

[ Section ASD]

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## 1 Introduction

*Due to the increase in the number of missing persons, the difficulty of finding them, and the difficulty of filing a police report due to a large number of procedures and time-consuming, we are now in a time of speed. Also, most people do not know when missing persons or things are found and where they should go. Sometimes people's laziness in going to a competent destination is also a reason.*

*The reason that prompted us to make the application is that we realized the amount of time wasted in the traditional search process, and it is essential to find the missing persons as soon as possible.*

*In addition to valuable items and animals that are living in houses, so we need only a program that helps people and the police also in operations Search and be dedicated only to search to speed up the finding.*

*That's why we thought of these solutions:*

- 1-Create a field for the things that were found, and no one knows who its owner is, and all people have permission to access this page.*
- 2- The ability to download the program on all types of devices.*
- 3- An immediate update on the situation by the police on all cases.*
- 4- The possibility of approving the communication in less than 24 hours.*
- 5- There is more than one way to prove ownership.*

## 2 Problem Definition

Every person may lose any of his belongings, a pet, or a person dear to them, and it is a big problem, and the most difficult thing is to find them or find an easy way to report or follow up on the issue. Therefore, our project is the main essence is to help those who are affected by this problem and trying to help them find what they are looking for in the fastest way possible.

## 3 Information Gathering

### 3.1 Interview Description

The aim from the interview is to know and understand the user's needs and help to improve the application.

The main question in interview is:

1. Have you ever experienced the situation of losing something? How did you behave?
2. What would you do if you found something missing?
3. What suggestions do you think might help speed up the process of finding lost items?
4. Do you think that the idea of the program guarantees the ease and speed of finding lost things?
5. In your opinion, what are the requirements that guarantee property rights?

### 3.2 Interview Analysis

Interviewer	Interviewee	Analyst Comment
Joud	Jana ,student, 20 Dec	<i>I lost a wallet with pieces of gold in it. I sought the help of the local authorities. Most of the time I find things missing and I did not find a suitable way to communicate with their owners. I think it is a great idea and it will make it easier for us, save time and develop social responsibility. For me, I think that the idea of one general program includes Inside it all the data and all the cases are very useful so that it is a reliable source. Perhaps ownership verification systems are sufficient, and also that the program is linked to police stations. This will be useful in the process of trust.</i>
Joud	Abdullah , officer, 19 Dec	<i>All of us, at some point in time, have lost things and purposes that belong to us, and any natural reaction is stress and start searching for the last places of their presence, asking people about them, and trying to tell everyone that something is missing, and on the contrary, there are many times we are in a position that we find missing things for other people, such as a watch or a ring Precious and the like, and we try to put it in a clear place for everyone so that everyone can find and see it. I suggest that there is a program or a specific place in which the lost items are placed and pictures of them are published in a search that everyone</i>

		<p>wishes to see. Also, the application supports security and credibility so that it is confirmed that the owner of the lost item is really The existence of a program or a place like that will facilitate the process of finding lost and lost valuables and reduce the rate of loss of valuables and exposure to theft or deception. And it will enable all people to be able to find their lost items or help others with that, and my country has made great efforts for lost and found items in almost every public place and in every university there is a lost and found section for people and things.</p>
Talah	Jomana , Student , 20 Dec	<p>Jumana had not been exposed to any situation before, but it happened that she was at the university and found a lost wallet on the ground and did not know what to do, so she left it. She suggested to take a picture of the item and putting it on a specific platform for the university with a description or putting things in a box. Jumana liked the idea of the application because it guarantees the speed of finding the thing with the least possible effort. It is possible to verify the ownership of the person when asked about the specifications of the lost thing.</p>
Talah	Jafar, Barista , 19 Dec	<p>Jafar had already been exposed to the situation of losing his cat. The cat left the house and he did not see her. He tried to put flyers around the neighborhood and wrote an announcement in his accounts on social media. Jaafar told me that he had found a headset on a table in the cafe where he works, but when he opened the headset , it was connected to its owner, The owner sent signals to the headset through( Find My) application so , the location of the headset appeared . He suggested to make an electronic collars around the neck for animals in which the information of the possessor is recorded. He liked the idea of the application because it might speed up and shorten the process of finding lost items. The application requires the presence of an eye print in order to identify the owner.</p>
Shatha	Saad, first lieutenant, 20 Dec	<p>Saad did have experience with missing belongings but the most recent incident him losing his laptop last year , and when he realized that it was missing, he went looking for it at the place where he lost it but still he didn't find it, so he went to the security to search for it , but unfortunately it is still missing.</p> <p>And since he works as first lieutenant, he has seen so many missing cases, and unfortunately some of them took more than a month to find their families, so he suggested speeding up the process of finding the missing</p>

