
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	<p><b>Complainant:</b></p> <table border="1"> <thead> <tr> <th data-bbox="444 189 922 260">Actor Action</th><th data-bbox="922 189 1489 260">System Response</th></tr> </thead> <tbody> <tr> <td data-bbox="444 260 922 449">1. The complainant logs in to the resident complaint portal using their credentials.</td><td data-bbox="922 260 1489 449"></td></tr> <tr> <td data-bbox="444 449 922 638">2. The complainant navigates to the "View Complaints" section of the portal.</td><td data-bbox="922 449 1489 638"></td></tr> <tr> <td data-bbox="444 638 922 785">3. The complainant selects the complaint they wish to view.</td><td data-bbox="922 638 1489 785"></td></tr> <tr> <td data-bbox="444 785 922 1016"></td><td data-bbox="922 785 1489 1016">4. The portal displays the current status of the complaint, along with any relevant notes or comments from the management team.</td></tr> <tr> <td data-bbox="444 1016 922 1400">5. The complainant can take appropriate action based on the status of the complaint, such as adding additional details, requesting updates, or closing the complaint if it has been resolved to their satisfaction.</td><td data-bbox="922 1016 1489 1400"></td></tr> </tbody> </table>	Actor Action	System Response	1. The complainant logs in to the resident complaint portal using their credentials.		2. The complainant navigates to the "View Complaints" section of the portal.		3. The complainant selects the complaint they wish to view.			4. The portal displays the current status of the complaint, along with any relevant notes or comments from the management team.	5. The complainant can take appropriate action based on the status of the complaint, such as adding additional details, requesting updates, or closing the complaint if it has been resolved to their satisfaction.	
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<p><b>Alternative Flows / Extensions</b></p>	<ol style="list-style-type: none"> <li>1. The user encounters technical issues or errors with the portal. They may need to troubleshoot or contact technical support to resolve the issue.</li> <li>2. The user's complaint has not yet been registered in the system or has been registered incorrectly. They may need to contact the relevant staff member to have the complaint registered or corrected in the system.</li> </ol>												

## UC-7: Browse Complaint

Section	Content												
Use Case Name	Browse Complaint												
Scope	Resident Complaint Portal												
Level	User Goal												
Primary Actor	Complainant, Admin												
Stakeholders and interests	<p>- <b>Complainant:</b> Wants to track the status of the filed complaint, view resolution of the complaint and if necessary escalate the complaint if necessary.</p> <p>- <b>Admin:</b> Want to easily access all the complaints filed by a certain customer, complaints of a certain type and complaints in a certain time limit e.g “complaints filed during last month”.</p>												
Pre-Condition	<ul style="list-style-type: none"> <li>• User has access to the complaint portal.</li> <li>• The user has logged in to the resident complaint portal using their credentials.</li> <li>• The user has already filed a complaint in the portal.</li> </ul>												
Post-Condition	The user is able to browse their complaint and view any related updates or responses.												
Main Success Scenario	<p>For Complainant:</p> <table border="1"> <thead> <tr> <th>Actor Action</th><th>System Response</th></tr> </thead> <tbody> <tr> <td>1. The complainant will open the portal and enter his credentials, (e.g his CNIC and password).</td><td></td></tr> <tr> <td></td><td>2. The system will verify the credentials and allow the Complainant to log in.</td></tr> <tr> <td>3. The complainant will then go to the browse site.</td><td></td></tr> <tr> <td>4. The complainant will search the complaint by id.</td><td></td></tr> <tr> <td></td><td>5. System will fetch the</td></tr> </tbody> </table>	Actor Action	System Response	1. The complainant will open the portal and enter his credentials, (e.g his CNIC and password).			2. The system will verify the credentials and allow the Complainant to log in.	3. The complainant will then go to the browse site.		4. The complainant will search the complaint by id.			5. System will fetch the
Actor Action	System Response												
1. The complainant will open the portal and enter his credentials, (e.g his CNIC and password).													
	2. The system will verify the credentials and allow the Complainant to log in.												
3. The complainant will then go to the browse site.													
4. The complainant will search the complaint by id.													
	5. System will fetch the												

		registered complaint on the id entered by the complainant.
	6. The complainant will click on the fetched Complaint.	
		7. System will Display the complaint.
	8. Complainant will view the complaint.	
	For Admin:	
	<b>Actor Action</b>	<b>System Response</b>
	1. The Admin will open the portal and enter his credentials, (e.g his CNIC and password).	
		2. The system will verify the credentials and allow the Admin to log in.
	3. The Admin will then go to the browse site.	
	4. The Admin will enter the id of the complaint	
		5. The system will fetch the complaints according to the id required by the Admin.
	6. The Admin will click on a complaint from the list of complaints fetched by the system.	
		7. The system will Display the complaint
	8. Admin will view the complaint.	

<b>Alternative Flows / Extensions</b>	<p>a. If the system fails to log in a complainant.</p> <ol style="list-style-type: none"> <li>1. The telephone number will be provided and he can call the Complaint site directly.</li> </ol> <p>b. The user searches the complaint(Date) which was never registered or was previously deleted by the admin.</p> <ol style="list-style-type: none"> <li>1. My complaint section will remain Empty.</li> <li>2. The user will receive an error message of invalid search.</li> </ol>
---------------------------------------	--

#### UC-8: Generate Report.

Section	Content								
<b>Use Case Name</b>	Generate Report								
<b>Scope</b>	Resident Complaint Portal								
<b>Level</b>	User Goal								
<b>Primary Actor</b>	Complainant								
<b>Stakeholders and interests</b>	<p>- <b>Complainant:</b> Wants a documented version of the browsed complaint for his/her record, to store the document as a piece of evidence or wants a printout form of it to escalate the complaint.</p> <p>- <b>Data Analyst:</b> Wants to generate a formatted report to forward to the Managers, to store the document as a record.</p>								
<b>Pre-Condition</b>	<ul style="list-style-type: none"> <li>• The Complainant is logged in to their account on the Complaint Portal.</li> <li>• The Complainant has submitted at least one complaint on the portal.</li> </ul>								
<b>Post-Condition</b>	<ul style="list-style-type: none"> <li>• The Complaint Report is generated and downloaded by the Complainant.</li> </ul>								
<b>Main Success Scenario</b>	<p>For Complainant:</p> <table> <tr> <th>Actor Action</th><th>System Response</th></tr> <tr> <td>1. The complainant will open the portal and enter his credentials, (e.g his CNIC and password).</td><td></td></tr> <tr> <td></td><td>2. The system will verify the credentials and allow the Complainant to log in.</td></tr> <tr> <td>3. The complainant will then go to the browse site.</td><td></td></tr> </table>	Actor Action	System Response	1. The complainant will open the portal and enter his credentials, (e.g his CNIC and password).			2. The system will verify the credentials and allow the Complainant to log in.	3. The complainant will then go to the browse site.	
Actor Action	System Response								
1. The complainant will open the portal and enter his credentials, (e.g his CNIC and password).									
	2. The system will verify the credentials and allow the Complainant to log in.								
3. The complainant will then go to the browse site.									

	4. The Complainant will filter the complaint by id.	
		5. The system will fetch the registered complaint by its id
	6. The complainant will enter the generate report button beside the search result of the complaint.	
		7. The system will generate a pdf format of the registered complaint.
	8. The complainant will view the report file of the desired complaint.	
	For Analyst:	
	<b>Actor Action</b>	<b>System Response</b>
	1. The Data Analyst will open the portal and enter his credentials, (e.g his CNIC and password).	
		2. The system will verify the credentials and allow the Data Analyst to log in.
	3. The Data Analyst will then go to the Data Analytics Page.	
	4. The Data Analyst will Click on generate Report Button	
		5. The system will generate formatted pdf documents of the Data Analytics, Surveys, and Complaints.
	6. The Data Analyst will	




	<table border="1"> <tr> <td>view/forward the document to the manager.</td><td></td></tr> </table>	view/forward the document to the manager.	
view/forward the document to the manager.			
<b>Alternative Flows / Extensions</b>	<p>a. The user searches for the complaint which was never registered or was previously deleted by the admin.</p> <ol style="list-style-type: none"> <li>1. My complaint section will remain Empty.</li> <li>2. The user will receive an error message of an invalid search.</li> </ol> <p>b. The User Wants an editable version of the report.</p> <ol style="list-style-type: none"> <li>1. Users will have to Install Adobe Converter.</li> <li>2. Users will have to contact support for further steps.</li> </ol>		

### UC-9: Expedite Complaints.

Section	Content								
<b>Use Case Name</b>	Expedite (Instant Action Charges)								
<b>Scope</b>	Resident Complaint Portal								
<b>Level</b>	User Goal								
<b>Primary Actor</b>	Complainant								
<b>Stakeholders and interests</b>	- <b>Complainant:</b> Wants Immediate/quick action on their Complaints.								
<b>Pre-Condition</b>	<ul style="list-style-type: none"> <li>• The Complainant is logged in to their account on the Complaint Portal.</li> <li>• The Complainant has sufficient Balance in their Account.</li> </ul>								
<b>Post-Condition</b>	<ul style="list-style-type: none"> <li>• Payment received by the System.</li> <li>• User notified by the bank of the amount deduction from the Bank.</li> </ul>								
<b>Main Success Scenario</b>	<table border="1"> <tr> <th>Actor Action</th><th>System Response</th></tr> <tr> <td>1. The complainant will open the portal and enter his credentials, (e.g his CNIC and password).</td><td></td></tr> <tr> <td></td><td>2. The system will verify the credentials and allow the Complainant to log in.</td></tr> <tr> <td>3. The complainant will then go</td><td></td></tr> </table>	Actor Action	System Response	1. The complainant will open the portal and enter his credentials, (e.g his CNIC and password).			2. The system will verify the credentials and allow the Complainant to log in.	3. The complainant will then go	
Actor Action	System Response								
1. The complainant will open the portal and enter his credentials, (e.g his CNIC and password).									
	2. The system will verify the credentials and allow the Complainant to log in.								
3. The complainant will then go									

	to the Register complaint site.	
	4. The complainant will then select the type of complaint.	
	5. He will then enter the problem he/she is facing.	
	6. The complainant will then select the check box for expedite Action.	
		7. The system will load a Payment Screen
	8. Complainant will enter their Bank Card credentials.	
		9. The system will authenticate the Payment received from the Bank.
		10. The system will forward Complainants' complaints to the Admin. Complaints will be on the Admin's top priority List.
<b>Alternative Flows / Extensions</b>	<p>a. The Payment is not received by the System.</p> <ol style="list-style-type: none"> <li>1. The customer will be notified that payment was not received, hence Action is canceled.</li> <li>2. If the payment is received after canceling the complaint, a Refund will be made within the next 24 hrs in the registered number of the complainant.</li> </ol> <p>b. The complainant faced a technical issue while registering a complaint.</p> <ol style="list-style-type: none"> <li>1. Complainant contacts the support team for further Assistance.</li> <li>2. Complainants try to Re-Login To the System.</li> </ol>	

## 6. Prototypes



### Residents Complaint Portal




Welcome, Dear Citizen / Member!

CNIC


Password

☐ Remember me?





[Register Now!](#)

Follow Us   

Developed at Fast NUCES



### UC-1: Register Complaint



### Register Complaint


Select Complaint Type ↓

Electricity ProblemWater ProblemRoad Problem

Description:




Do you want Expedite actions?

☐ Yes ☐ No



Activate Windows  
Go to Settings to activate Windows.

## UC-2: Forward Complaint



### View Complaint

<b>Name :</b>	Abdullah
<b>Address :</b>	F10\4, Street #56, House # 6, Islamabad.
<b>CNIC :</b>	11324-9788234-5

<b>ID:</b>	1132123411
<b>Complaint Type :</b>	Electricity
<b>Date :</b>	23-02-2023
<b>Description :</b>	There is a problem of electricity in our sector, the lights are out since morning, along with that, the voltage in out sector is very low, the lights are on but very dim light is being emitted.
<b>Expedite Action:</b>	No

Back

Submit

Electricity Department




Road Department

Garbage Department

Resident Rave

Activate Windows  
Go to Settings to activate Windows.


## UC-3: Delete Account



### Deleting Account

<b>Name :</b>	Abdullah
<b>CNIC :</b>	11324-9788234-5

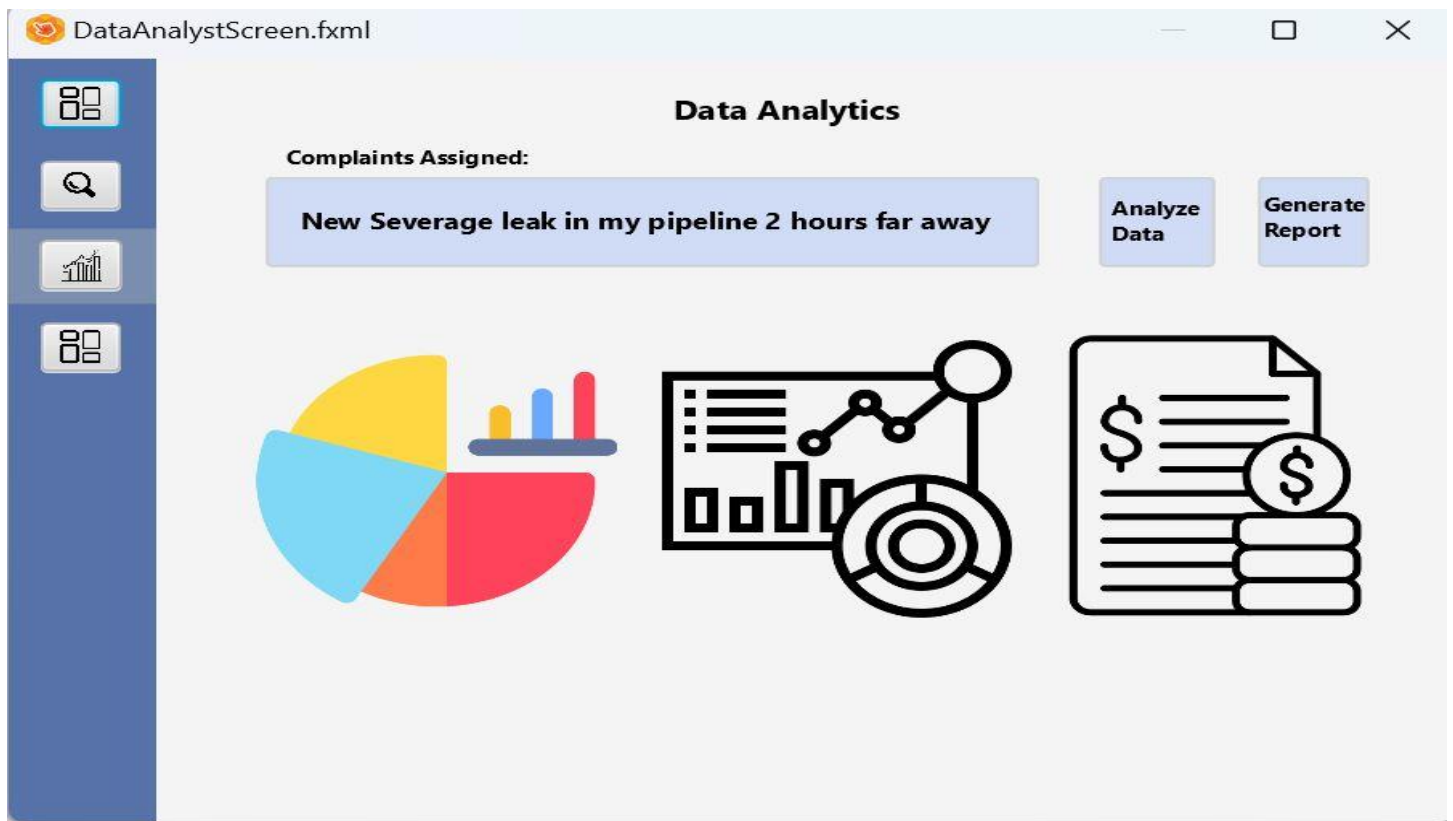
<b>Reason :</b>	<div><input type="radio"/> User Requested to</div> <div><input type="radio"/> Spam Complaints</div> <div><input checked="" type="radio"/> Inappropriate words</div> <div><input type="radio"/> Other</div>
<b>Add Evidence :</b>	<div>Import PDF* +</div>
<b>Description :</b>	The Complainant was using inappropriate words, and was violating the code of conduct of the portal, the evidence is provided in the pdf form of his complaint.



