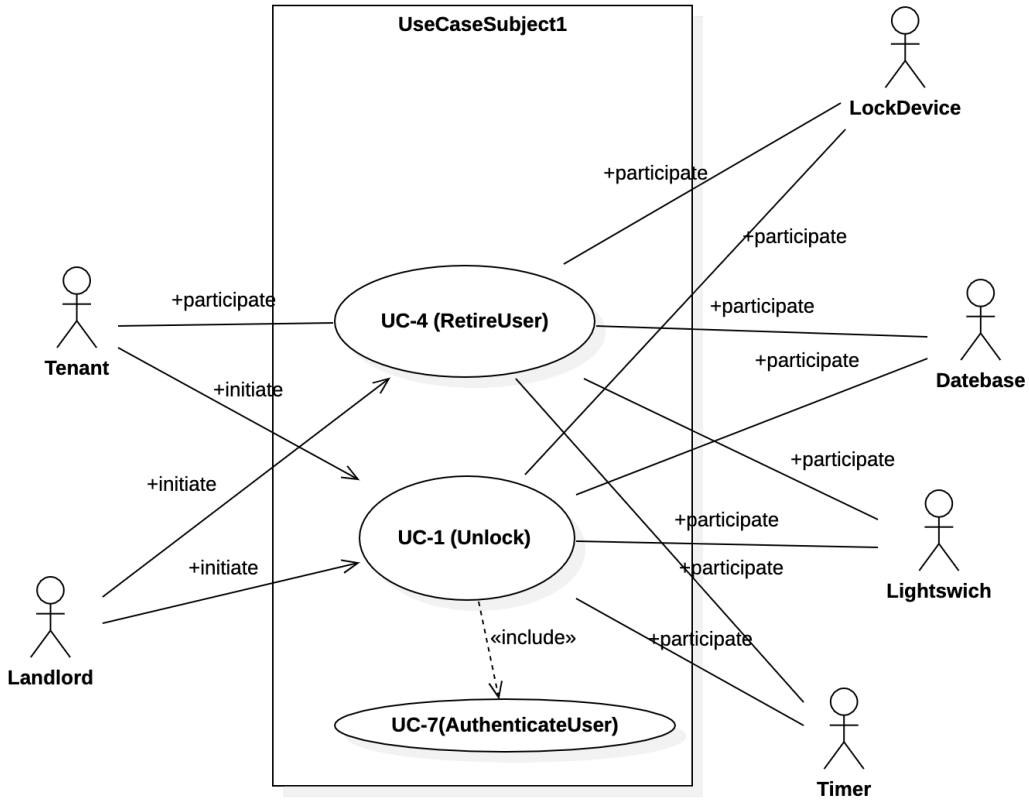
UseCaseSubject1
LockDevice
+participate
+participate
Tenant
+participate
UC-4 (RetireUser)
+participate
Datebase
+participate
+initiate
+participate
+initiate
UC-1 (Unlock)
+participate
Lightswich
+initiate
+participate
Landlord
«include»
+participate
UC-7(AuthenticateUser)
Timer

Use Case UC-1:	**Unlock**
Related Requirem'ts:	REQ1, REQ3, REQ4, and REQ5 stated in UseCaseDiagram1.png
Initiating Actor:	Any of: Tenant, Landlord
Actor's Goal:	To disarm the lock and enter, and get space lighted up automatically.
Participating Actors:	LockDevice, LightSwitch, Timer
Preconditions:	• The set of valid keys stored in the system database is non-empty. • The system displays the menu of available functions; at the door keypad the menu choices are "Lock" and "Unlock."
Postconditions:	The auto-lock timer has started countdown from autoLockInterval.
Flow of Events for Main Success Scenario:	
→ 1.	**Tenant**/**Landlord** arrives at the door and selects the menu item "Unlock"
2.	include::*AuthenticateUser* (UC-7)
← 3.	**System** (a) signals to the **Tenant**/**Landlord** the lock status, e.g., "disarmed," (b) signals to **LockDevice** to disarm the lock, and (c) signals to **LightSwitch** to turn the light on
← 4.	**System** signals to the **Timer** to start the auto-lock timer countdown
→ 5.	**Tenant**/**Landlord** opens the door, enters the home [and shuts the door and locks]

Use Case UC-4:	RemoveUser
Related Requirem'ts:	REQ3, and REQ7 stated in UseCaseDiagram1.png
Initiating Actor:	Landlord
Actor's Goal:	To retire a use's access authentication.
Participating Actors:	Database
Preconditions:	• The set of valid keys stored in the system database is non-empty. • The target user is existed in database.
Postconditions:	The modified data is stored into the database and the target user's access is vanished.

Flow of Events for Main Success Scenario:

→	1.	**Landlord** wants to remove a Tenant and enters the System.
	2.	
←	3.	**System** (a) display the options of activities available to the Landlord and (b) prompts the Landlord to make selection.
←	4.	**Landlord** selects the user to remove.
→	5.	System (a) stores the new data on a persistent storage, and (b) signals completion.

Test-case Identifier:	TC-1
Use Case Tested:	UC-1, main success scenario, and UC-7
Pass/fail Criteria:	The test passes if the user enters a key that is contained in the database, with less than a maximum allowed number of unsuccessful attempts
Input Data:	Numeric keycode, door identifier

Test Procedure:	**Expected Result:**
Step 1. Type in an incorrect keycode and a valid door identifier	System beeps to indicate failure; records unsuccessful attempt in the database; prompts the user to try again
Step 2. Type in the correct keycode and door identifier	System flashes a green light to indicate success; records successful access in the database; disarms the lock device

Test-case Identifier:	TC-4
Use Case Tested:	UC-4, main success scenario, and UC-8
Pass/fail Criteria:	The test passes if : The landlord logins correctly, and successfully retires an existed tenant. If the retired user could still unlock a lock, the test fails.
Input Data:	System login info, target tenant.

Test Procedure:	**Expected Result:**
Step 1. Landlord is successfully identified	The System indicates success and record the access, showing the user panel to the landlord.
Step 2. Try to retire an existed user	The target user will no longer be able to unlock, and get deleted in DB.
Step 3. Try to retire a not existed user	The System will prompt landlord the user is not existed
Step 4. Type in the incorrect login info once	The System indicates fail and record the access.