		<p>people by making a program that announces the missing people instead of announcing them in newspapers or on TV, because not everyone reads newspapers or news. And looking at his position in his work. His opinion of our program is very important to us.</p> <p>His opinion was that our program will not only help them but it will help poor families and bring them some comfort and make it easier for them to keep up with their cases instead of going to the police station every day to see the updates, and the program is very useful, because not only will it shorten the time and the effort. It will be suitable for all ages, and the speed of identifying the missing person will increase the chance of their return to a family. It will be easy to use for citizens and policemen, as updating information and tracking the case is easy for both parties. And he thinks that the required systems that guarantee property rights at the police station are sufficient, but they are not integrated for all types of lost items. Therefore, we must search and discover better and faster methods to guarantee rights. Therefore, he feels that our program will have better methods of preserving property rights than the police stations.</p>
<b>Shatha</b>	Ali, Teacher, 20 Dec	<p>Ali always forgot his stuff, but the most important thing he lost was his wallet on a 6 hour road trip. He didn't know how to find it or what to do or where he lost it and, unfortunately, he hadn't found it since that day, but there was one time when he found a lost child all on his own. He helped him to find his family, but it took almost a half day because there were no cameras or security around that area to help.</p> <p>Therefore, he suggested that there be an immediate reporting program instead of waiting for the police to show up. And every reported case should have a phone number attached to it so that who ever found it gets to report back on the case and make it easier to solve the problem and faster.</p> <p>His opinion about the program was that it not only saves time and effort, but also brings an unprecedented idea, which is that it urges the promotion of humanitarian cooperation and spreads the spirit of cooperation among everyone locally and globally.</p> <p>In fact, the program was introduced at the time of the current software revolution, and I see that the program is very easy when compared to other government programs.</p>

		<p>With regard to his opinion about the requirements to prove ownership, one of the most important requirements is a certificate proving ownership, photos he owns, or a payment receipt, and that the proof depends on what he lost, whether it is property, a family member, or even a pet. Each of them has different procedures. For example, if it is a family member, an id card is required from him and the police prove the link between them with tests if needed.</p>
<b>Khlood</b>	Seham, student, 19Dec	<p>All searching processes for a thing was trying to remember the last place , or asking the family, there were no Electronic or technique aids. There are also some difficulties in finding the things owners, especially in public places, It's probably will be easy if there were missing items police or inform a center in a public areas . Our country has developed moreover about safety , so that why it is easy to prove of ownerships . The application idea is extremely useful , Saves time and effort on a large scale , And it is substantial to make sure it easy and available in many countries and places.</p>
<b>Khlood</b>	Osama, Paramedic, 21 Dec	<p>The searching processes were counting on remembering, remember the last place you put your thing in , places you probably going to find your thing in . regarding to other people's things, It was a huge waste of time and exhausting, as well it's not easy to look for the thing owner . There supposed to be at least missing things lockers in public. I think that the application can be useful and facilitate the search process and it better than the idea of general funds, because most do not have the ability to go to the funds or they are too lazy. But people must be made aware of this application and knowing how to use it, because if the application's users are few, it will not be useful. It is also crucial to have the person's number and a field for private chatting, and not to merge areas with each other.</p>
<b>Rodina</b>	Khalid, Office Worker, 21Dec	<p>After Khaled's car was taken, he promptly reported the crime to the police. Three weeks later, someone reported seeing an abandoned car in a busy neighborhood for two weeks, along with particular procedures and formal documents to confirm the owners' identities. Additionally, Khaled believes it to be a creative and practical project idea that saves time and effort.</p>

<b>Rodina</b>	Rowina, High School Student , 21Dec	In one of the Jeddah malls, Rowina spotted a wallet. Unsure of what to do because she was unfamiliar with the steps needed to return the wallet to its owner, she turned it over to security. She explained that she had found it on the ground. According to Rowina, one way to facilitate and speed up the process of finding the owner of lost items is through a program like Tawakkalna, in which whoever has lost something reports it to the program so that a notification is sent to everyone nearby. This will help find the owner of the lost items to be seen and delivered to their owners more quickly. He must describe what is inside or any indication of his awareness of it, or if there is any information inside the lost object that identifies its owner, to prove ownership of the missing person.
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## The Summary About the Interview

Based on our conversations with people, we feel that one of the issues is the inability to get in touch with a trustworthy source to return lost objects to their owners. We also believe it is crucial to have a single, safe source that gathers all instances to build trust and encourage people to take action. Suppose they discover something, initiative. We conclude that the privileges offered by our scheme will be advantageous to police officers. It will unite people to support one another and assist the government in creating a better and safer nation.

We concluded that because people lack sufficient awareness about the speed technology will provide, the program will be one of the technology's most practical applications and benefit people.



## 4 Planning Phase

### 4.1 Project Goals

Gaining time and helping people through the program so that it speeds up and facilitates the process of submitting and receiving cases.