Ban Account

Resident Rave

## UC-4: Analyze Data



## UC-5: Submit Feedback

The screenshot shows a web application window titled "SubmitFeedback.fxml". The interface has a blue sidebar on the left with icons for a dashboard, search, and feedback. The main content area is titled "Submit Feedback". It contains a form with the following fields and elements:

- Name**: A text input field.
- Any Bugs?**: A text input field.
- CNIC**: A text input field.
- Choose File**: A button next to the CNIC field.
- Problem Type**: A dropdown menu with three options: "Electricity Problem", "Water Problem", and "Road Problem".
- Description**: A large text area for providing details.
- Submit**: A button at the bottom right of the form.

At the bottom left of the sidebar, there is a logo for "Resident Rave" featuring a house icon.

## UC-6: View Status

Browser: complaint.html

Complaint ID

Complaint ID	Name	Address	CNIC	Complaint Type	Date
12345678	Abdullah Daniyal	F10/4, St#56...	11324-322...	Electricity	01-2-2023

Received Received by admin Forwarded to Concerned Department Complaint Resolved





## UC-7: Browse Complaint

Complaint ID

Complaint ID	Name	Address	CNIC	Complaint Type	Date		
<input type="checkbox"/>	12345678	Abdullah Daniyal	F10/4, St#56...	Electricity	01-2-2023	<input type="button" value="Open"/>	
<input type="checkbox"/>	11325679	Abdullah Daniyal	F10/4, St#56...	Water	15-03-2023	<input type="button" value="Open"/>	
<input type="checkbox"/>	11325679	Abdullah Daniyal	F10/4, St#56...	Water	30-03-2023	<input type="button" value="Open"/>	

Activate Windows  
Go to Settings to activate Windows.

## UC-8: Generate Report




### View Complaint


<b>Name :</b>	Abdullah
<b>Address :</b>	F10\4, Street #56, House # 6, Islamabad.
<b>CNIC :</b>	11324-9788234-5

<b>ID:</b>	1132123411
<b>Complaint Type :</b>	Electricity
<b>Date :</b>	23-02-2023
<b>Description :</b>	There is a problem of electricity in our sector, the lights are out since morning, along with that, the voltage in out sector is very low, the lights are on but very dim light is being emitted.
<b>Expedite Action:</b>	No

Back

  
Activate Windows  
Go to Settings to activate Windows.

## UC-9: Expedite Actions



### Payment

**Card Number:**

without spaces or dashes

**CVC:**

Enter Last 3 Digits

**Date of Expiry:**

mm/yy

**Address:**

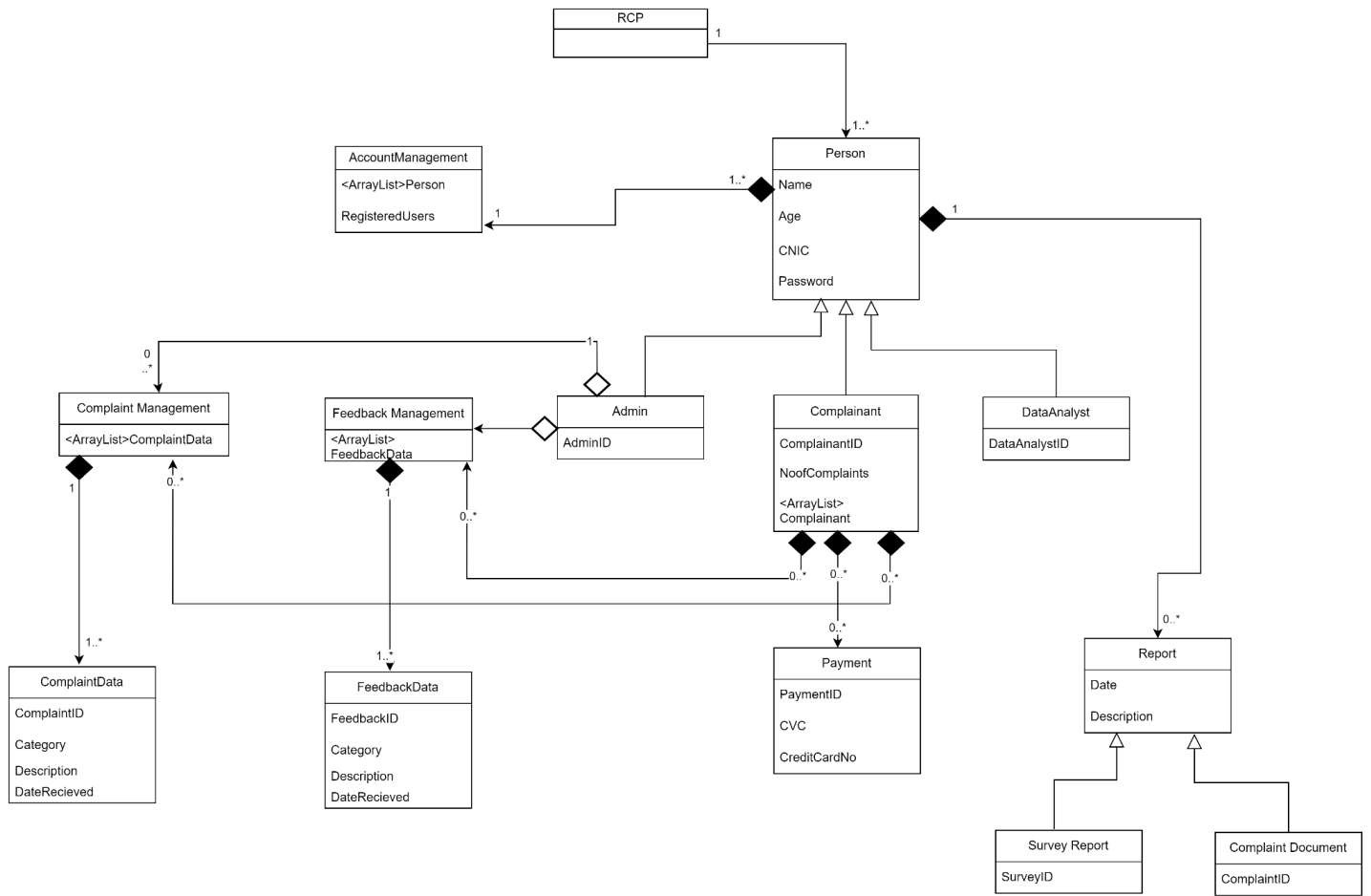
**Zip Code:**

Submit

  
Activate Windows  
Go to Settings to activate Windows.

