USER STORY#

A real estate rental agency which leases online and which has different premises, geographically distant, is obliged to send an agent on site, for each rental transaction, in order to hand over the keys to the tenant and to hand them over to them. recover after the end of the rental period.

Sometimes the agency has even opened other branches in other regions or hired someone to handle these kinds of issues.

This includes waste of resources, waste of time and unnecessary charges for a very simple operation (delivery and recovery of keys).

Solution

The proposed solution is that the agency equips the doors of the properties it manages with a connected lock (electric lock equipped with a WiFi module) which opens with a 4-digit digital code entered by the tenant each time time he wants to open the door.

Opening codes are generated by the agency for a specified period (rental period) after which the codes will be invalid.

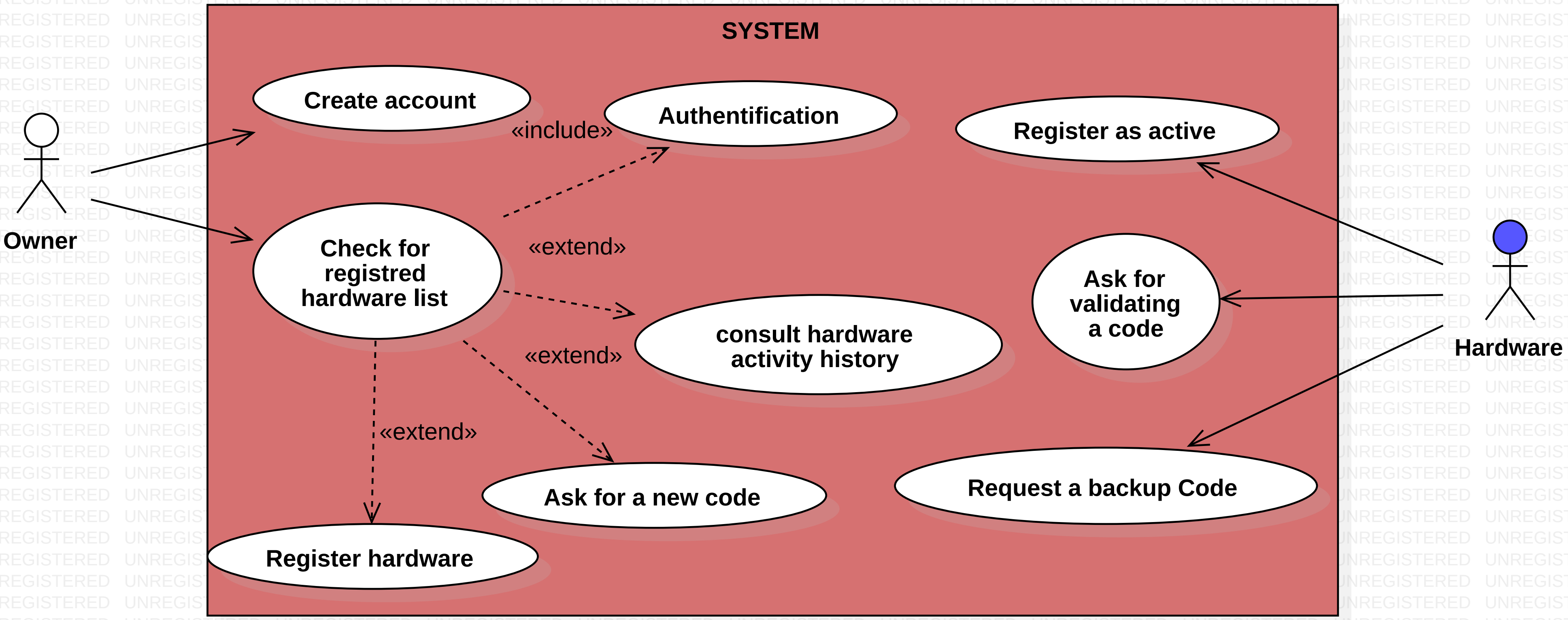
To benefit from this service, the agency must have an account on a web application otherwise create one. After that, she can register all the locks she owns and specify their MAC addresses. The lock must initiate a first communication as soon as it is powered up with the server so that the last one registers it as active. The owner can request the generation of codes only for a registered and active lock. The generated code is sent by email to the owner of the lock, but the latter can also specify another person (the customer) to receive a copy of the code.

The owner must also be able to access a history for the codes he has generated.