### 4.2 Cost and schedule estimation

#### *Project Estimated Costs*

Resources	Estimated cost
2 Programmers	18000 SR
1 Developer	5000 SR
1 Designer	4500 SR
3 Data Analyst	21000 SR

#### *Project Estimated Schedule:*

Tasks	Estimated duration	Start date	End date
Think about the problem	3 Days	15 Dec	17 Dec
Solution Plan	2 Days	17 Dec	18 Dec
Collect the data	4 Days	19 Dec	22 Dec

Arrange and prioritize the data	3 Days	23 Dec	25 Dec
Collect and analyze the requirements	3 Days	26 Dec	28 Dec
Requirements Validation	4 Days	29 Dec	1 Jan
Search for the developers and shareholders	1 week	2 Jan	8 Jan
Start Programming	1 month	9 Jan	9 Feb
Test the program	1 week	10 Feb	16 Feb
Maintenance	4 Days	17 Feb	20 Feb
Display The applications to a proxy customer	1 week	21 Feb	27 Feb
Publish the program	1 Day	28 Feb	28 Feb
Program interface design	4 Days	18 Jan	23 Jan
Advertising design and marketing	7 Days	24 Jan	1 Feb
Project presentation	2 Days	2 Feb	3 Feb

## 4.3 The Feasibility Study

### 1 Problem Definition:

Every person may lose any of his belongings, a pet, or a person dear to them, and it is a big problem, and the most difficult thing is to find them or find an easy way to report or follow up on the issue. Therefore, our project is the main essence is to help those who are affected by this problem and trying to help them find what they are looking for in the fastest way possible.

### 2 Scope Objectives of “new system”:

The name of our software is faqeedy

Creating a unified, reliable program that includes all cases and will be a reference for all people in case something is lost or something is found.

The main concept of this program is to link the technology to a useful way for the community and make it a primary source for all cases, which speeds up the processes of finding lost and lost itemsSome of the procedures that will be used:

1. Create a field for the things that were found, and no one knows who its owner is, and all people have permission to access this page.
2. The ability to download the program on all types of devices
3. An immediate update on the situation by the police on all cases
4. The possibility of approving the communication in less than 24 hours
5. There is more than one way to prove ownership

What distinguishes our program is that it will be a unified system for all regions and that it is connected to the police system, which guarantees the validity of cases and confidence in the program and not being afraid of reporting

### 3 Alternative Solutions:

1-Publication of the lost in newspapers and media.

2-Putting Air Tag.

From apple on all the belongings.

3-Pay another one or give up.

4-Making app to report the missing objects or person and find it location.

#### 4 Cost And Benefits of Alternatives:

Here draw the costs table.

Also write the benefit of applying alternative from finance view

<b>Alternatives</b>	<b>Cost</b>	<b>Benefits</b>	<b>Drawbacks</b>
<i>Publication of the lost in newspapers and media</i>	100-50\$	The sources are reliable	Not all people read the newspaper nowadays - Cannot post multiple types of lost and found
<i>Putting Air Tag From apple on all the belongings</i>	60-40\$	-It makes finding the lost easier  -Alerts the owner movement and the location of the object	- Alert all the surrounding people who have the app for it -It's only for one object or one person so it's expensive
<i>Pay another one or give up</i>	Depends on the price of the lost from 1 to 999+	No time will be wasted if it's missing forever	If pay another or give up the item could be out there, but they give up so early
<i>Making app to report the missing objects or person and find it location</i>	For free	-Benefits all people  -Easy to use and faster than most methods  -Doesn't cost anything since it will be used by the police	-The price of developing the program is high -It requires a lot of cooperation from the police -Needs a high amount of cyber security

## 5 Software Impacts:

*In fact, there is no service program that give a service like we will create, but there are some accounts in social media environments. The idea of accounting for missing animals, and this is the closest thing we found to our idea, but we will work from scratch in building the software.*

## 6 Potential Changes in the Organization:

- 1. Aiding the police in the search for people who have gone missing, whether they were people, animals, and objects.*
- 2. Assuring the individual that he has informed him that everything has been lost so that he may promptly track out the issue.*
- 3. The police officer can update case information, allowing the case owner to follow the case without going to the police.*
- 4- Make the situation widely known so anyone can locate the missing individual and bring him back to the police.*
- 5- Only the person in charge of the case can tamper with the data (those responsible for the cases and the case owner).*
- 6- Trust, wherein if a lost item is discovered, it is not given to anybody until ownership or kinship is established.*

## 7 Recommended Alternative of the Course of Action:

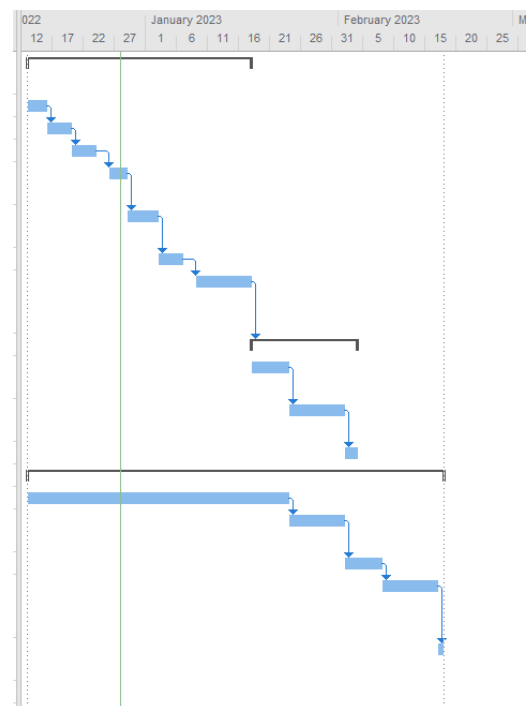
*Making an app to report missing items or people and track their whereabouts benefits everyone, is simple to use, works faster than most techniques, and*