Search

## 7. Domain Model

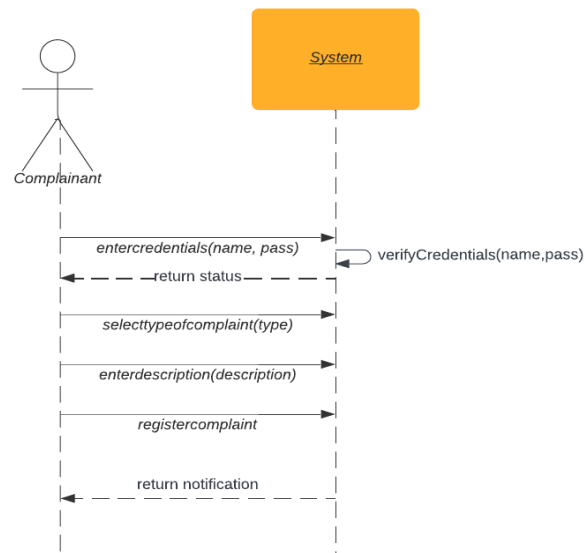




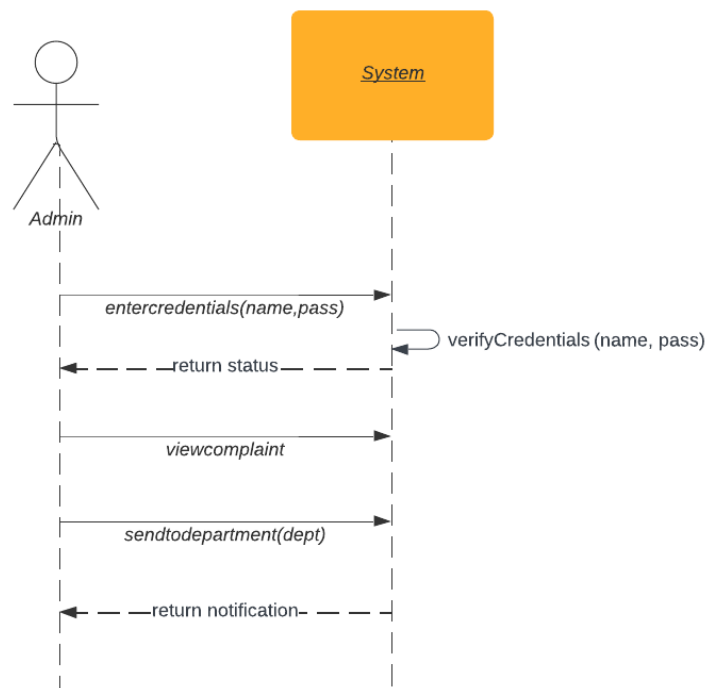
## 8. System Sequence Diagram

---

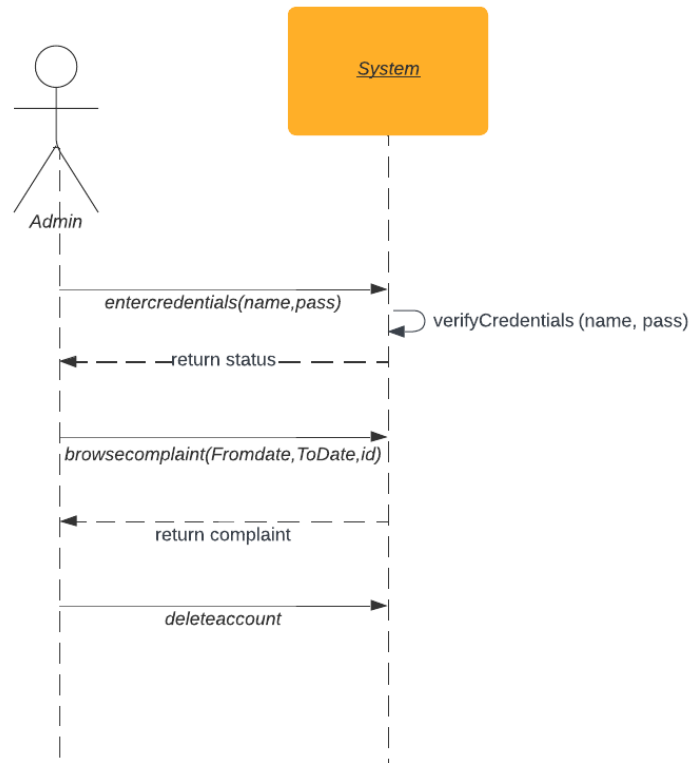
### UC-1: Register Complaint



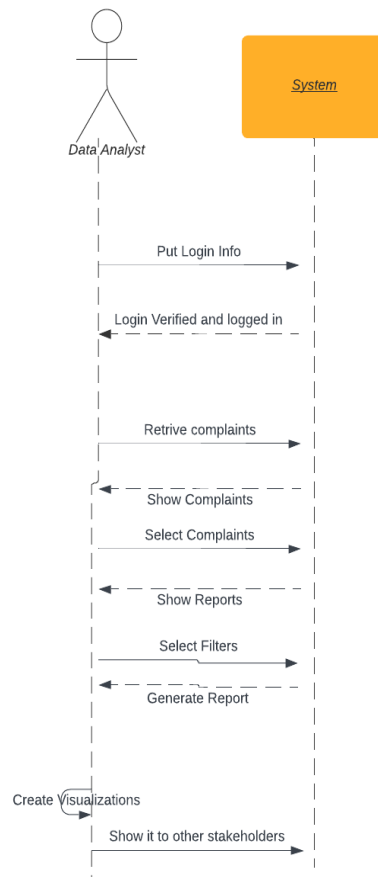
### UC-2: Forward Complaint



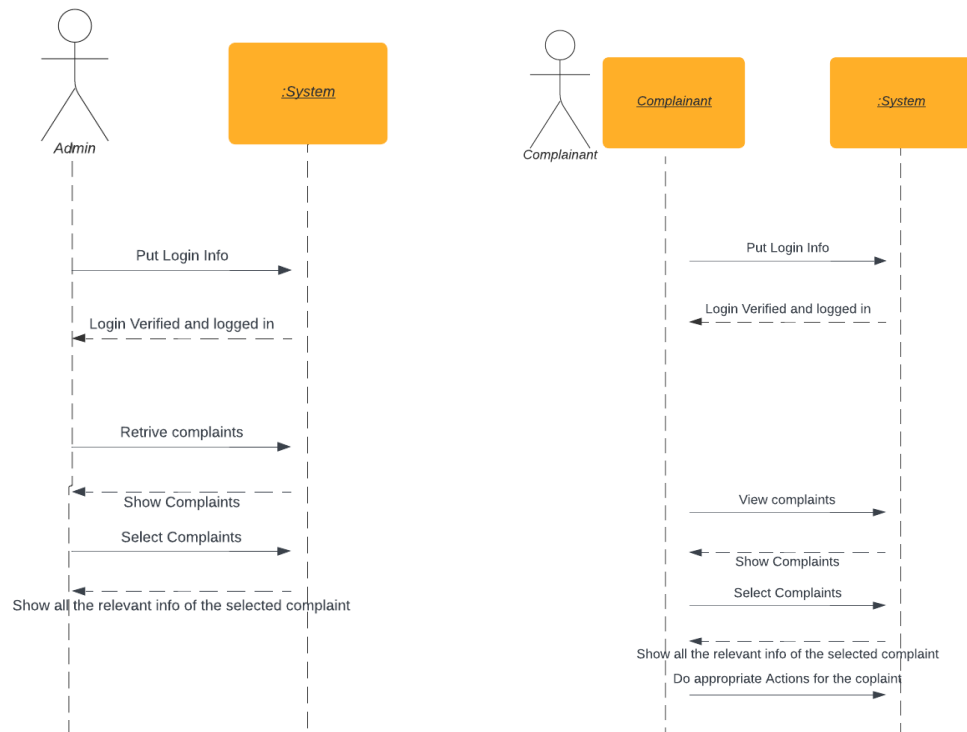
### UC-3: Delete Account



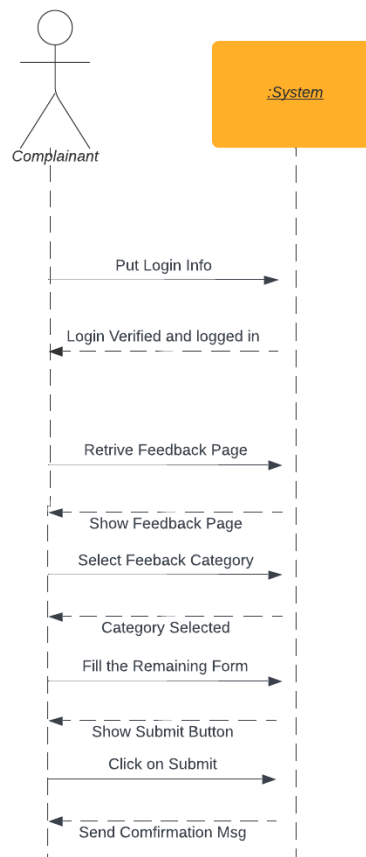
### UC-4: Analyze Data



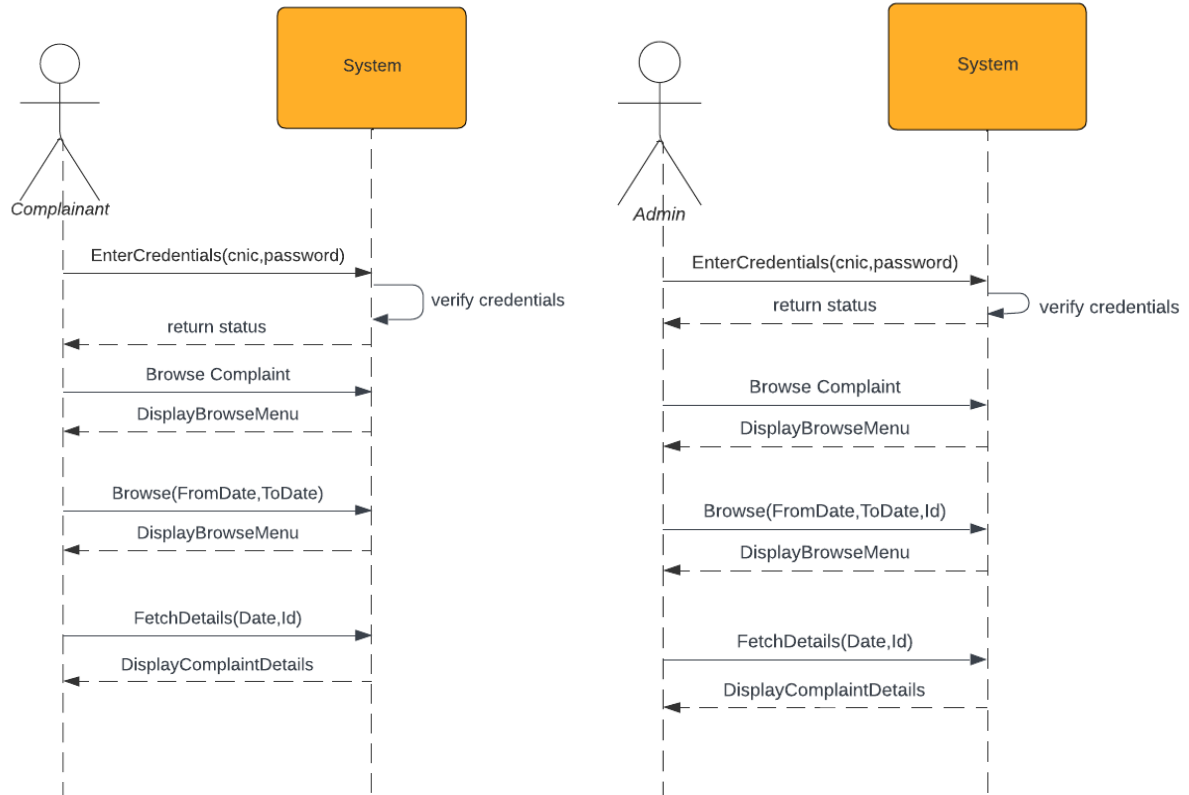
## UC-5:View Status



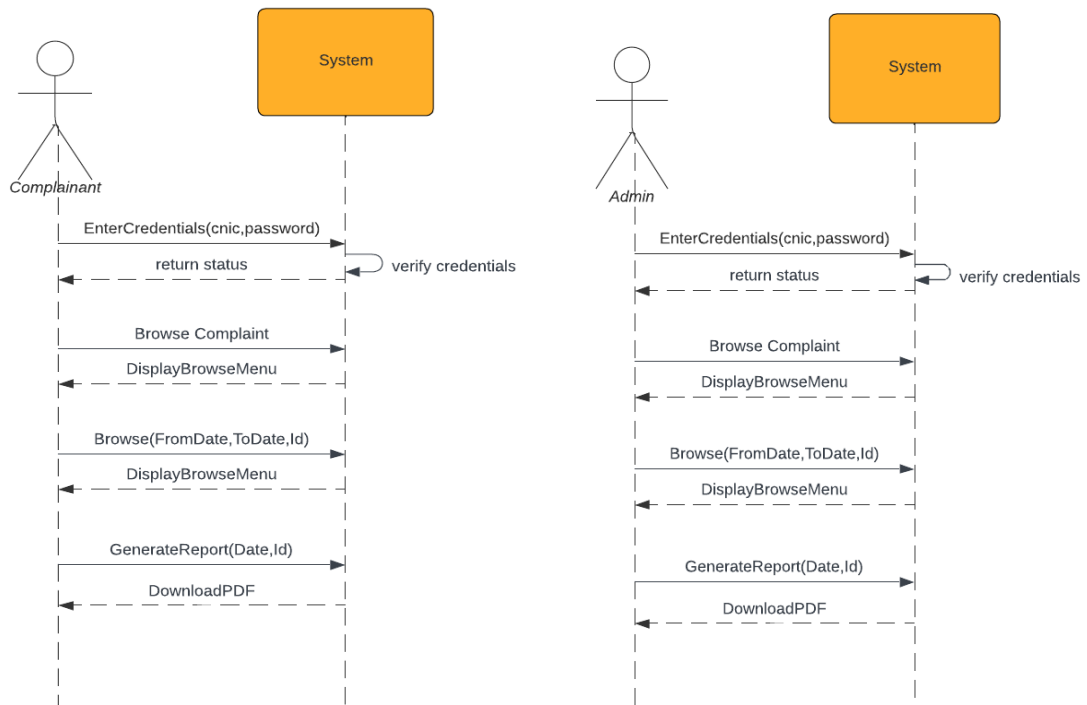
## UC-6:Submit Feedback

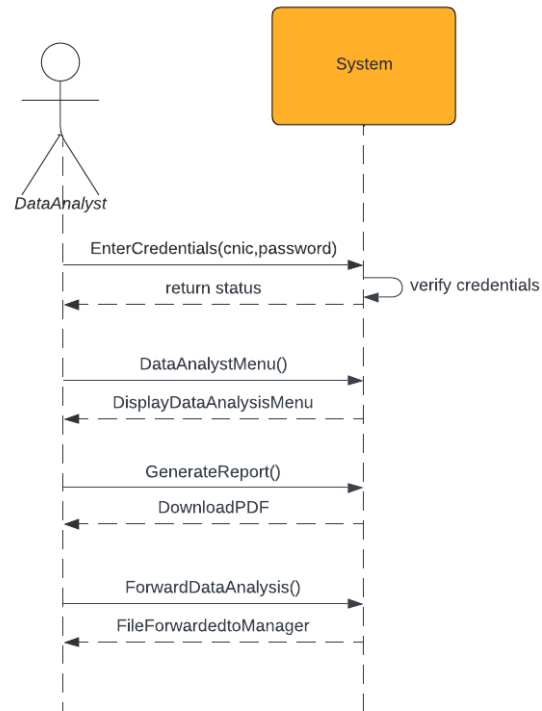


