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Faculté des Nouvelles Technologies de l'Information et de la
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d'Information

Option : Software Engineering

Rapport MINI-PROJECT

SMART HOME SYSTEM

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1. Introduction :

A smart home system is a network of connected devices and services that work together to provide convenience, comfort, and security for the home. The main actors in this system are the house owner, authorized persons, and the security system. The house owner has control over the system and can manage the various devices and services through a user-friendly interface, such as a smartphone or tablet app. Authorized persons, such as family members or guests, can be granted access to the system to control certain devices and services. The security system, consisting of sensors and alarms, protects the home and its occupants, and can be monitored and controlled remotely by the house owner or authorized persons. All these elements work together to create a smart and secure living environment.

2. Identification of actors :

In this section we identify the principal actors for application(**Tableau 1**).

Tableau 1:identification of actors

Actor	ROLE
Admin	<ul style="list-style-type: none">• Represent the home owner who can manage the autorised persons and security system and surveillance system.
Autorised person	<ul style="list-style-type: none">• Represent the person who can see the temperature and humidity and request permission to access the door.
Security System	<ul style="list-style-type: none">• Represent the system who can manage the door and camera.
Surveillance System	<ul style="list-style-type: none">• Represent the system who can manage the temperature and humidity.

3. Identification of use cases :

In this section we identify use cases and Determine the responsible actor for each case(Tableau 2)

ACTEUR	Cas d'utilisation
Admin	<ul style="list-style-type: none">• Manage autorised persons.• Manage security system.• Manage surveillance system.
Autorised person	<ul style="list-style-type: none">• View Temperature.• View humidity.• Request access to the door.
Security System	<ul style="list-style-type: none">• Control the door.• Control the camera.• Save access request.
Surveillance System	<ul style="list-style-type: none">• Capture info.• Send humidity and temperature.

Tableau 2:identification use cases

4. Context static diagram :

This section Represnt the context static diagram(Figure 1).

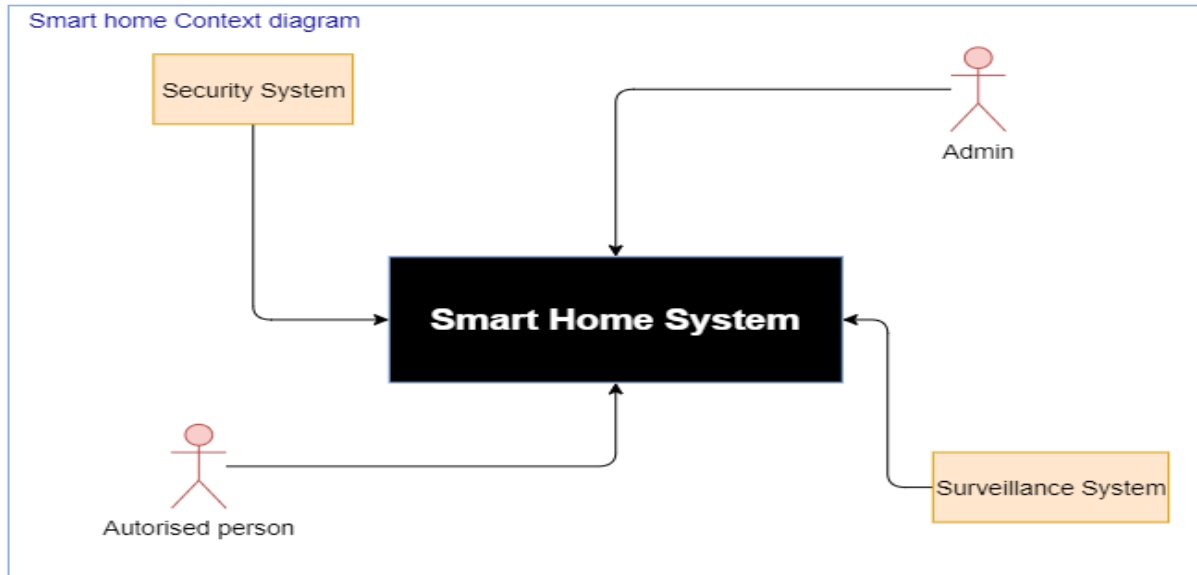


Figure 1:Context Diagram

5. Use case diagram

This section represents use case diagram.