## 4.5 Project Plan

**Specify:**

- Task list
- Resource names

Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
	analysis&software requirement	26 days	Tue 12/13/22	Tue 1/17/23		
	think about the people	3 days	Tue 12/13/22	Thu 12/15/22		
	solution plan	2 days	Fri 12/16/22	Mon 12/19/22	2	
	collect the data	4 days	Tue 12/20/22	Fri 12/23/22	3	
	arrange and prioritize the data	3 days	Mon 12/26/22	Wed 12/28/22	4	
	collect and analysis the requirement	3 days	Thu 12/29/22	Mon 1/2/23	5	
	requirements validation	4 days	Tue 1/3/23	Fri 1/6/23	6	
	search for the developers and shareholders	7 days	Mon 1/9/23	Tue 1/17/23	7	
	design	13 days	Wed 1/18/23	Fri 2/3/23	8	
	program interface design	4 days	Wed 1/18/23	Mon 1/23/23		
	advertising design & marketing	7 days	Tue 1/24/23	Wed 2/1/23	10	
	project presentation	2 days	Thu 2/2/23	Fri 2/3/23	11	
	implementation	49 days	Tue 12/13/22	Fri 2/17/23		
	start programming	30 days	Tue 12/13/22	Mon 1/23/23		
	test the programming	7 days	Tue 1/24/23	Wed 2/1/23	14	
	maintenance	4 days	Thu 2/2/23	Tue 2/7/23	15	
	display the applications to a proxy customer	7 days	Wed 2/8/23	Thu 2/16/23	16	
	publish the program	1 day	Fri 2/17/23	Fri 2/17/23	17	



## 5 Analysis Phase

### 5.1 Stakeholders

#### 1 The Customer

The government is one of the customers because it helps the citizen and the police

#### 2 Other Stakeholder

***The person who lost the thing:*** fill in the required data to find the lost thing.

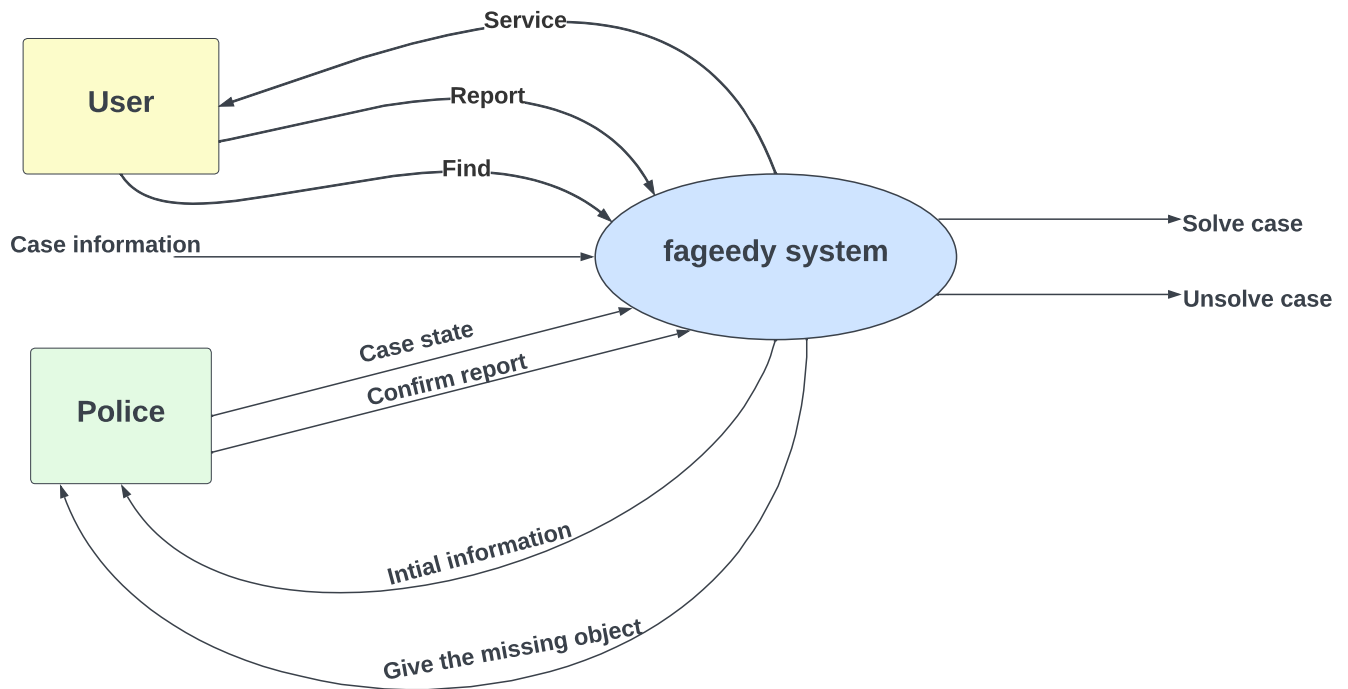
***The person who finds a missing thing:*** He documents the thing and locates it.

***Police:*** who approves the case, starts searching, sends the latest updates through the System and Ensure the completeness of missing items information.