## UC-7:Browse Complaint

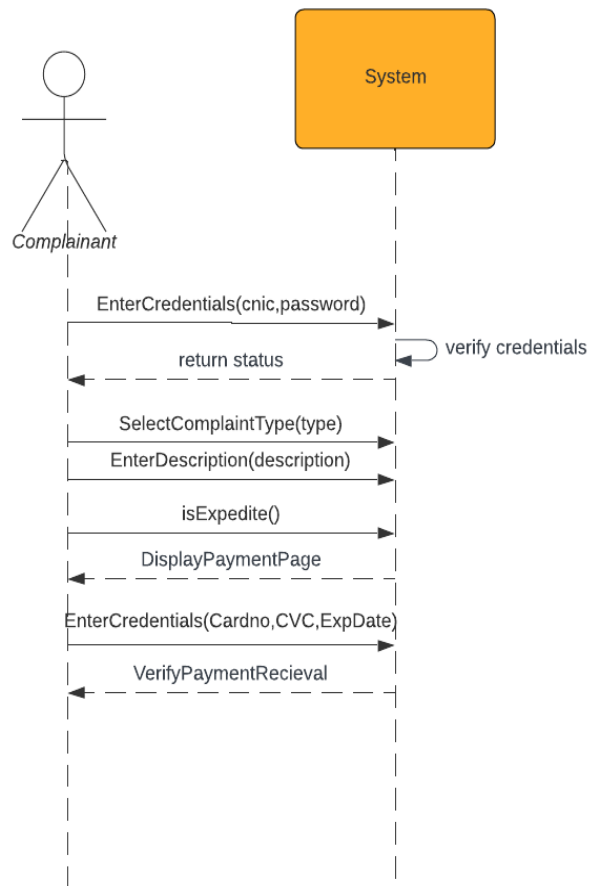


## UC-8:Generate Report



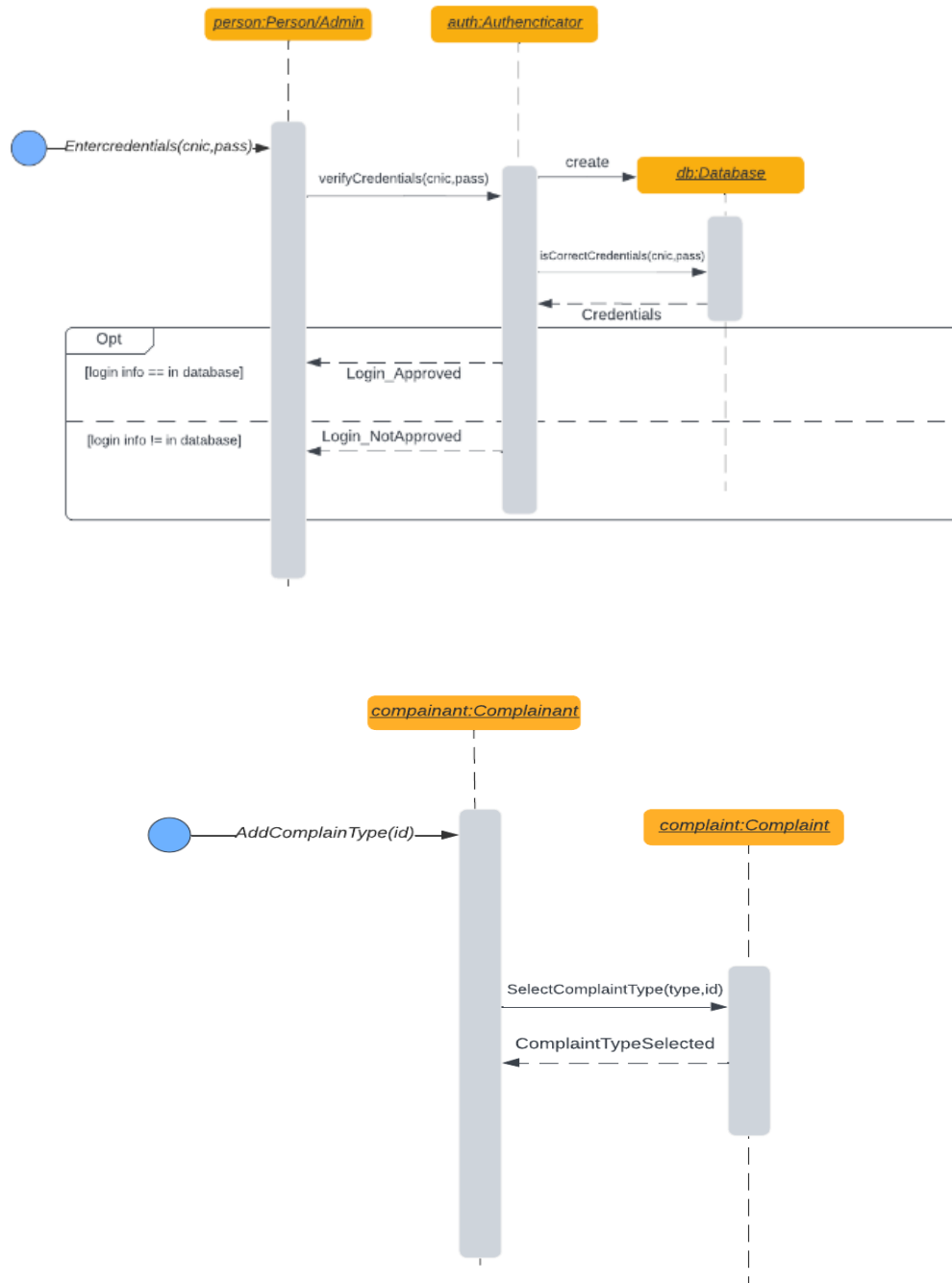


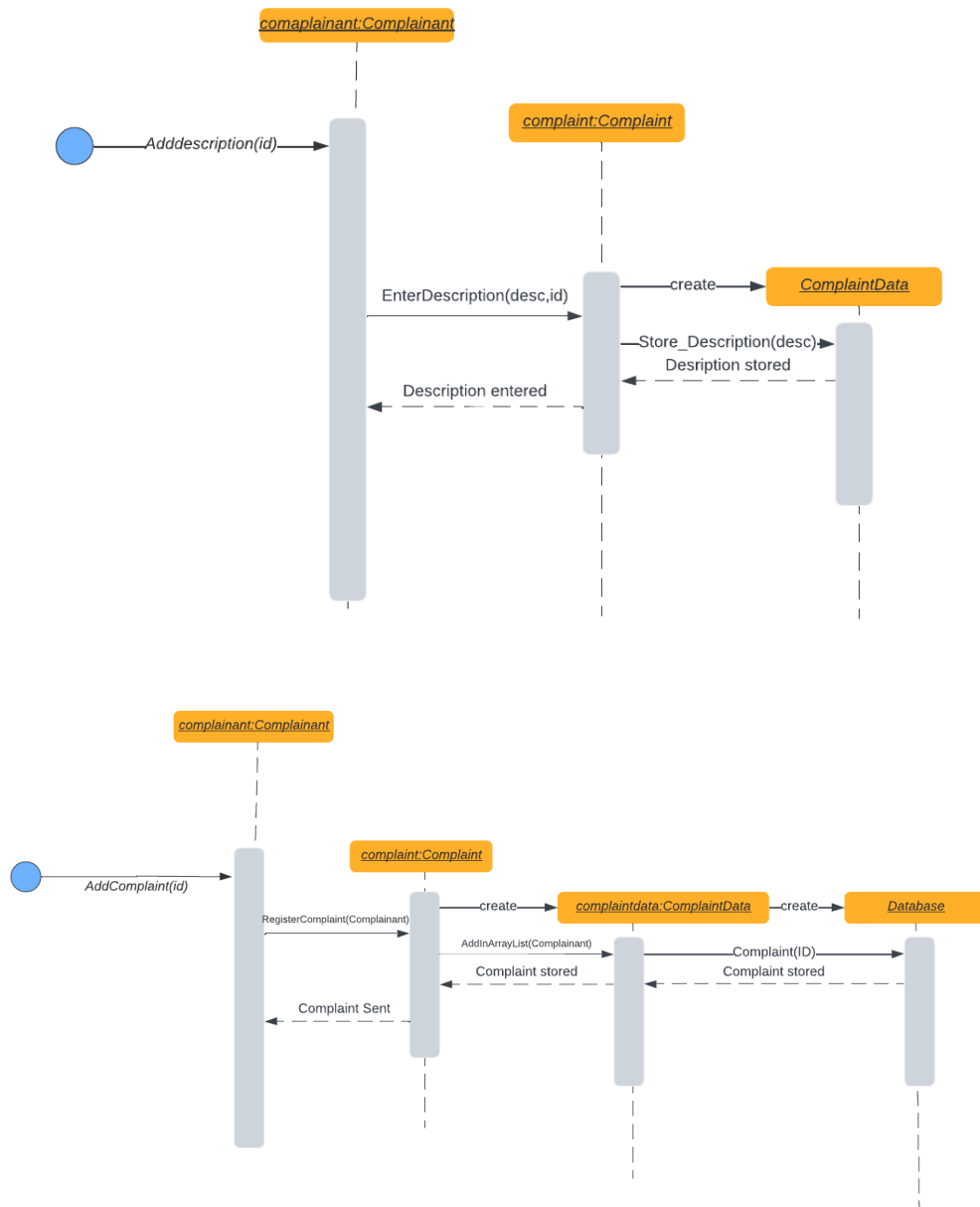
## UC-9: Expedite



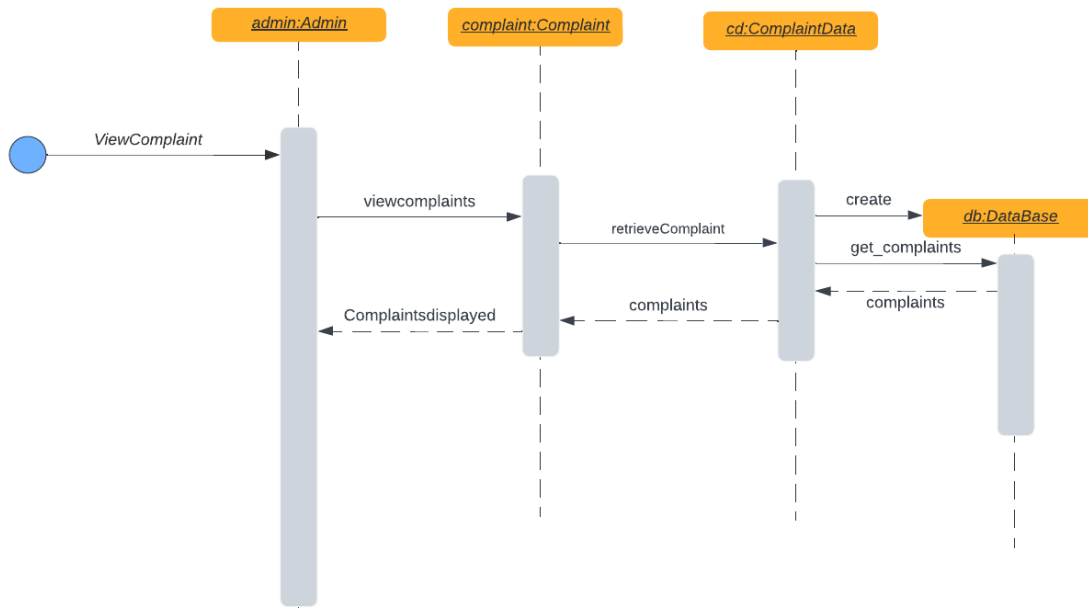
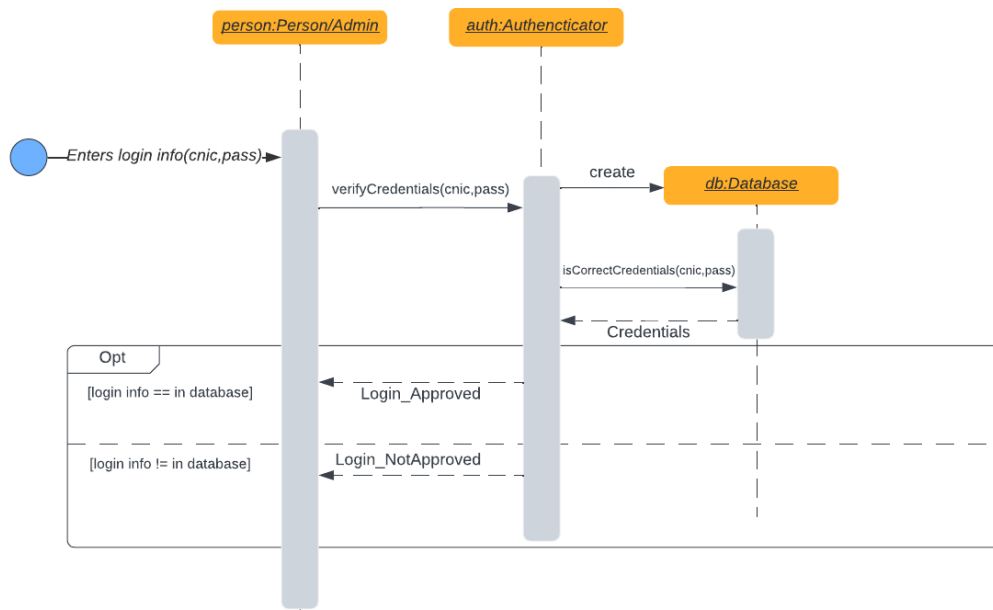
## 9. Sequence Diagrams

### UC-1: Register Complaint

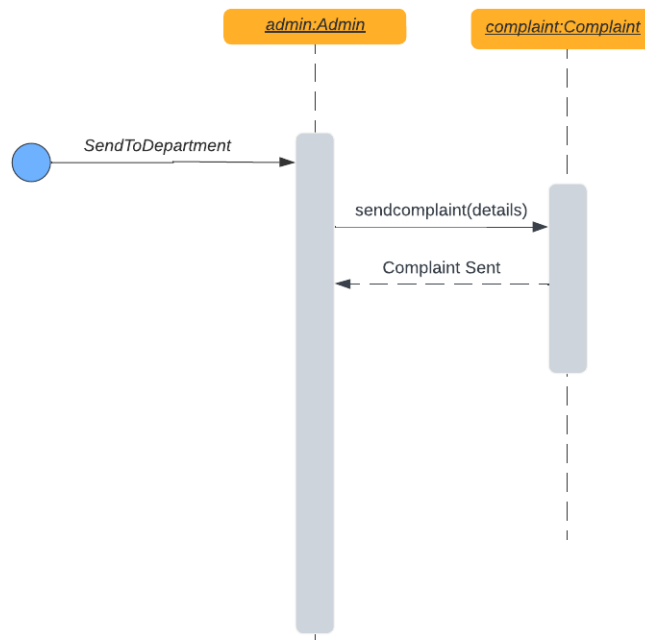




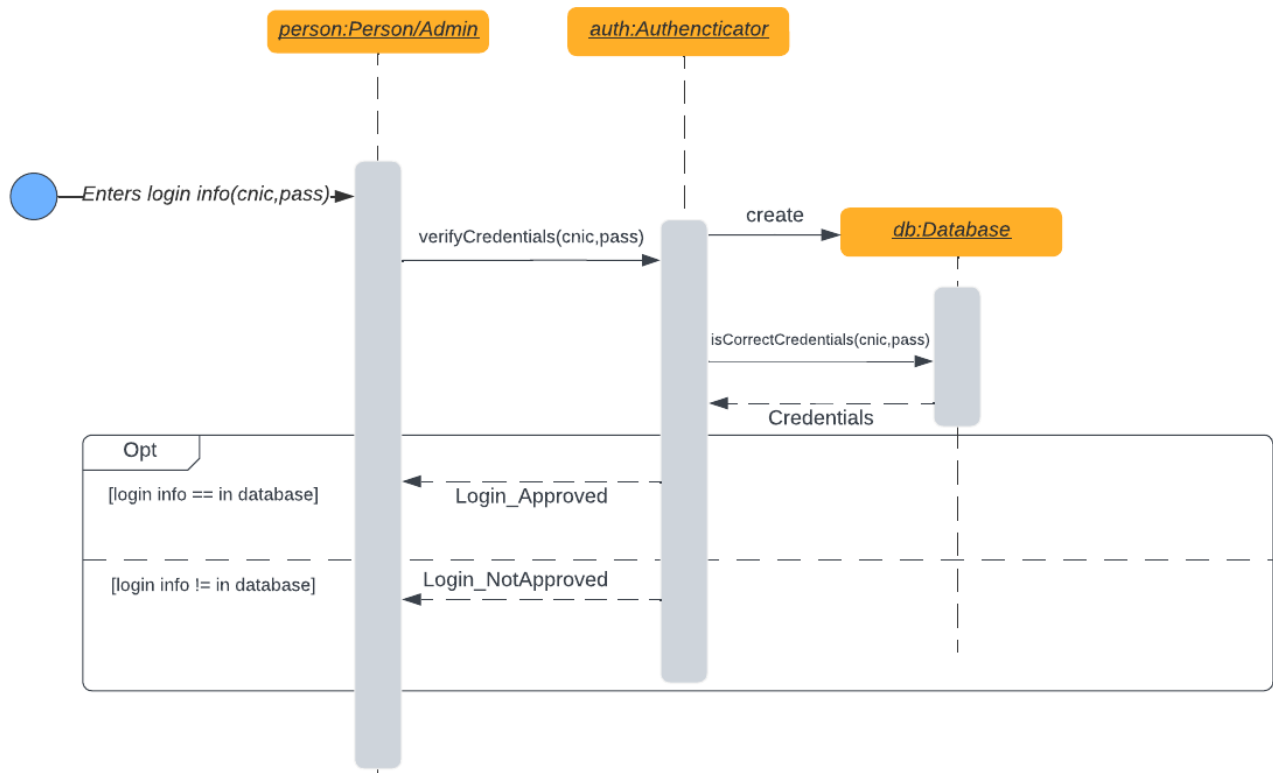
## UC-2: Forward Complaint

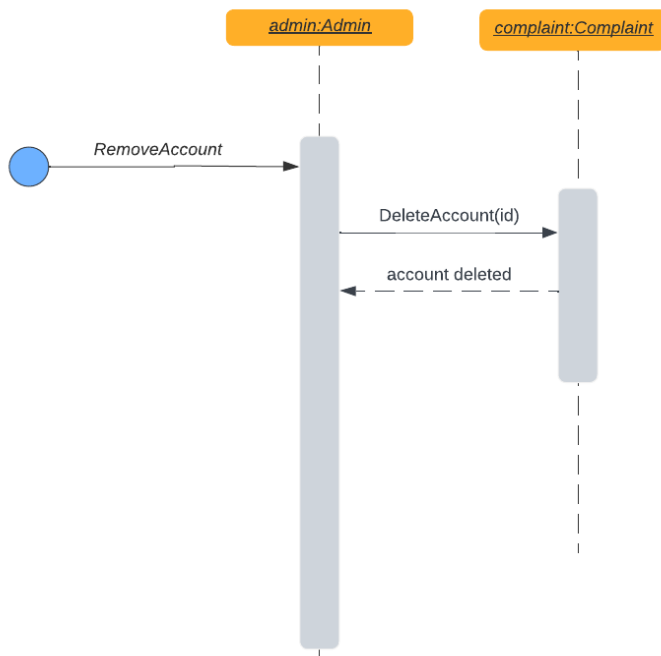
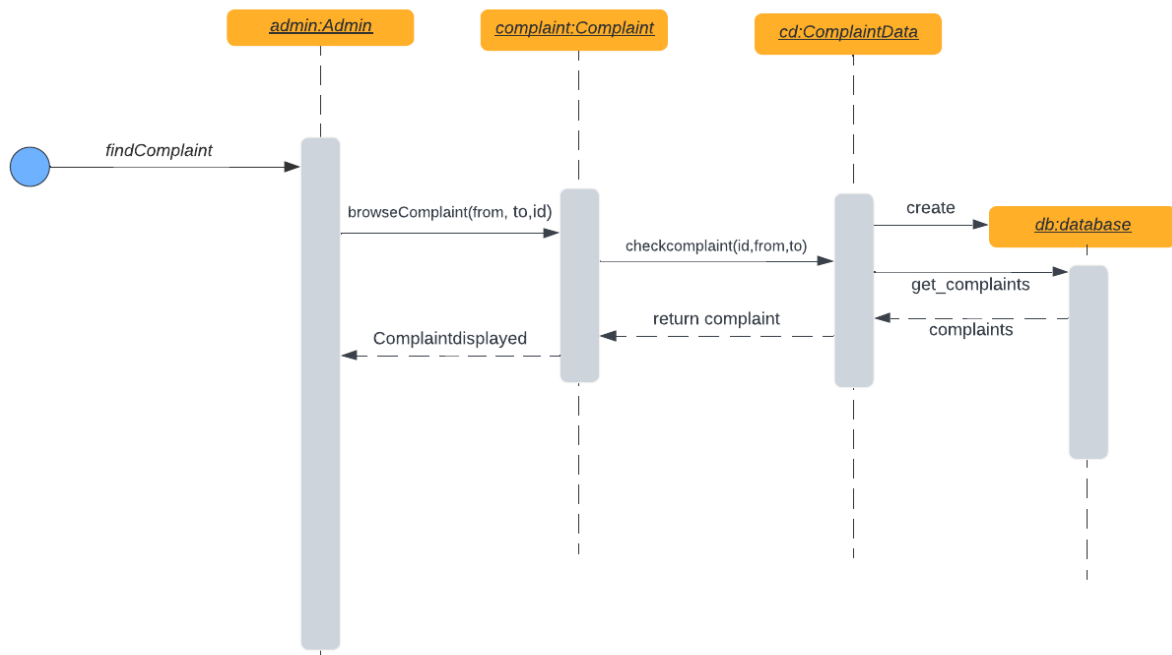