a) Admin case diagram :

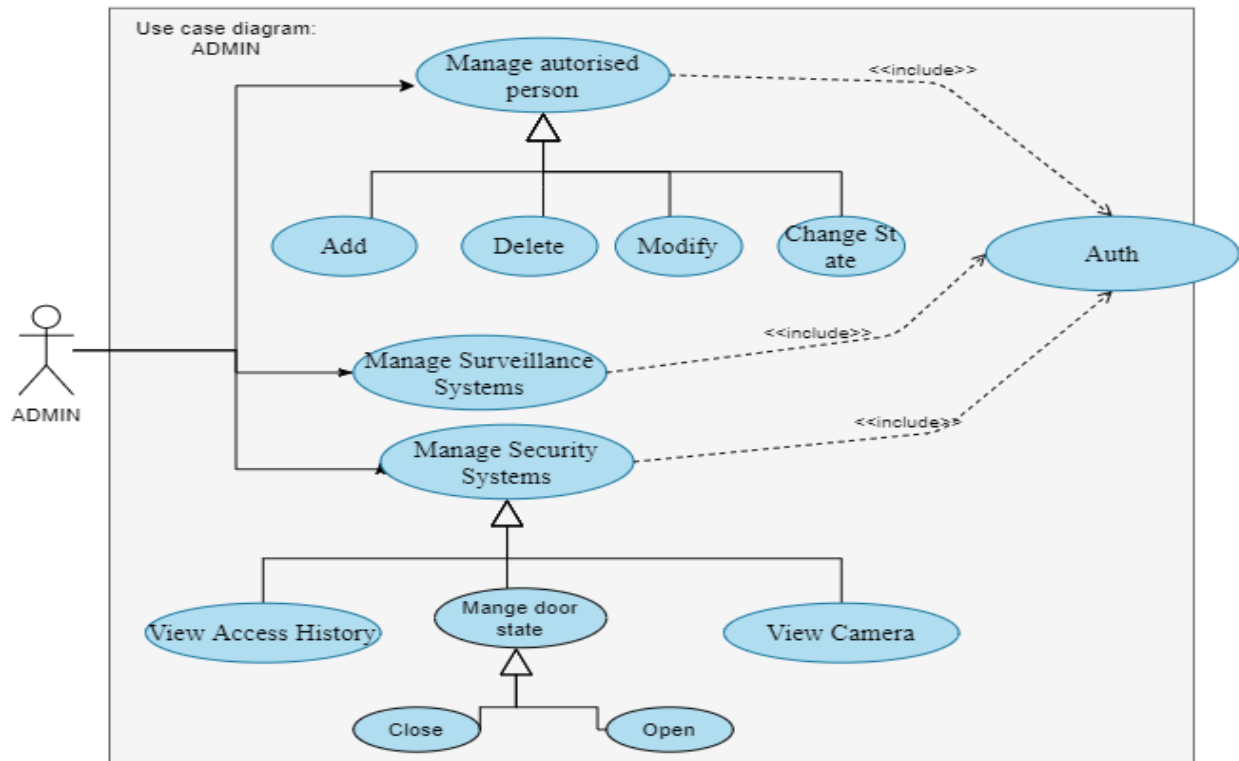


Figure 2:Admin use case diagram

b) Autorised person use case diagram:

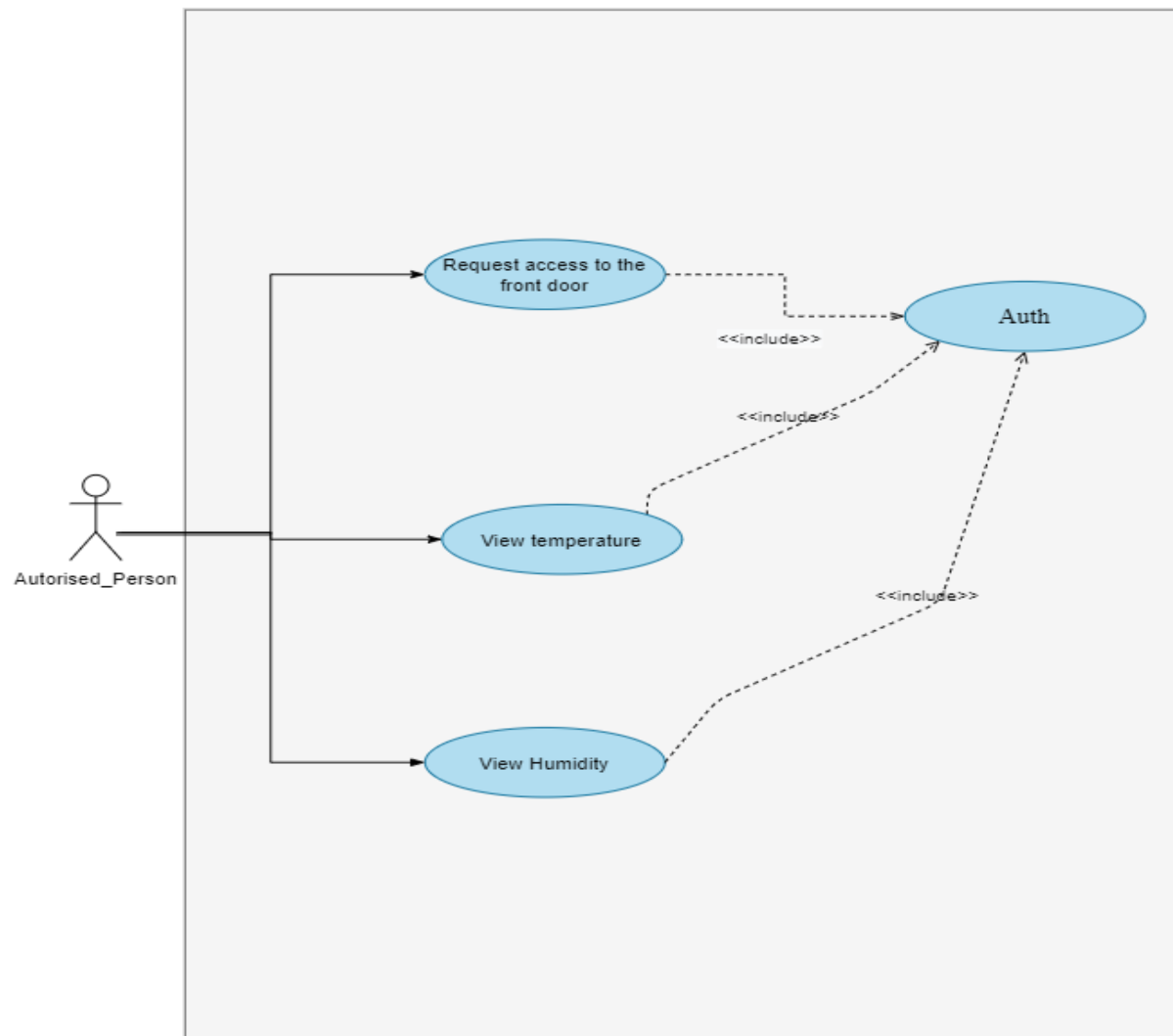


Figure 3: Autorised person use case diagram

c) Security system use case diagram :