***IT staff :*** who are responsible for installing and maintaining the system .

***Investigator:*** Verifies the credibility of the cases.

## 5.2 Context Diagram





### 5.3 Event Table

Event Name	Input and Output	Summary
1. Choose Service	Report (in)	Receive Report from user
2. Choose Service	Find(in)	Receive Find object report from user
3. Providing service	Service (out)	Dealing with the type of service to serve the user
4. Case Registration	Case Information (in)	The System receive all the information about the case
5. Dealing Cases	Solve or Unsolved the problem (out)	The System solve the case or Unsolved it
6. Updated Information	Case state (in)	The System receive the case status from the police
7. Initial Information	Initial Info about the Case (Out)	The police receive initial information about the case from the system
8. Case Approval	Confirm report (in)	The system gets the case approval from police
9. Return lost objects	Gives the missing object (out)	The police receive the missing objects

## 5.4 Functional Requirements

- FR1: The system shall allow the user to log in by entering the ID number and password.
- FR2: The system shall allow the user to choose the type of the Service.
- FR3: The system can receive more than one case.
- FR4: The user can share the location.
- FR5: The system allows the user to track the status of the report.
- FR6: The system allows the police to access all user information.
- FR7: The user can raise more than one report.
- FR8: The system allows the user to use any language.
- FR9: The system sorts the cases depends on the date.
- FR10: The user can communicate directly with people who found things.
- FR11: The system allows the user to choose the category of the missing thing from the list of things found and reported previously.
- FR12: The user can quickly login using the face print.
- FR13: The user can put a financial reward when finding the lost thing.
- FR14: The system allows the user to attach documents proving the ownership of animals when reporting their loss.

## 5.5 Non-Functional Requirements

### 2.1 Performance:

*NFR1: The System Receives more than one report at the same time.*

*NFR2: The system must interact with database systems for police officers and other users.*

### 2.2 Usability:

*NFR3: The system must be easy to use and clear to the user.*

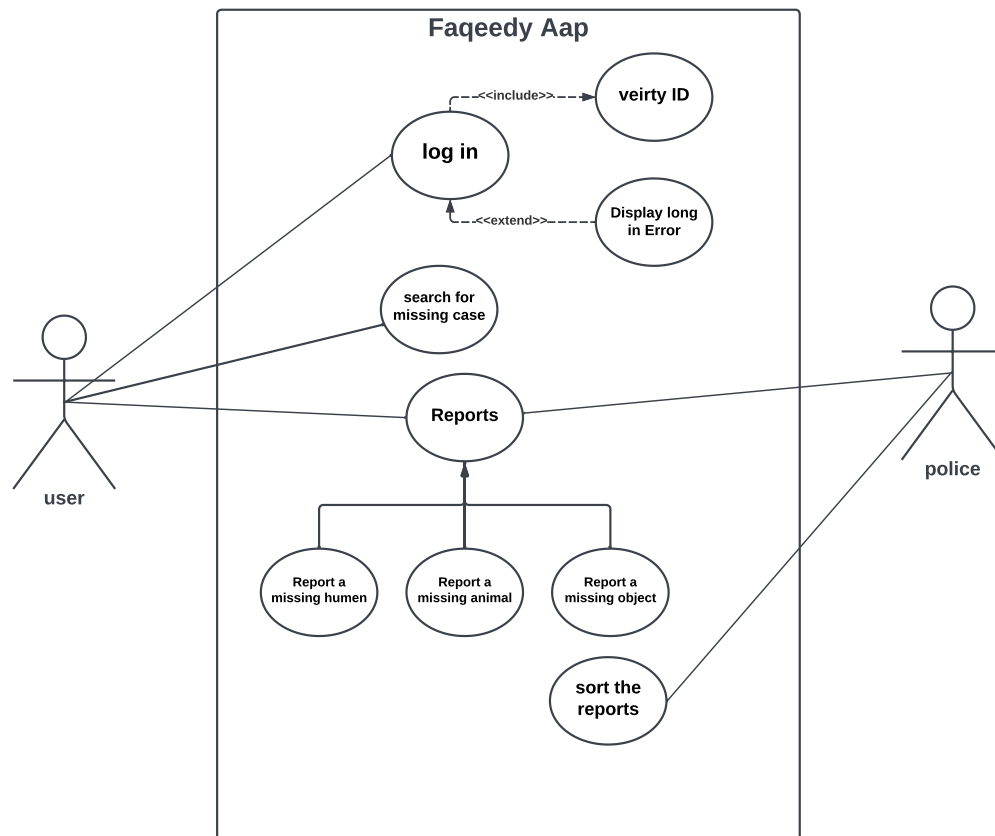
*NFR4: The System must be easy to remember for the casual user.*

### 2.3 Availability:

*NFR5: The system shall allow the user to access the application 24/7.*

*NFR6: The user can use the application without a network.*

## 5.6 Use case Diagram



## 5.7 Scenarios

Name	Reporting a missing animal
Id	TP-3
Actors	dog owner
Precondition	1-sign in with an ID number 2- enter personal information

**Path**

- 1-sign in with ID number
- 2-chose missing object/ found an object
- 3-contact number
- 4- putting the animal photo
- 5- animal information such as: sex, breed / male, female, the last place the dog was before it went missing
- 6- chose the city, area, neighborhood
- 7- deliver the animal to the nearest animal shelter/clinic.