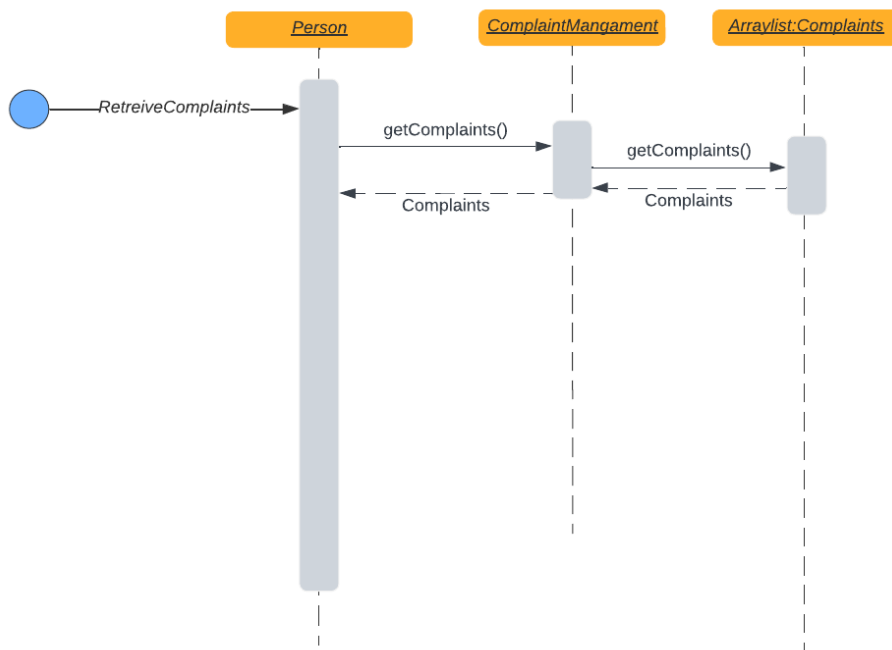
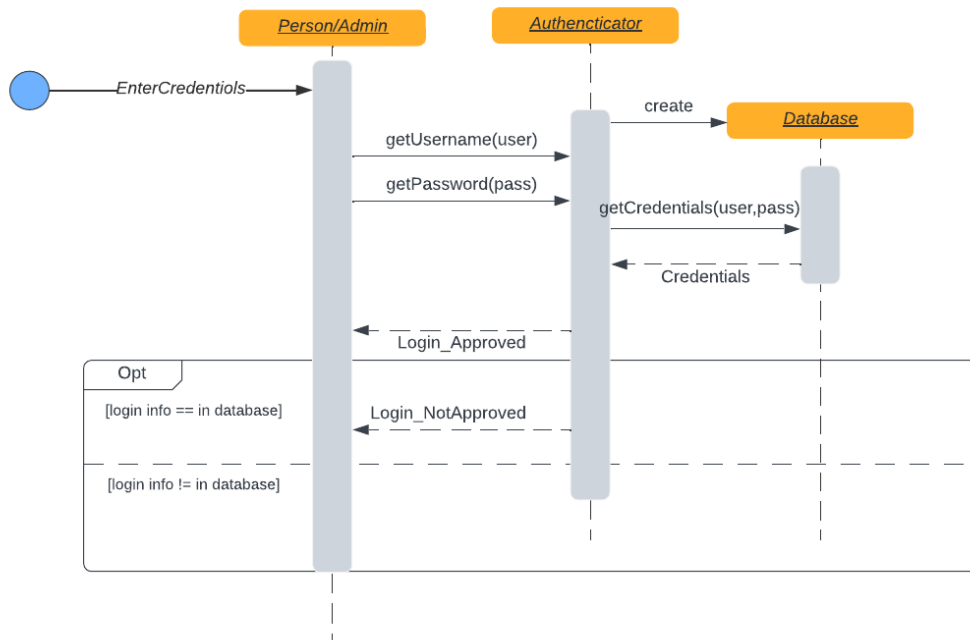


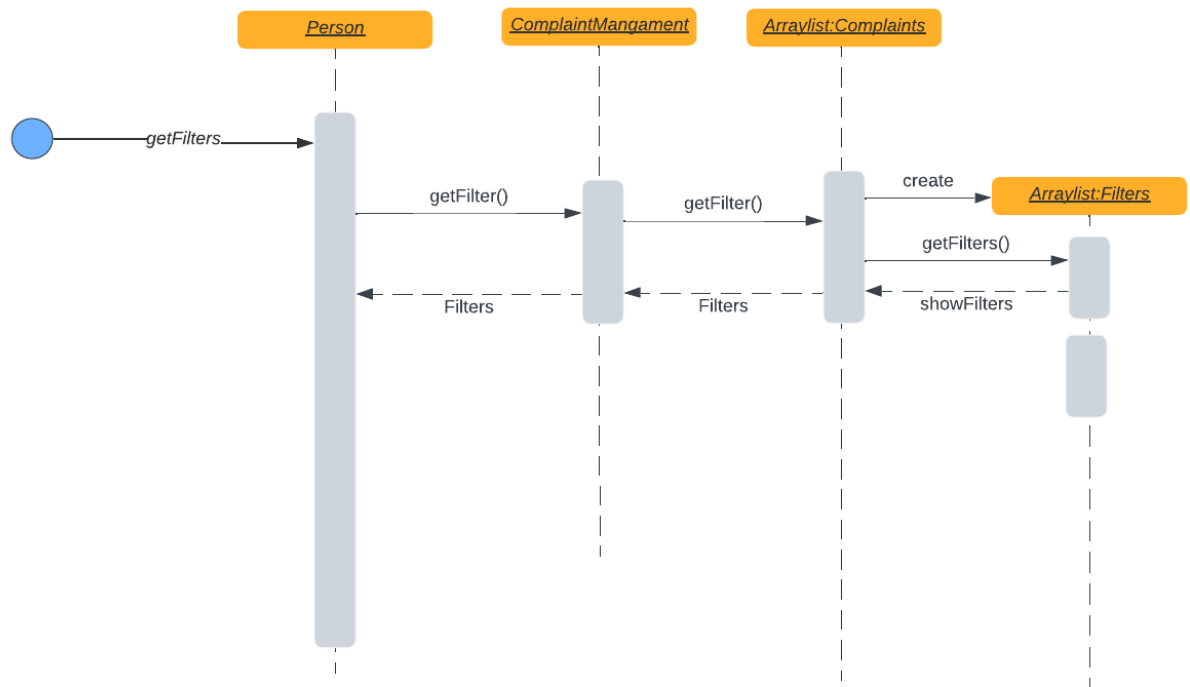
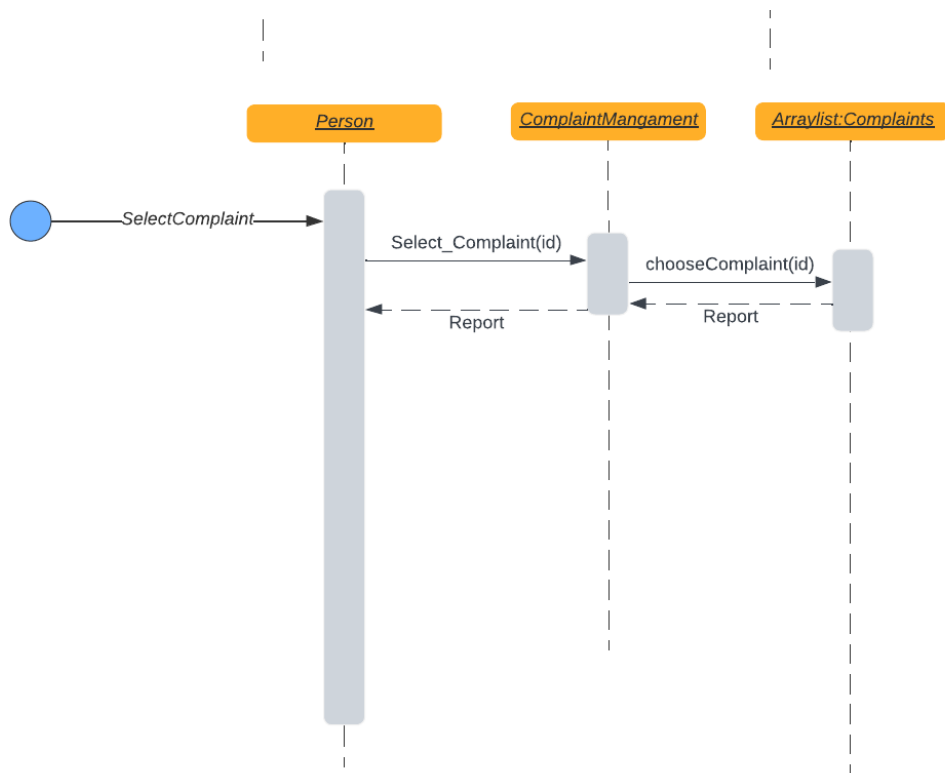
### UC-3: Delete Account

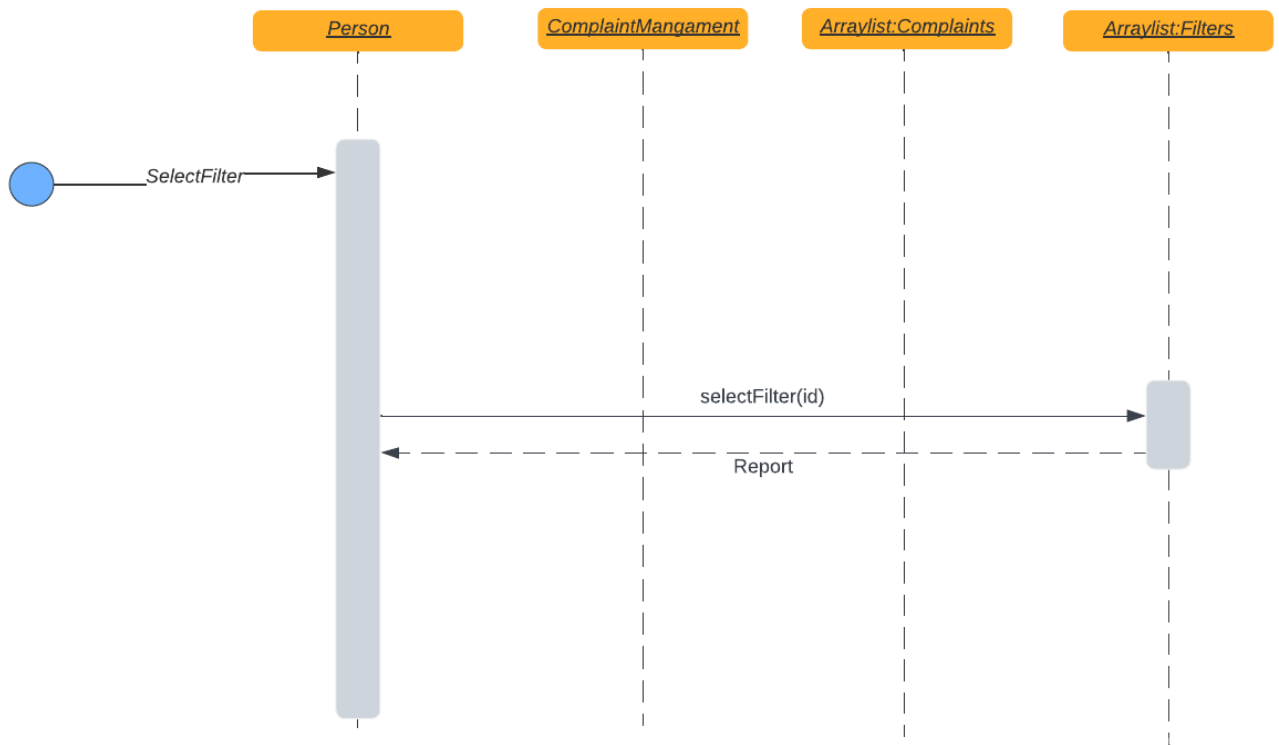




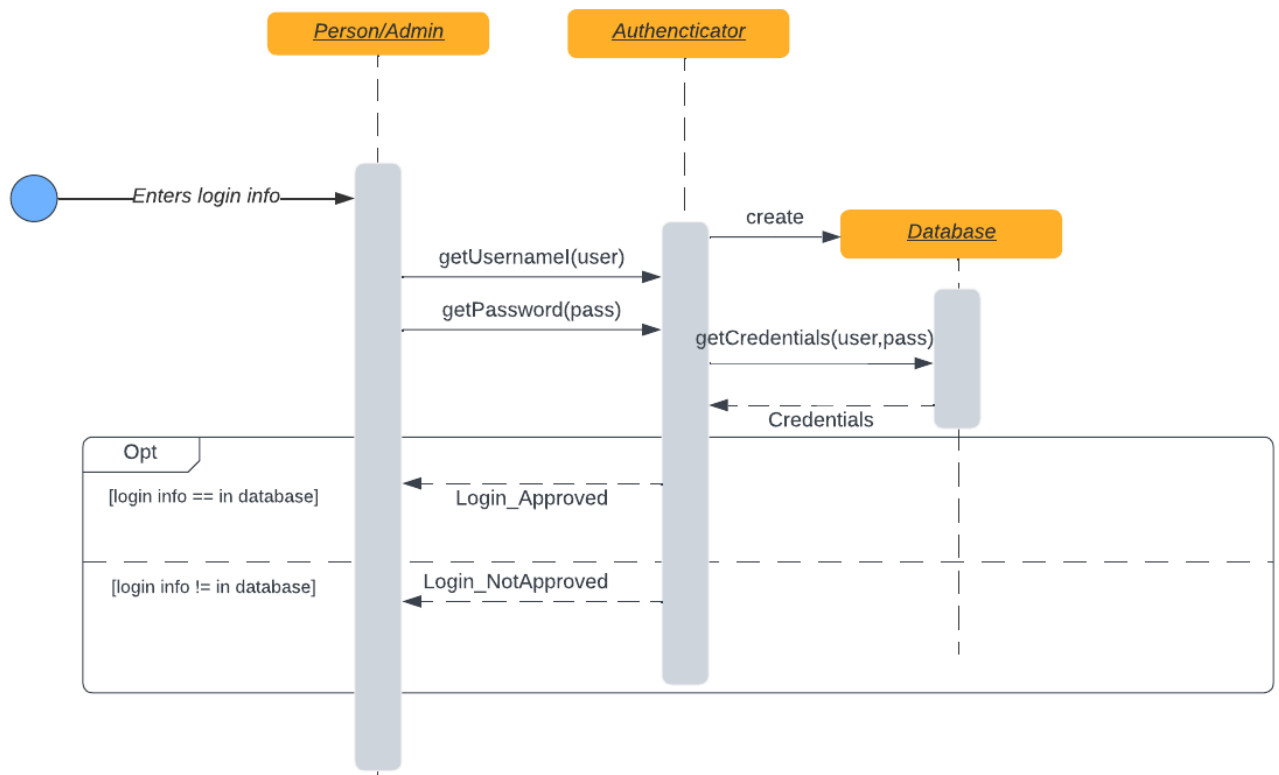
## UC-4 - Analyze Data:



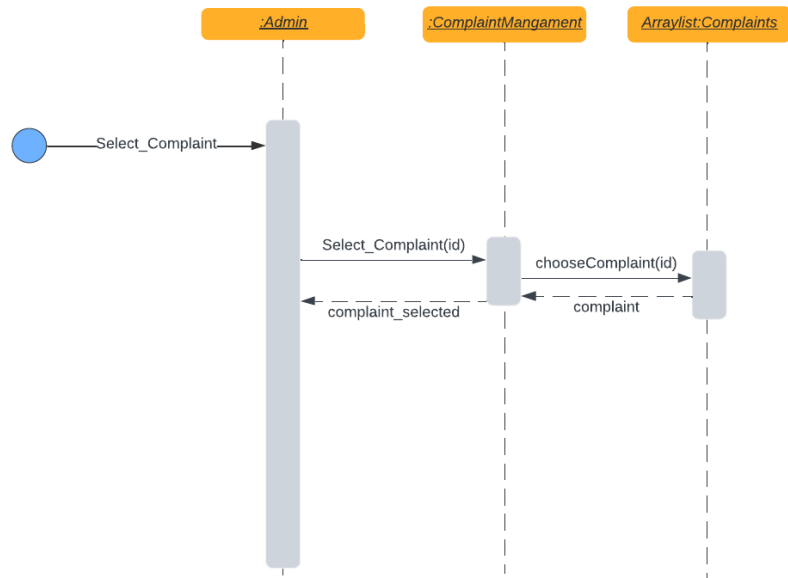
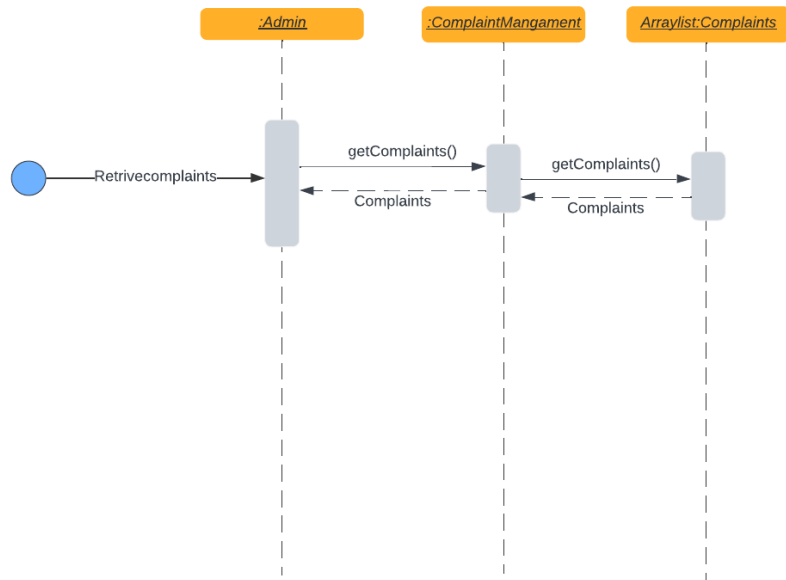




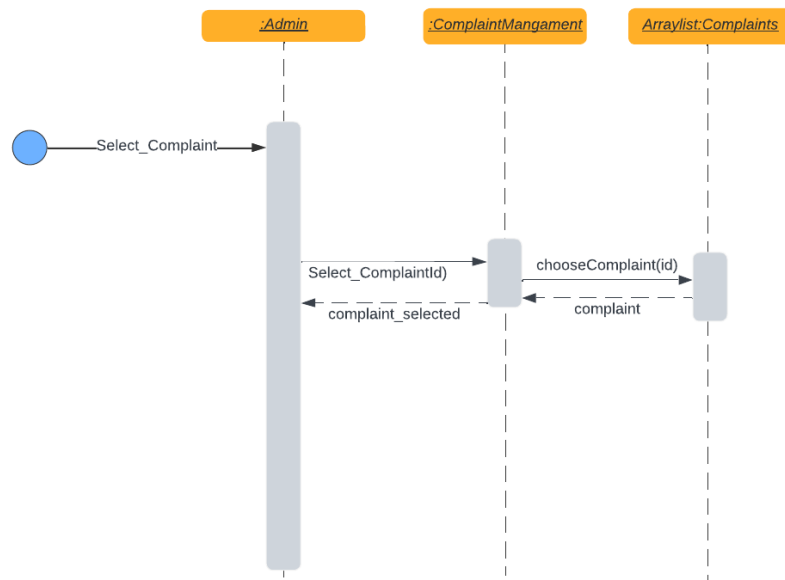
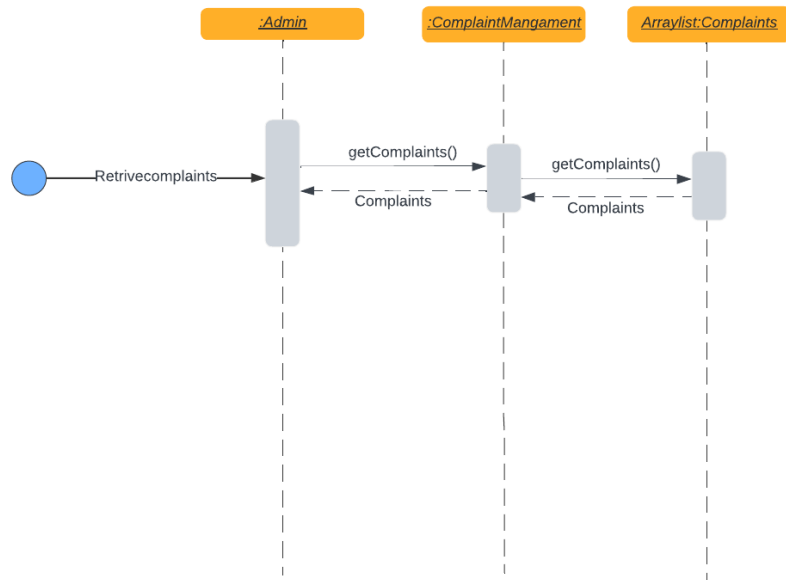
## UC-5 - View Status:



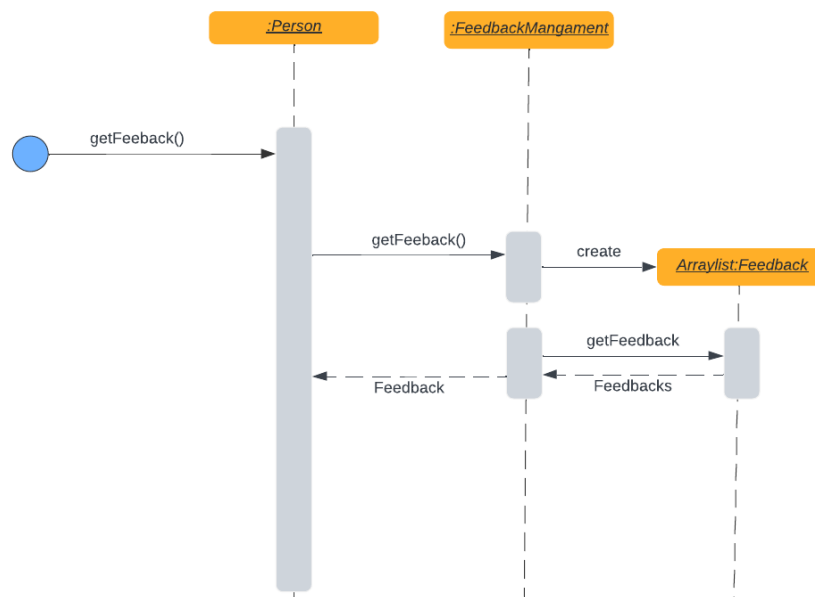
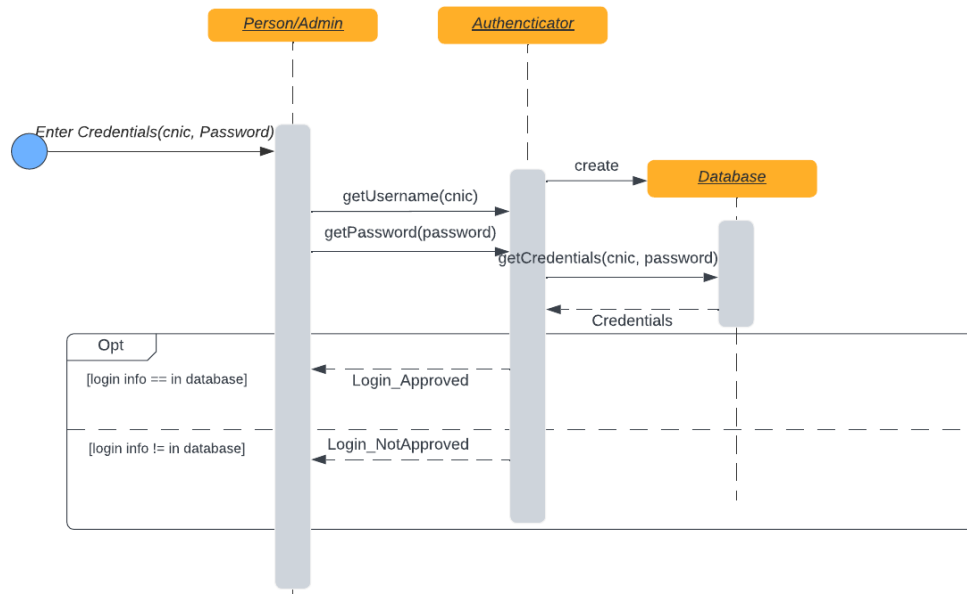
# Admin



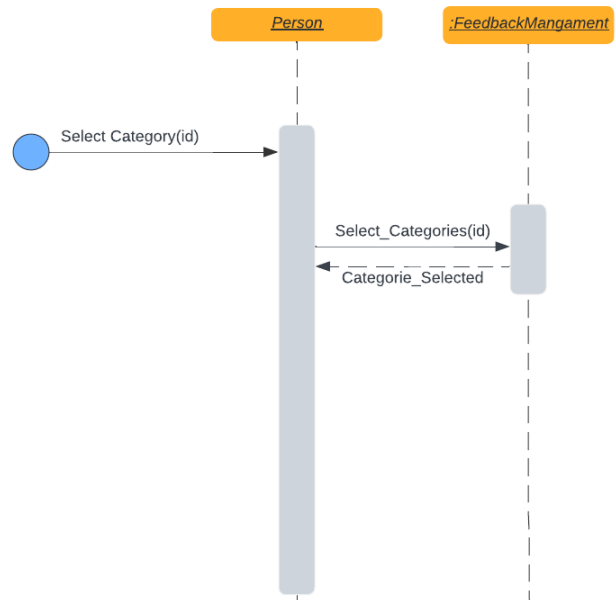
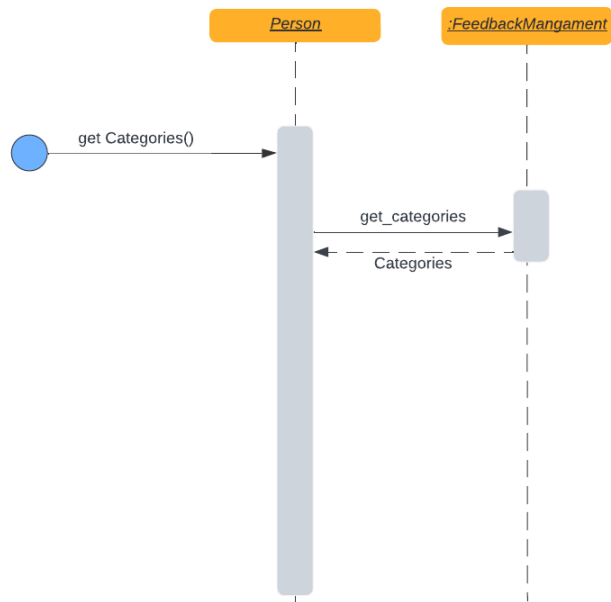
# Person