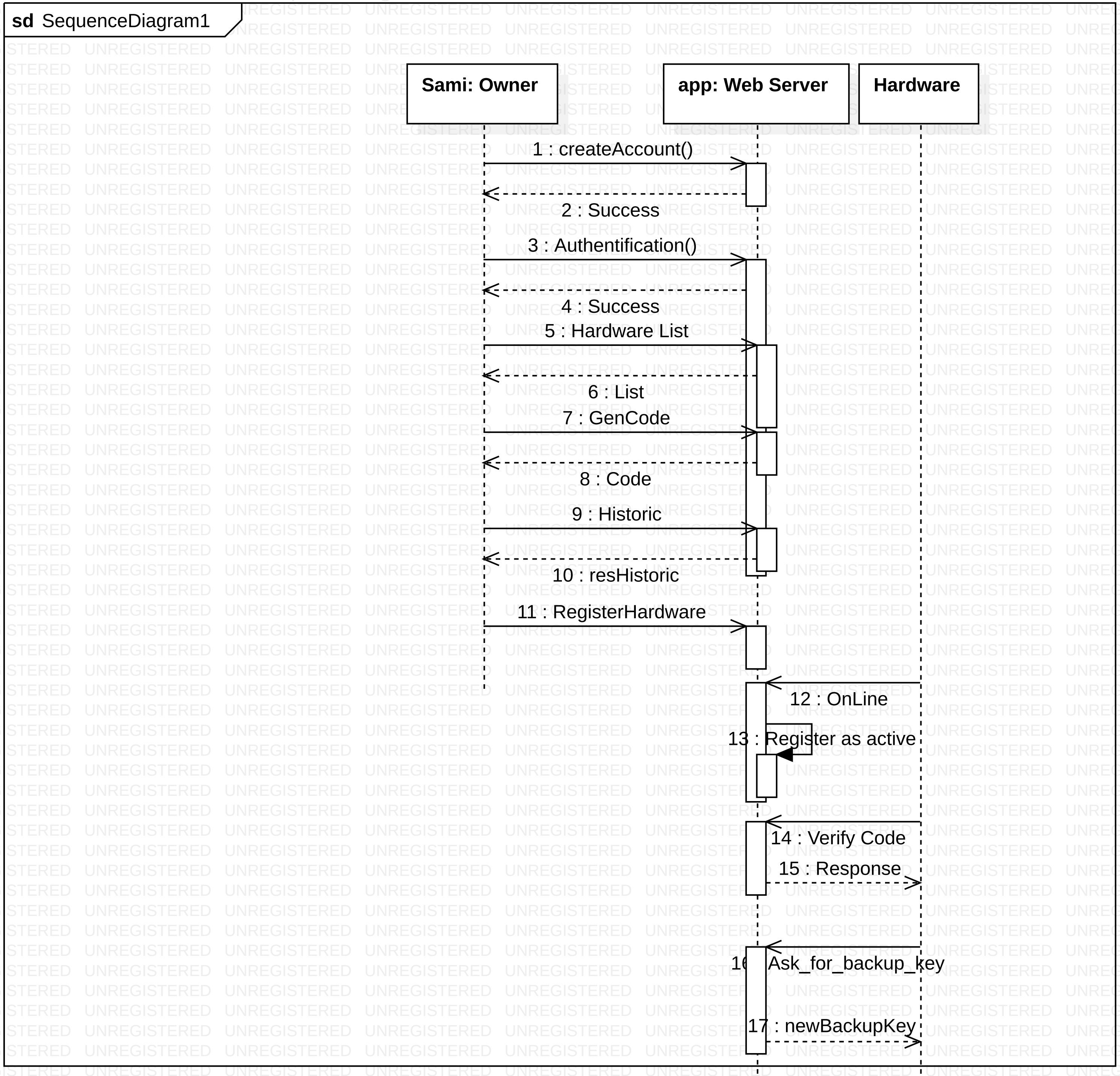
To guarantee access to goods even if a communication problem with the server arises. Each lock has a code stored in its memory (backup key). Once used, the lock sends a request to the server to retrieve a new backup Key after 24 hours of use. The owner is notified of the change of the backup key with various details.

What differentiates the backup key from other codes is that the first one does not have an expiry date.