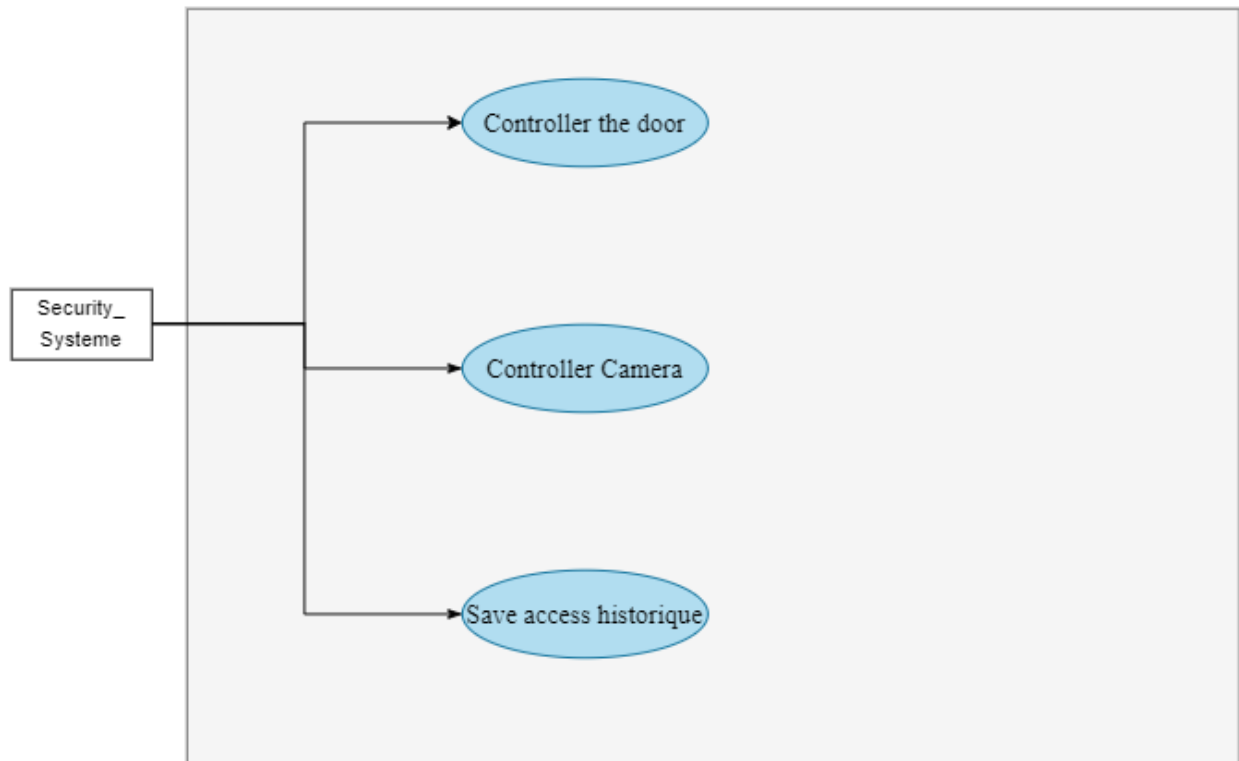


Figure 4:Security use case diagram

d) Surveillance system use case diagram:

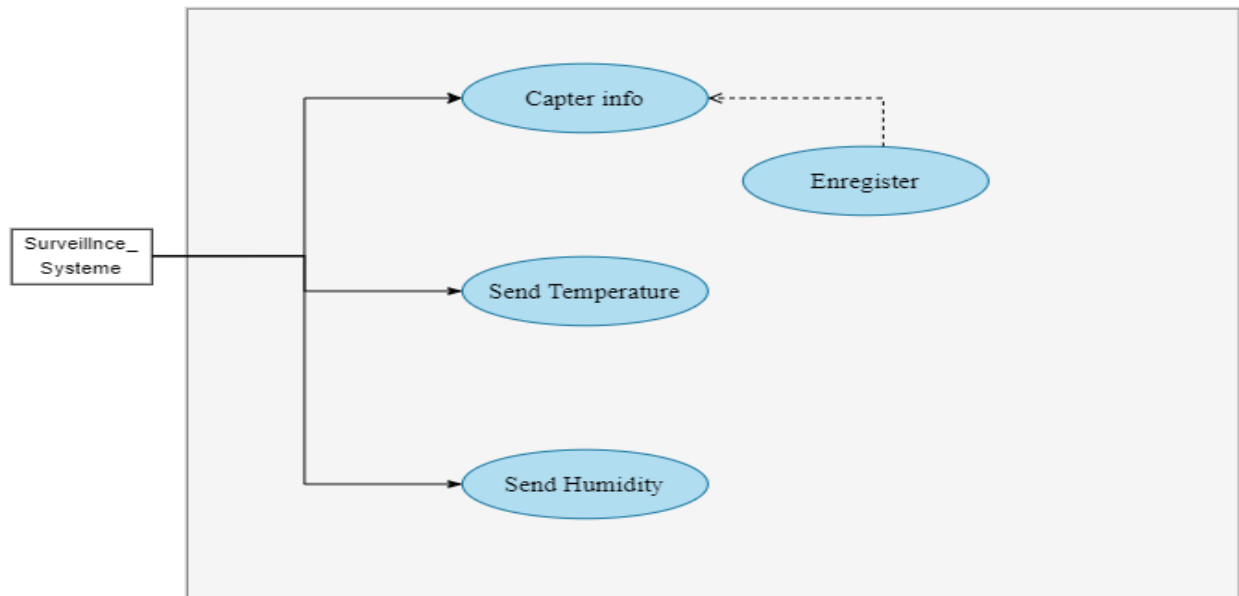


Figure 5:Surveillance use case diagram

e) Global use case :