<b>Name</b>	Finding a missing object
<b>Id</b>	FP-1
<b>Actors</b>	Student
<b>Precondition</b>	1- sign in with an ID number 2- enter personal information
<b>Path</b>	1-sign in with an ID number 2-contact number 3-chose missing object/ found an object 4- upload the object photo 5- object information: what is the object - where did you find the object 6- hand the object to the nearest police station in case you can't hand it to the owner
<b>Name</b>	Finding a missing ID Card
<b>Id</b>	FP-5
<b>Actors</b>	Clean worker
<b>Precondition</b>	1. sign up with residency number 2. enter personal information

**Path**

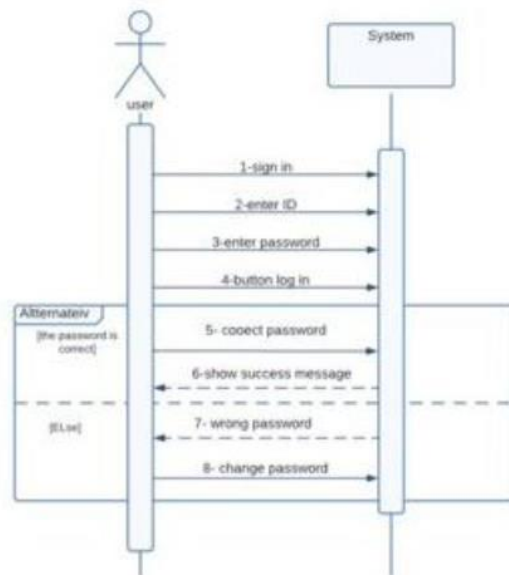
- 1-sign up with residency number
- 2-choose missing object/ found an object
- 3- contact number
- 4- put an ID photo, with covering personal information such as: - ID number - full name - the photo
- 5- hand it to the nearest police station.

<b>Name</b>	<b>Reporting a missing child</b>
<b>Id</b>	<b>SP-2</b>
<b>Actors</b>	<b>gaming operator</b>
<b>Precondition</b>	<ol style="list-style-type: none"> <li>1. sign in with ID number</li> <li>2. enter personal information</li> </ol>
<b>Path</b>	<ol style="list-style-type: none"> <li>1-sign up with residency number</li> <li>2-choose missing object/ found an object</li> <li>3- contact number</li> <li>4- put an ID photo, with covering personal information such as: - ID number - full name - the photo</li> <li>5- hand it to the nearest police station</li> </ol>
<b>Name</b>	<b>Police reception of reports</b>
<b>Id</b>	<b>FP-4</b>
<b>Actors</b>	<b>Policeman / woman</b>
<b>Precondition</b>	<ol style="list-style-type: none"> <li>1-sign in with ID number or Job ID</li> <li>2- enter personal information</li> </ol>
<b>Path</b>	<ol style="list-style-type: none"> <li>1-sign in with an ID number</li> <li>2-enter the department in which he / she works</li> <li>3- begin the reporting procedures</li> <li>4-According to the case, the lost item is evaluated and sent to the relevant department</li> <li>5-Keep searching</li> <li>6-Case closed</li> </ol>