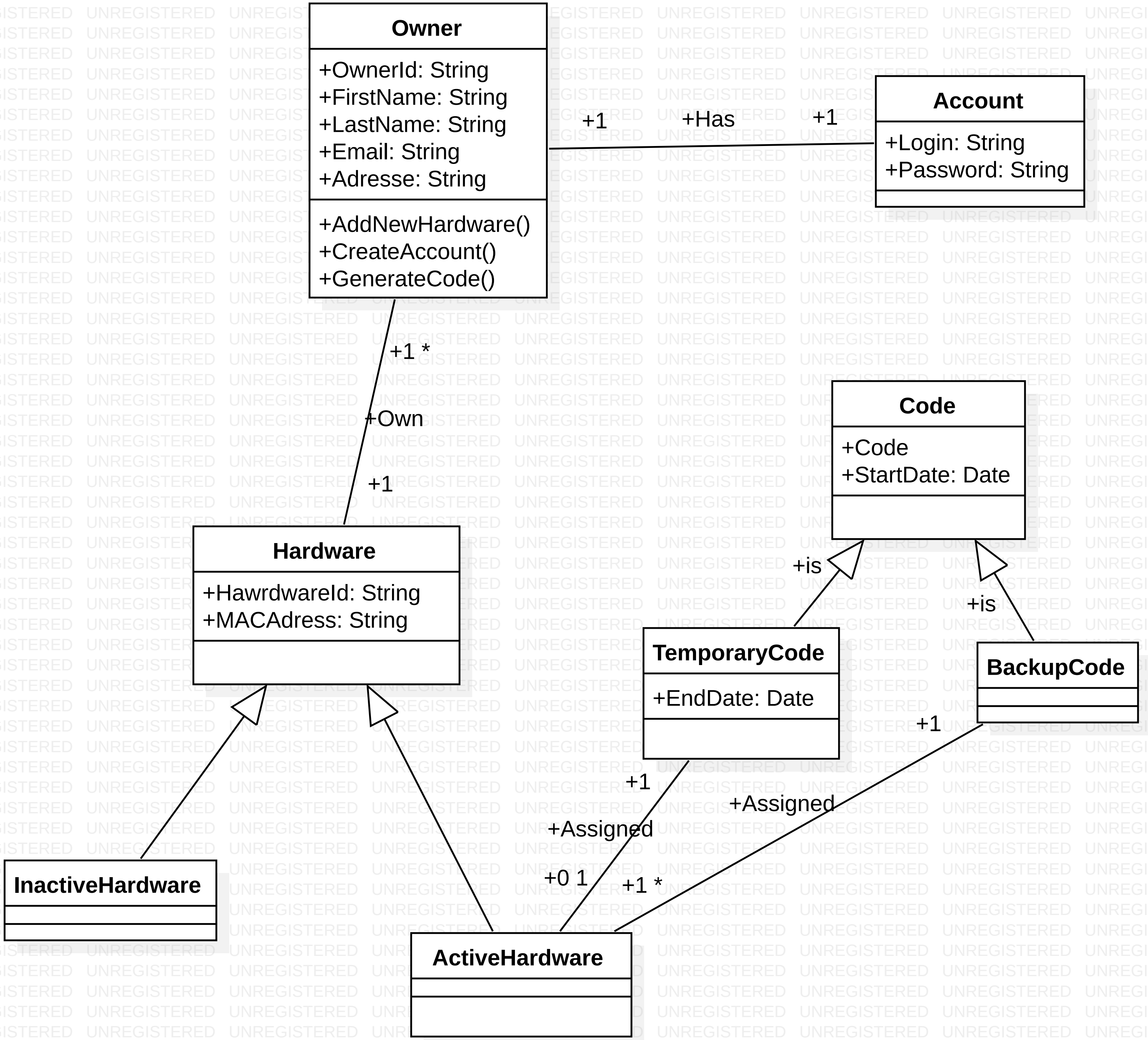
Model1::UseCaseDiagram1



Collaboration1::Interaction1::SequenceDiagram1



Model2::ClassDiagram1


Owner
+OwnerId: String
+FirstName: String
+LastName: String
+Email: String
+Adresse: String
+AddNewHardware()
+CreateAccount()
+GenerateCode()
+1
+Has
+1
Account
+Login: String
+Password: String
+1 *
+Own
+1
Code
+Code
+StartDate: Date
Hardware
+HawrdwareId: String
+MACAdress: String
+is
+is
TemporaryCode
+EndDate: Date
BackupCode
+1
+1
+Assigned
+Assigned
+0 1
+1 *
InactiveHardware
ActiveHardware