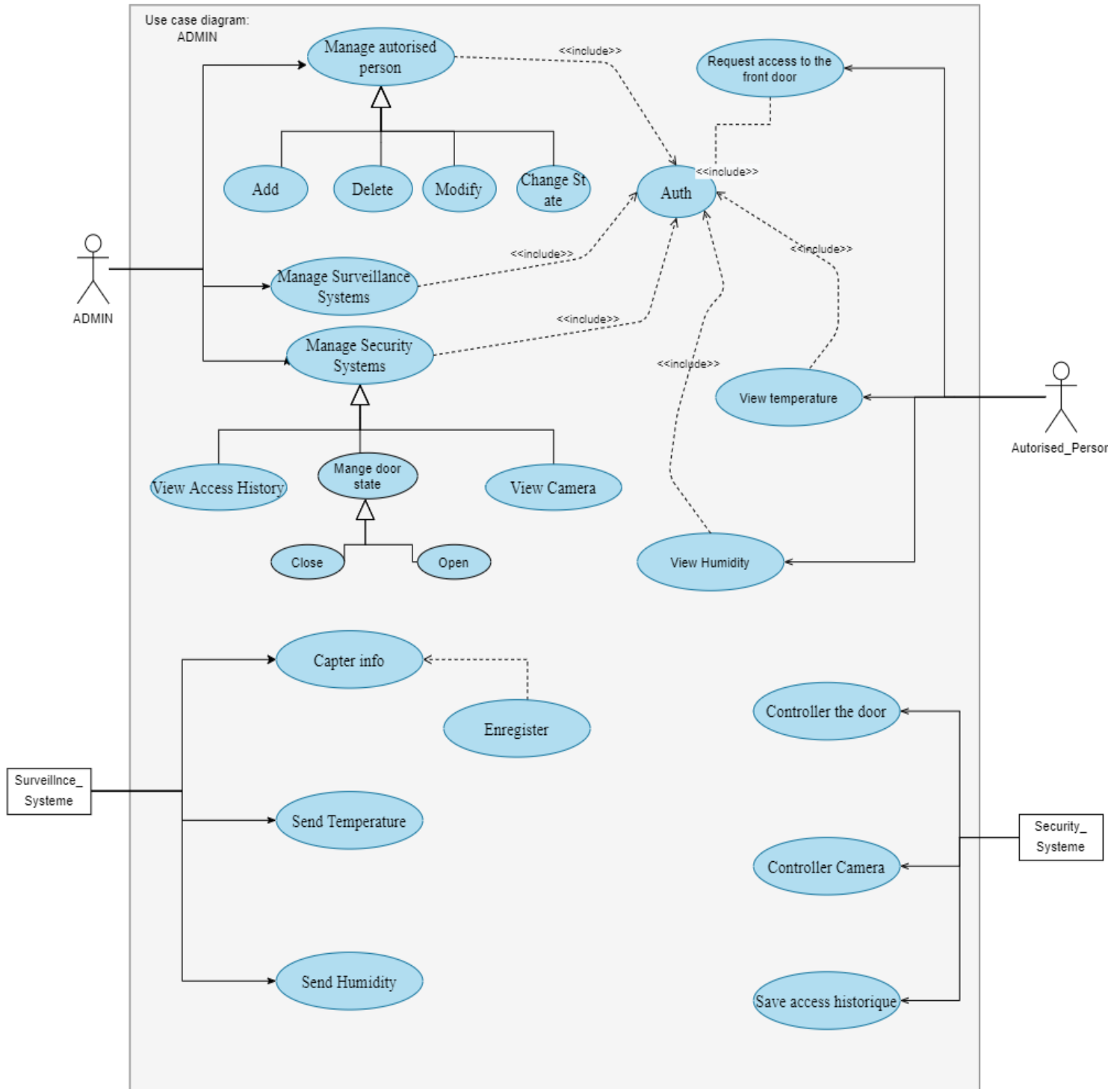


Figure 6:Global use case

6. Ad-hoc Architecture :

In this section we designed a simple architecture for smart home



Figure 7: Ad-hoc Architecture

This section we designed the component diagram(Figure 8).