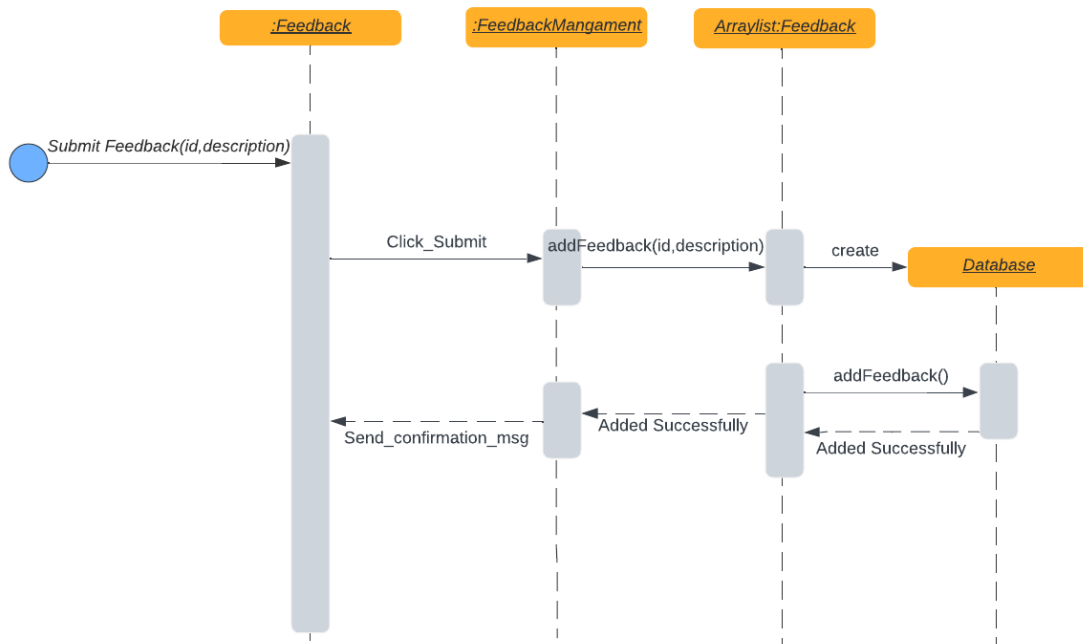
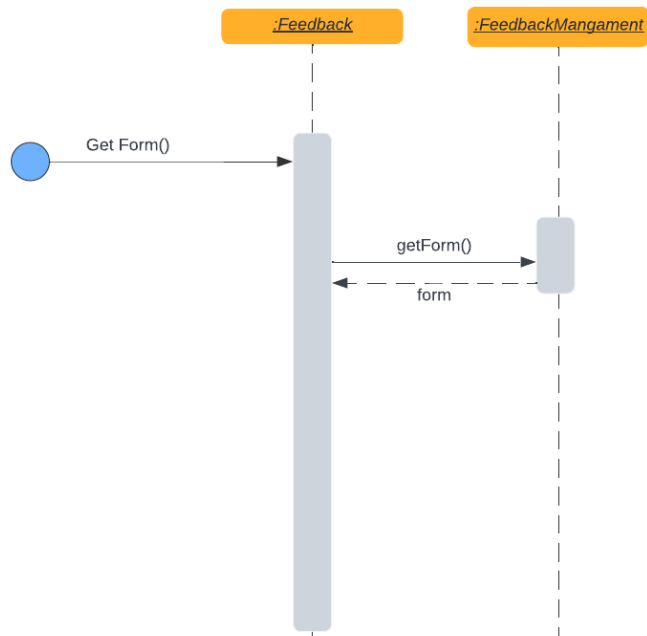


## UC-6 - Submit Feedback:

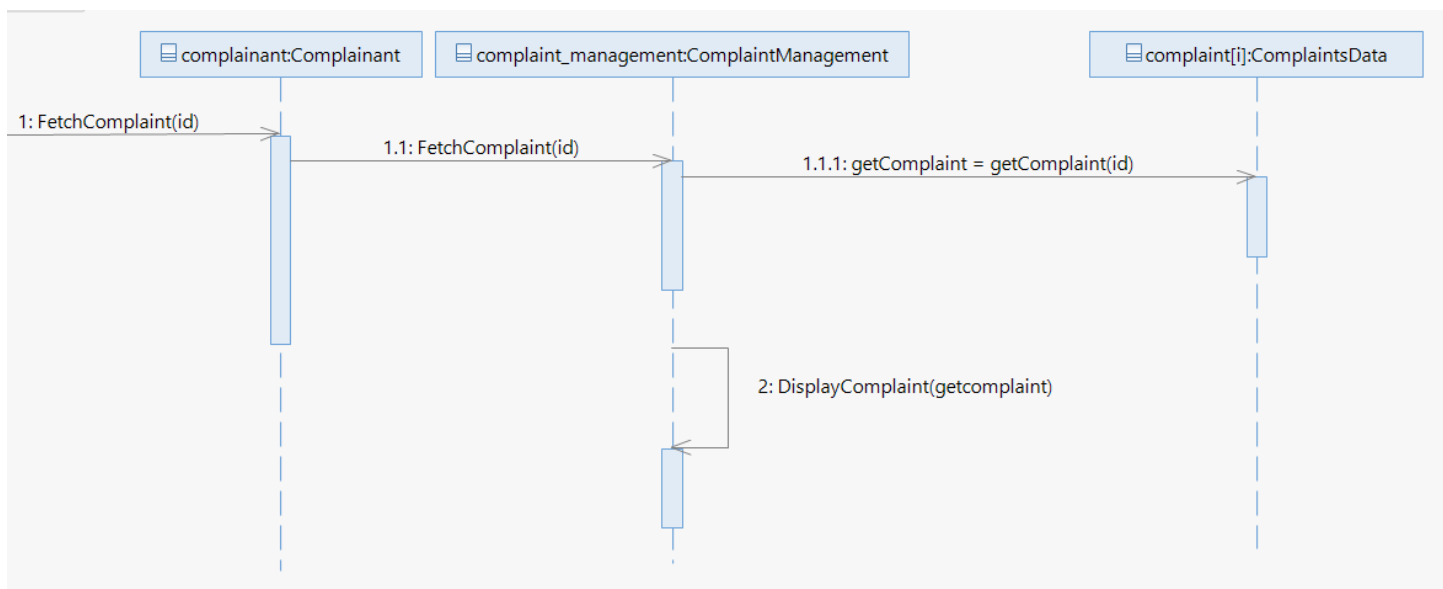
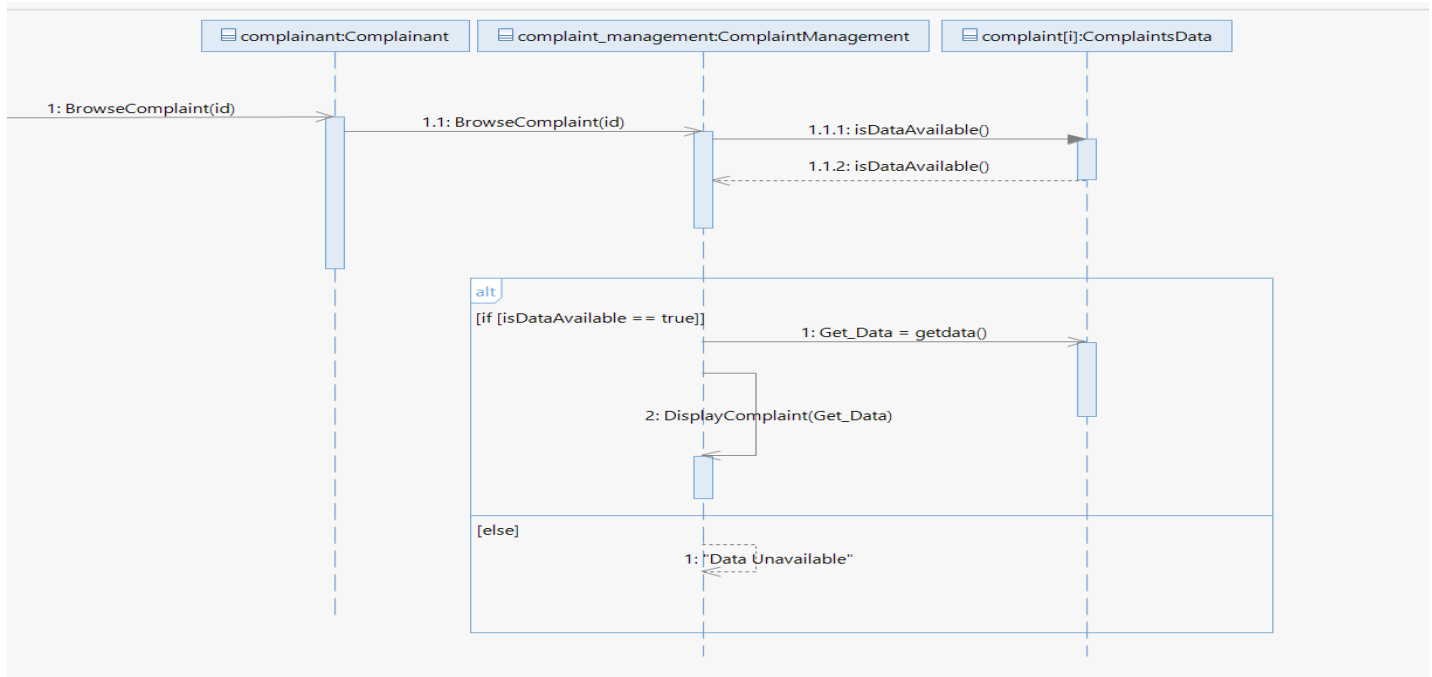




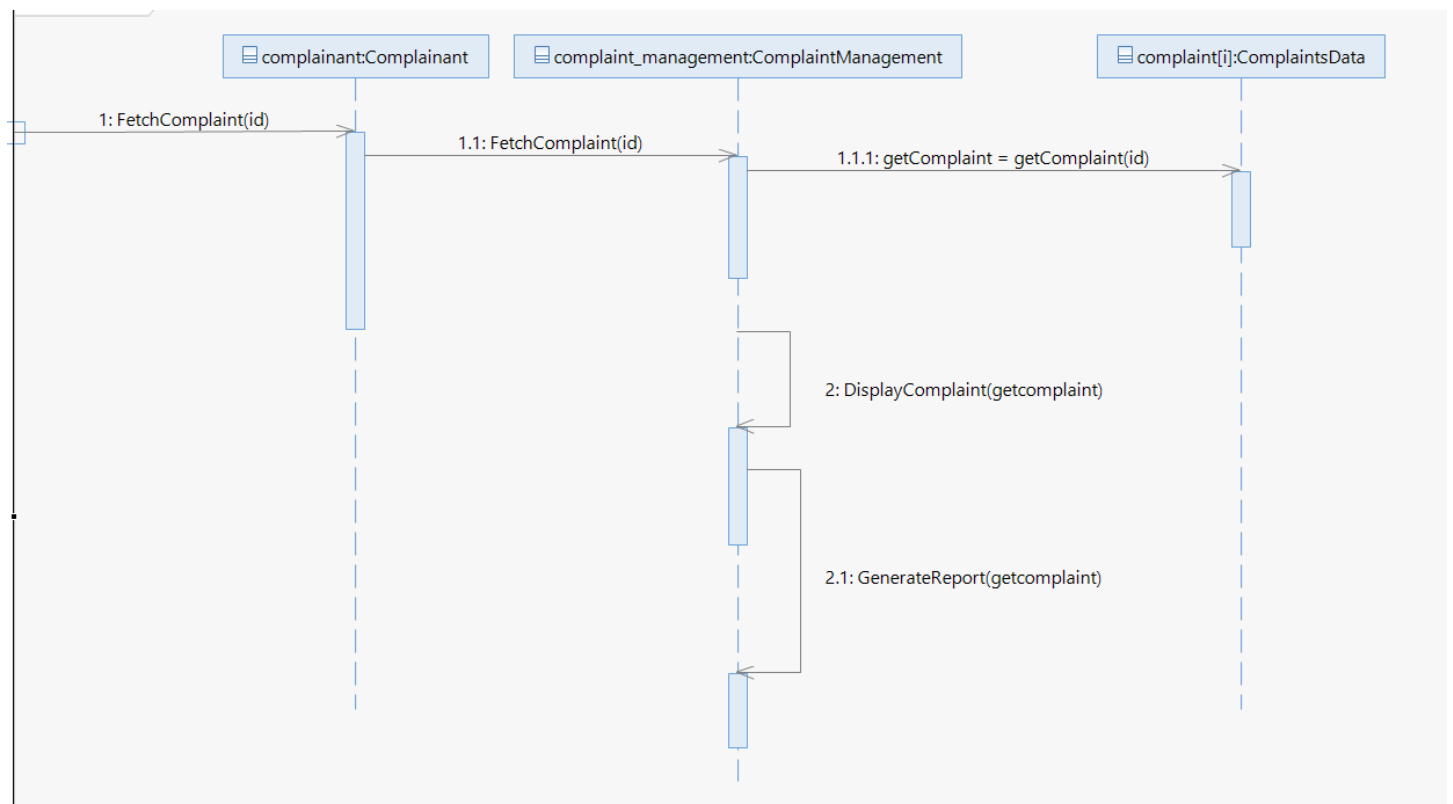
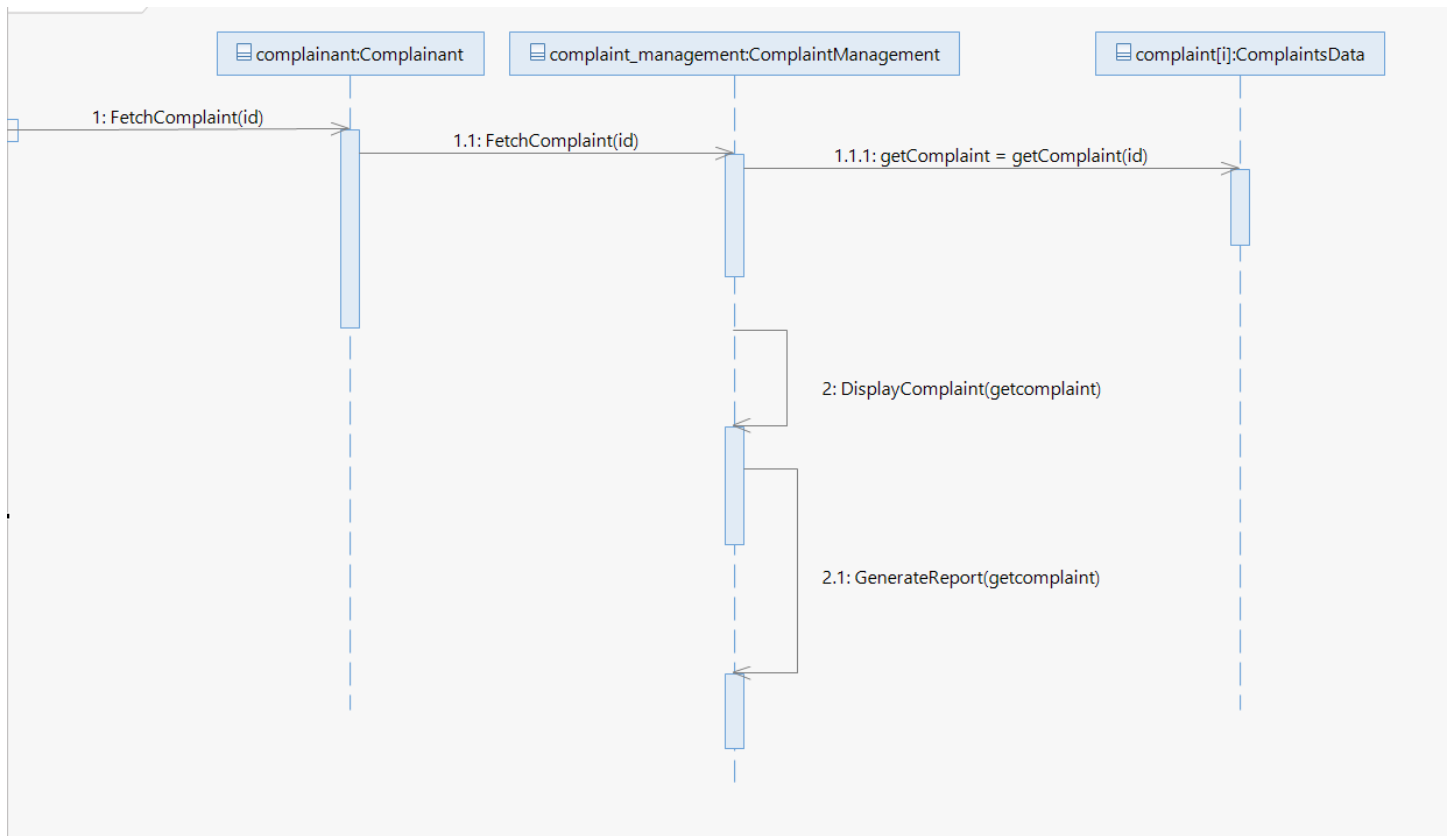


