Use Cases Description

Name of Use Case:	Door locking		
Created By:	Egor Anenkov	**Last Updated By:**	Egor Anenkov
Date Created:	2/15/23	**Last Revision Date:**	3/3/23

Description:	A senior wants to lock the house remotely using his mobile app when he goes out
Actors:	Senior, Senior's Family, Device, Ai
Preconditions:	1. Senior is going out of the house 2. He has his verified device with him 3. He wants to lock the house
Postconditions:	1. The house system receives the request to close the doors 2. The doors have closed 3. Can be opened only by verified users
Main Flow:	1. Senior takes out his device and logs in to the app 2. Senior requests for the house system to close the doors 3. The system closes all doors 4. System sends message to the senior and his family about successful request completion
Alternative Flows:	1. In step 1 of the normal flow, if the senior forgot his account info: 1. Senior calls his family 2. Family members log in to the app 3. They request the system to close the doors 4. System closes the doors 5. System sends message to the senior and his family about successful request completion 2. In step 3 if senior forgot to close the door: 1. Ai checks the camera to see that there is no one inside or near the house 2. In 15 minutes AI closes the door and sends messages to the senior and his family about closed doors.
Exceptions:	In step 1 if the senior is inside the house and someone unknown is approaching the house: 1. Close the doors 2. Send the message about closed doors and unknown person to the senior and senior's family 3. Wait for the furthest requests
Non-Functional Requirements:	The following requirements must be met before execution of the use case 1. Both senior and senior's family devices should have accounts for the app. 2. Both senior and senior's family devices should have a connection to the house system 3. Senior and family know how to use app(the app is simple in use)

Name of Use Case:	Turning on the kettle		
Created By:	Egor Anenkov	**Last Updated By:**	Egor Anenkov
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Description:	A senior wants to turn on the kettle remotely
Actors:	Senior, Senior's Family, Device
Preconditions:	1. Senior is going out of the house 2. Senior has a verified device with him 3. There is water in the kettle 4. He wants to boil the water so he won't waste time later
Postconditions:	1. The house system receives the request to boil the kettle 2. The system turns on the kettle 3. It sends a message to the user about turning on the kettle 4. It sends a message if the water is boiled 5. It sends the message if there is no water inside
Main Flow:	1. Senior takes out his device and logs in to the app 2. Senior requests for the house system to turn on the kettle 3. The system checks if there is water in the kettle 4. System turns on the kettle 5. System sends a message to the senior about successful request 6. System sends the message to the senior when the water is boiled
Alternative Flows:	1. In step 1 of the normal flow, if the senior forgot his account info: 1. Senior calls his family 2. Family members log in to the app 3. Continue from the step 3 of main flow 2. In step 3 of normal flow and alternative flow above, if there is no water inside: 1. Send the message to the user who requested kettle turn on 2. Wait till someone pours water inside 3. Continue from step 4 of normal flow
Exceptions:	In step 3 of normal flow and 1st alternative flow if the system sees that water is already boiled: 1. Send the message that the water is boiled
Non-Functional Requirements:	The following requirements must be met before execution of the use case 1. Both senior and senior's family devices should have accounts for the app. 2. Both senior and senior's family devices should have a connection to the house system 3. All appliances can be turned on and off by the system 4. Senior and family know how to use app(the app is simple in use)

Name of Use Case:	Risky behavior		
Created By:	Egor Anenkov	**Last Updated By:**	Egor Anenkov
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Description:	An AI sends a message to the senior's family about risky senior behavior
Actors:	Senior's Family, Device, Ai
Preconditions:	1. Senior is acting strange or doing something risky 2. Family members have their devices with them
Postconditions:	1. The house system sends messages and video of the situation to the family members 2. If AI identifies senior state as dangerous it sends the message to the hospital
Main Flow:	1. Senior is acting strangely (for example he is drunk and throws different items) 2. AI receives data about this 3. The system sends video and messages to the family 4. System waits further commands from the family
Alternative Flows:	1. In step 2 of the normal flow, if the AI sees that the senior is in danger state(unconscious): 1. The system sends message and the video to the hospital 2. The system sends message and the video to the family 3. The system waits further commands from the family 4. If the emergency arrives the system opens the doors (let's assume they have special code that is sent by the system in case of such situation)
Exceptions:	In step 1 if the senior is with someone else inside his house(and this person is in one room with the senior): 1. send the message to the hospital only in case of serious danger 2. Wait further commands from the family
Non-Functional Requirements:	The following requirements must be met before execution of the use case 1. Both senior and senior's family devices should have accounts for the app. 2. Both senior and senior's family devices should have a connection to the house system 3. Cameras are working and connected to AI 4. Senior and family know how to use app(the app is simple in use)