

# Lab-3

## Derive UC-1 (Unlock) and UC-4 (RetireUser)

Initiator	Initiator's Goal	Participants	Use Case Name
Tenant	Unlock and enter home.	Lock,Household,Devices, Database	Unlock (UC-1)
Landlord	Retire an existing user account and disable access.	Database	RetireUser (UC-4)

## Give the use case schemas of UC-1 and UC-4

Use Case UC-1: Unlock		
Related Requirements:	REQ1, REQ3, REQ4, and REQ5 stated in Table 2-1	
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 mobile phone 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 2	Tenant/Landlord arrives at the door and selects the menu item "Unlock" 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]
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Use Case UC-4: RetireUser		
Related Requirements:		REQ6 in Table 2-1
Initiating Actor:		Landlord
Actor's Goal:		Retire an existing user account and disable access.
Participating Actors:		Database
Preconditions:		The set of valid mobile phone 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." The landlord can remove the user account
Postconditions:		an existing user account was be retired and access was be disabled. The tenant can not use his mobile phone to enter the room。
Flow of Events for Main Success Scenario:		
→	1	Landlord retire an existing user account and disable access.
→	2	Tenants using his own mobile phone to unlock the door.
←	3	System beeps to indicate failure and tenants can not enter the room

I think the flow of Events for Extensions (Alternate Scenarios) is not need in UC-1 and UC-4, because they can only do it in one way

## Give the acceptance tests for UC-1 and UC-4

Test-case Identifier: TC-1	
Use Case Tested: UC-1, main success scenario	
Pass/fail Criteria: The test passes if the user unlock the doors by using his own mobile phone, the system will block when it detects multiple lock-phone pairing failures.	
Input Data: mobile phone, door identifier	
Test Procedure:	Expected Result:

Step 1. Using incorrect mobile phone and a valid door identifier.	System beeps to indicate failure; records unsuccessful attempt in the database; prompts the user to try again
Step 2. Using correct mobile phone and door identifier.	System flashes a green light to indicate success; records successful access in the database; disarms the lock device.

<p>Test-case Identifier: TC-7</p> <p>Use Case Tested: UC-1, main success scenario</p> <p>Pass/fail Criteria: The tenant can no longer enter the room after the tenant has deleted the mobile phone account in the database</p> <p>Input Data: mobile phone, door identifier</p>	
Test Procedure:	Expected Result:
The tenant using his own mobile phone to unlock the doors.	System using the Bluetooth network to detect the proximity of user's phone and beeps to indicate failure, the tenant can not enter the room.
The tenant using his own mobile phone to unlock the doors.	System flashes a green light to indicate success; records successful access in the database; disarms the lock device.