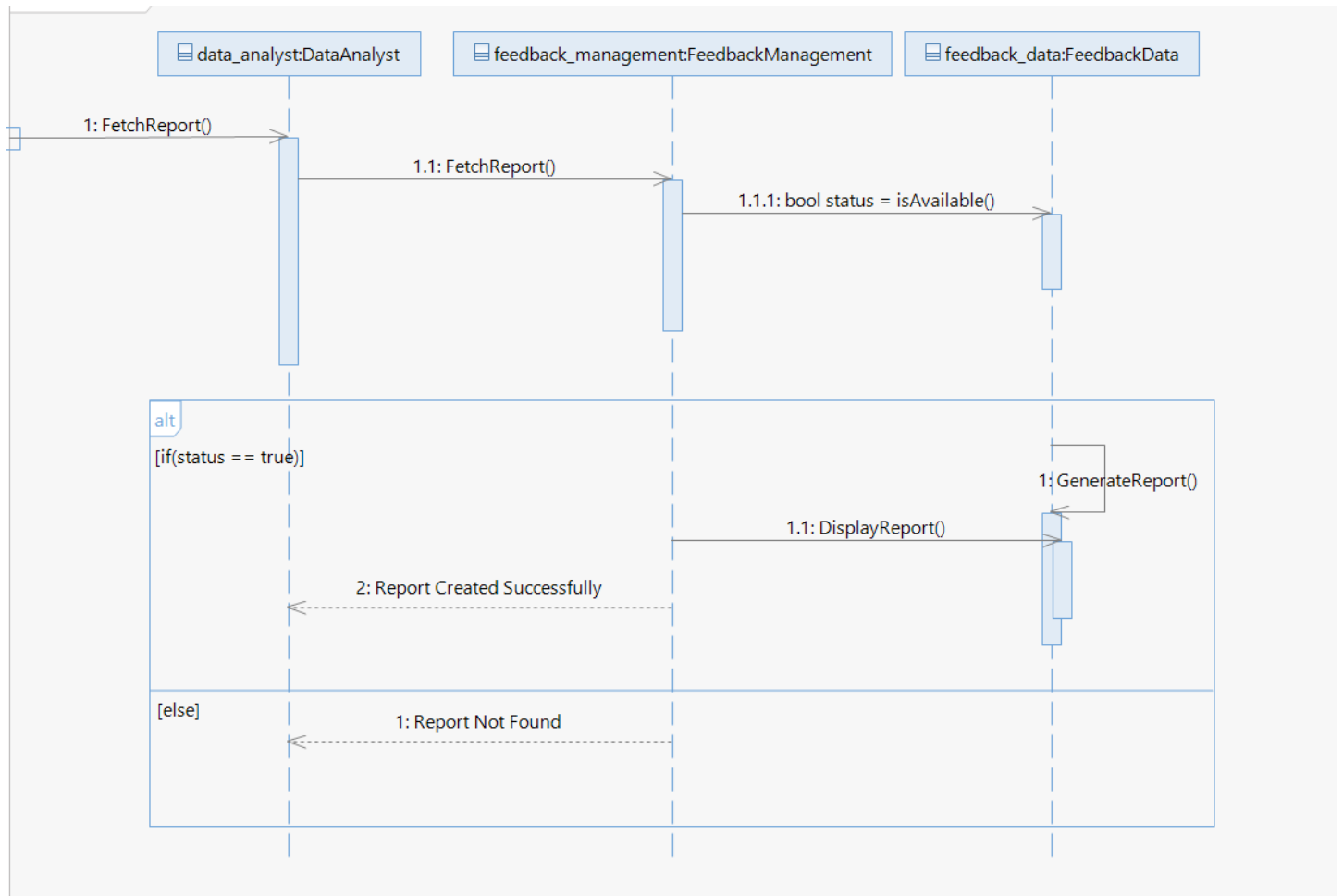


## UC-7 :Browse Complaint:

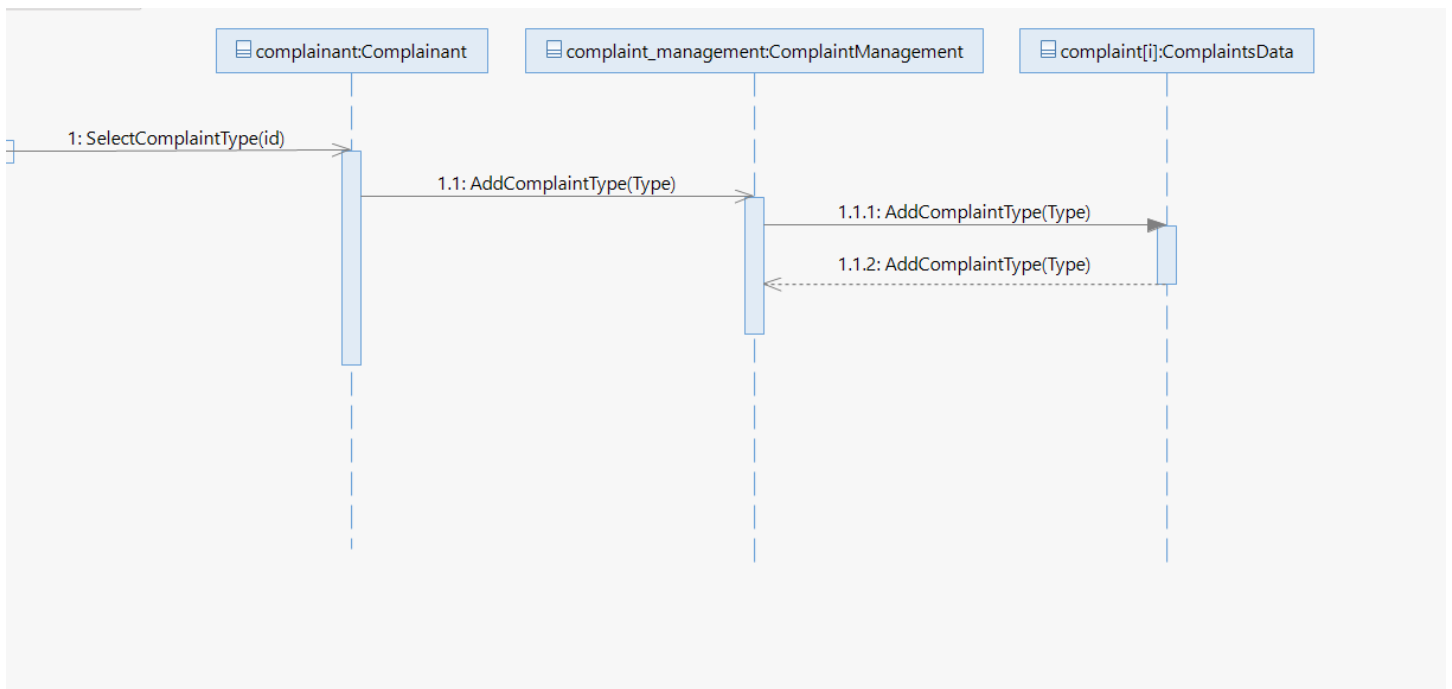


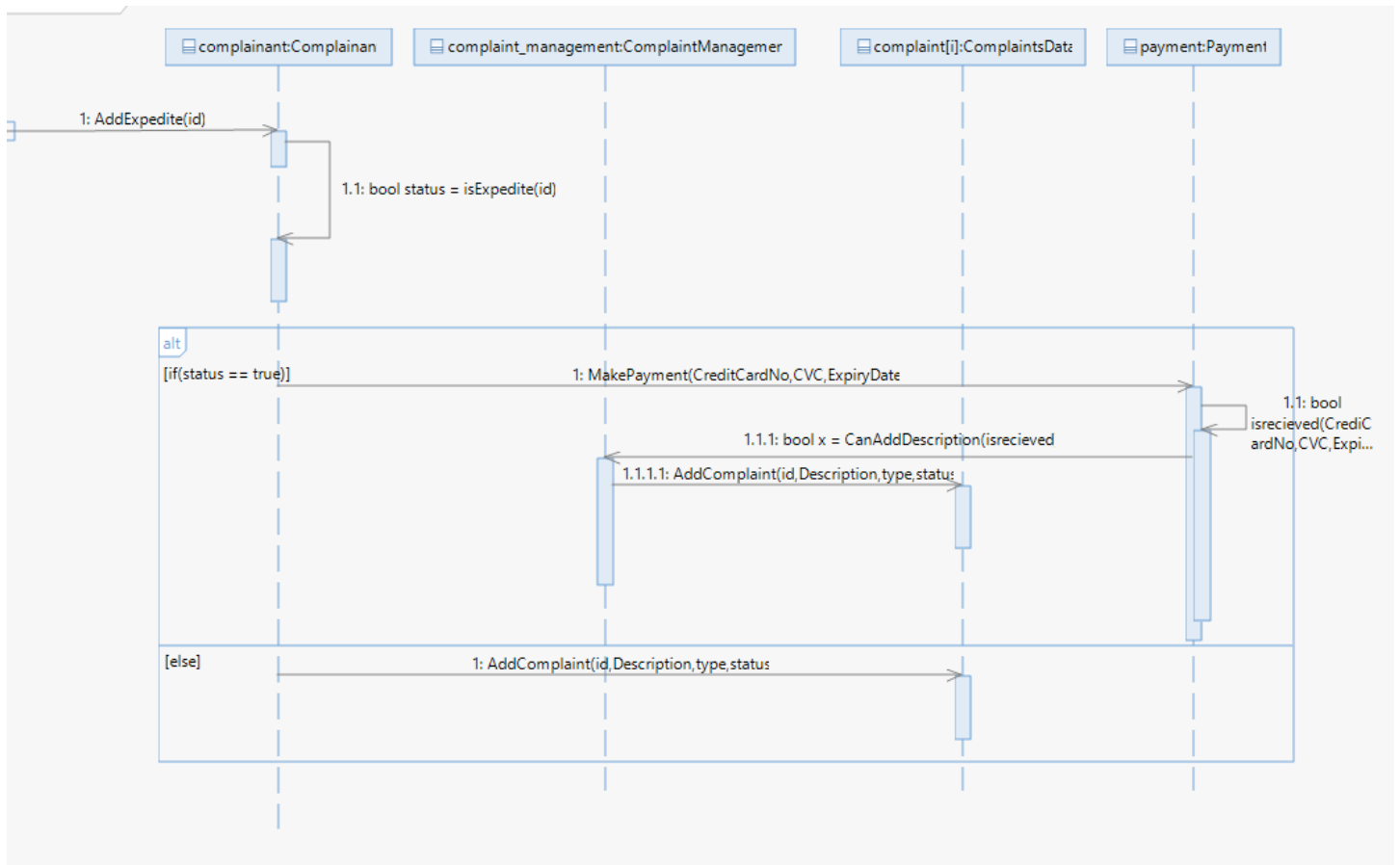
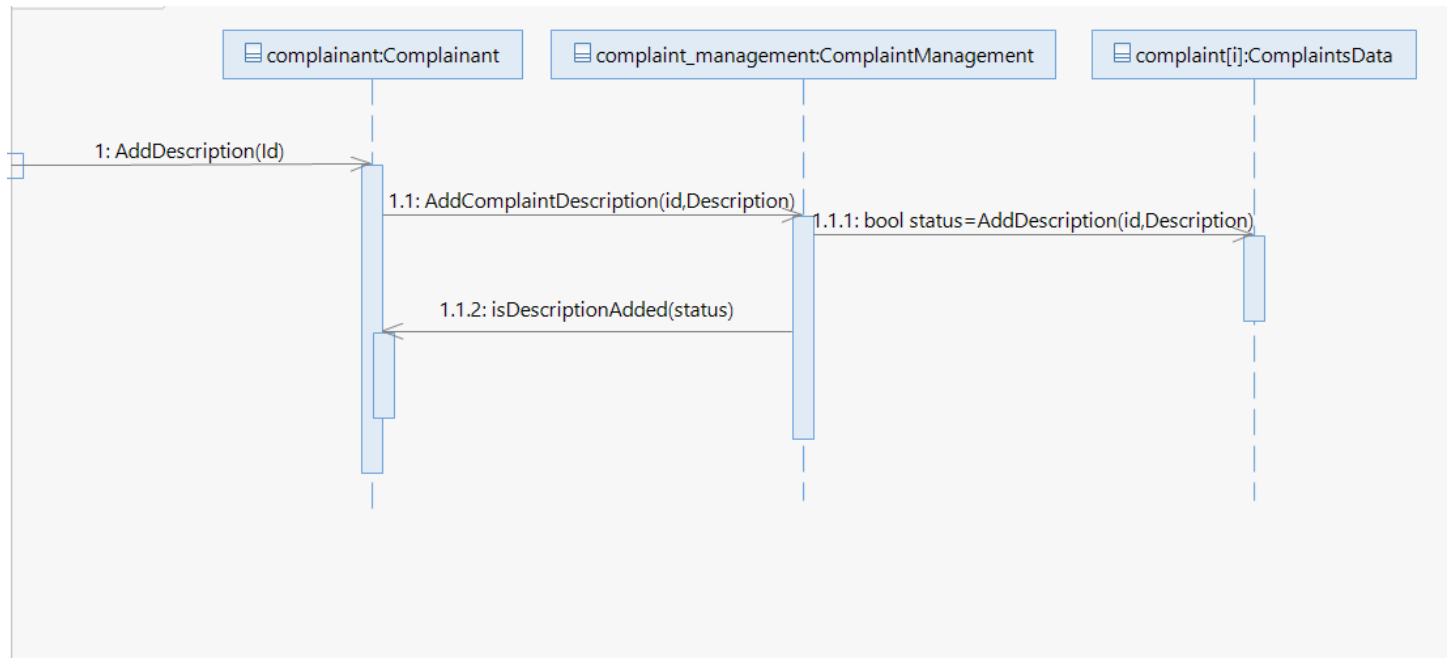
## UC-8: Generate Report:





## UC-9: Expedite Complaint:





## 10. Class Diagrams