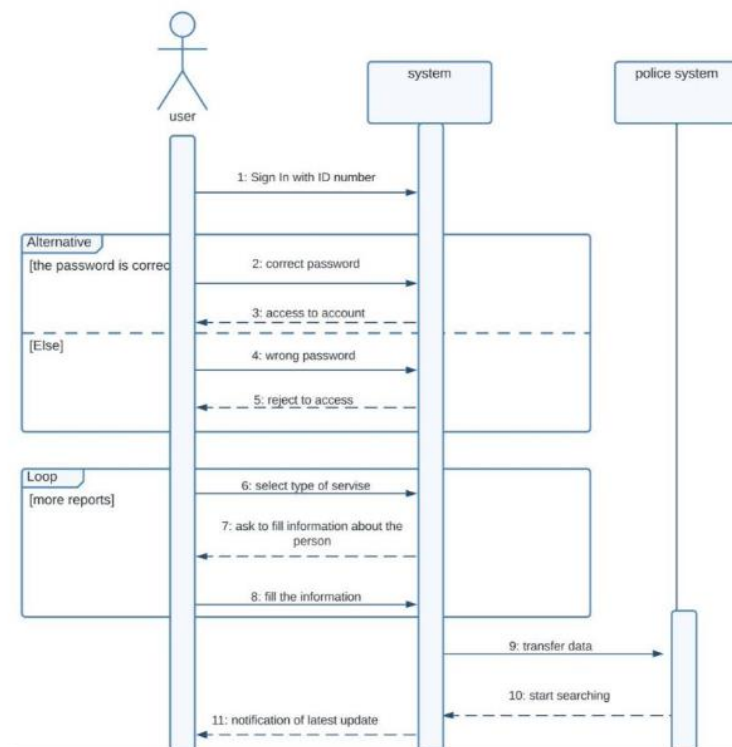
## 6 Design Phase

### 6.1 System Sequence Diagram

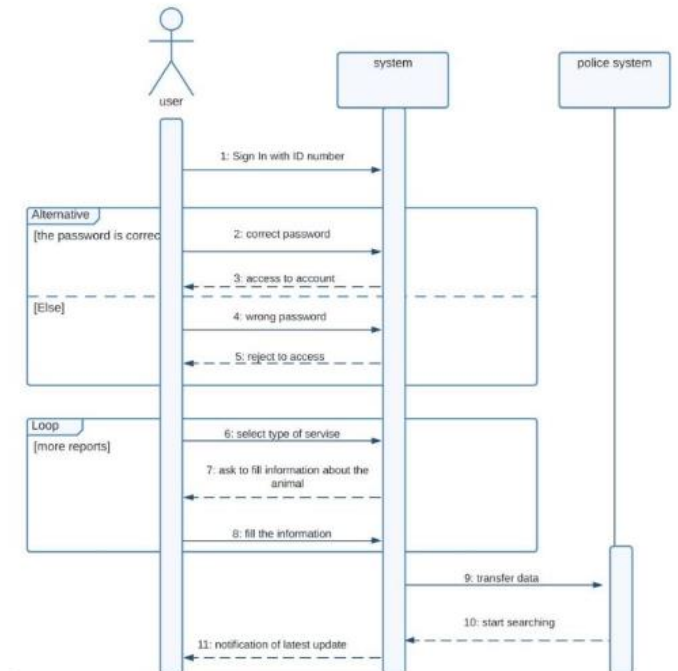
User log in sequences



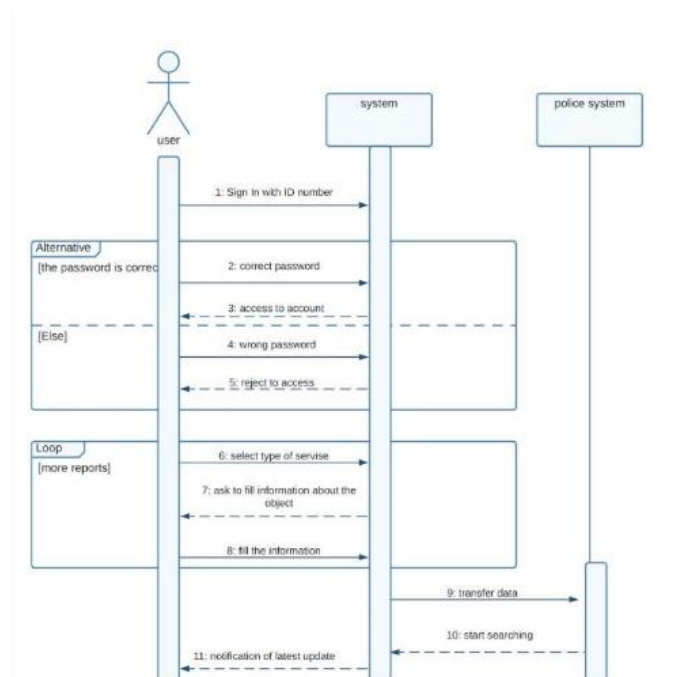
Report/Finding missing human sequences



## Report/Finding missing animal sequences

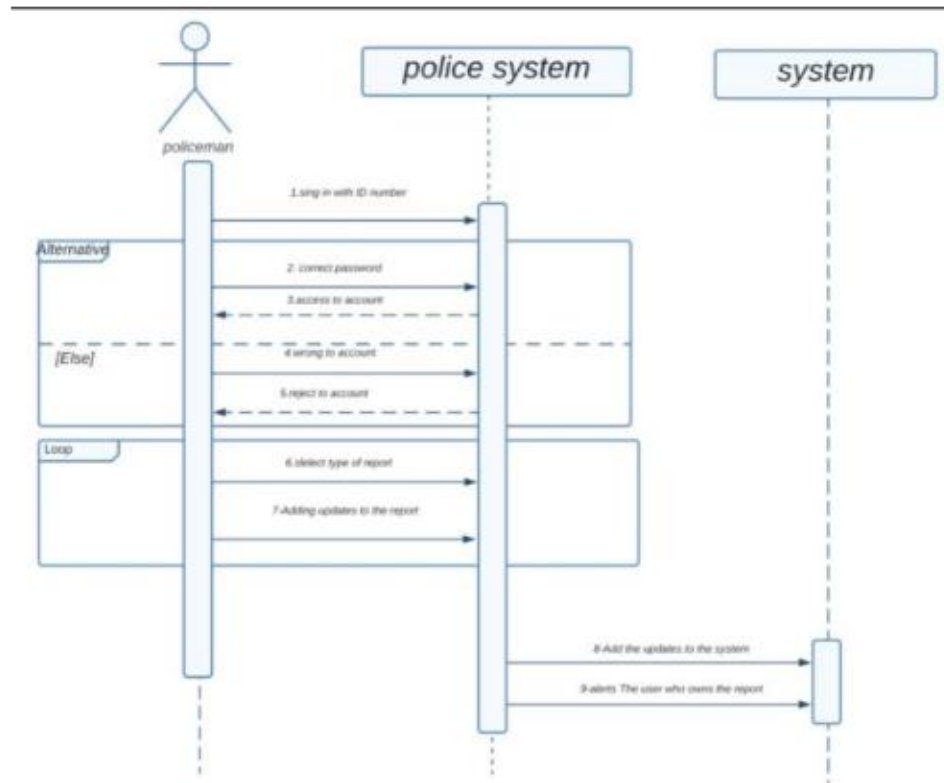


## Report/Finding missing object sequences

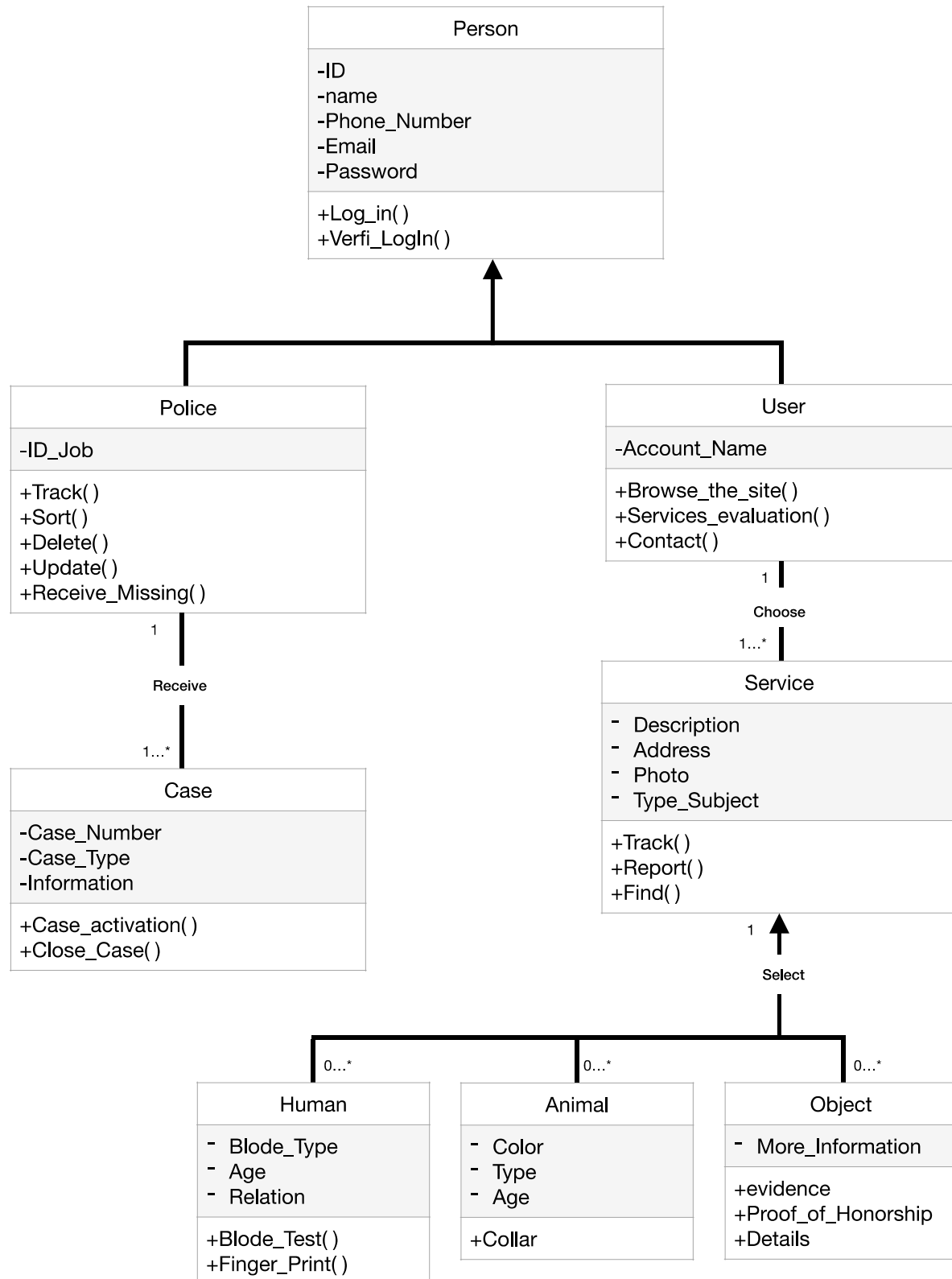




## Sort report by police sequences



## 6.2 Class Diagram



## 7 Conclusion

In conclusion, The Faqeedy app has finally gone through several steps, starting with user research and interviews before creating the project plan and calculating the cost of our application. establish an event table in the context diagram, assess the stakeholders, do a feasibility analysis, and list the functional and non-functional requirements. The use case, sequence, and class diagrams are designed last before the system models. The challenge we faced in developing the Faqeedy app was the challenge of implementing and delivering the product on time, as well as the challenge of creating an application with novel features and concepts. The lessons we took away from this work included how to design projects, the use of visuals in illuminating and enabling project work, creating a project that meets the requirements of the client, and teamwork.