Technology Bucket : Secure distributed transaction recording system

Category: Software

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Problem Code : SS1

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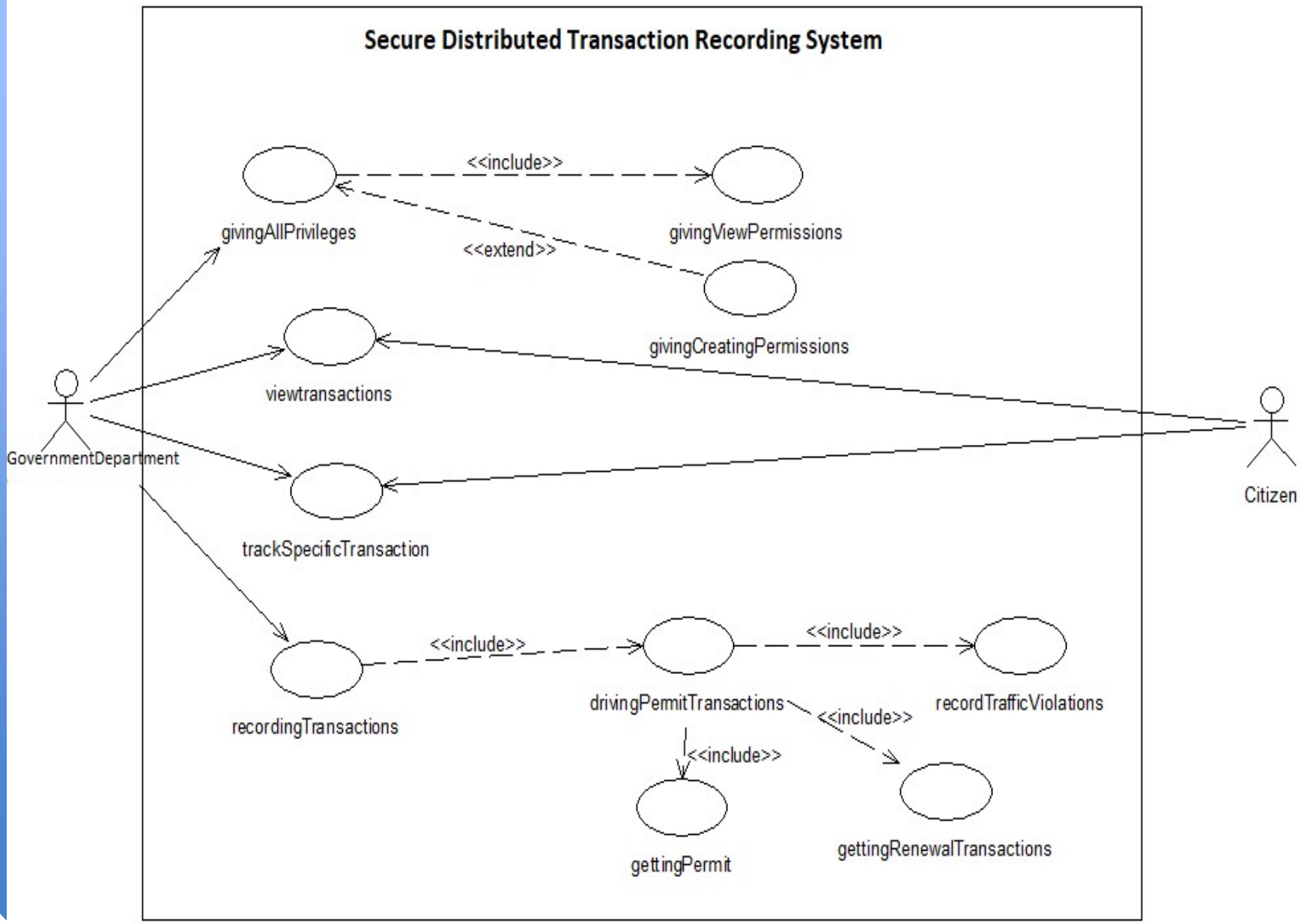
The idea is to Design a system by which we can make visible/non-falsifiable transactions between a common citizen and a government department for getting and management of getting the permit. To record all the all transactions taking place in the network (involves citizens and respected government department) we use the concept of immutable ledger i.e., decentralized database which is the main reason for visibility. By using the principles of blockchain we can achieve security, which in turns results in the non-falsifiable transactions. For this first we need to create a business network by using Hyperledger composer and fabric providing different levels of security depends on the participant involved. We should develop the transaction logic based on the problem involved in the different government departments and this can be deployed directly in the required fields. Admin will be provided with the privileges to add and remove the participants. User interface for participants to interact with other participants in the network is designed using angular4,Finally we will develop a secure distributed Transaction Recording and management model.

Technology Stack:

Back-end: Hyperledger Blockchain platform
Hyperledger composer
Hyperledger Fabric
Docker
Node.js
Any text-editor

Front-end: user interface is developed for the interaction of participants (citizens and government) with the network logic
Angular4


Secure Distributed Transaction Recording System
<<include>>
givingAllPrivileges
givingViewPermissions
<<extend>>
givingCreatingPermissions
viewtransactions
GovernmentDepartment
Citizen
trackSpecificTransaction
<<include>>
<<include>>
recordingTransactions
drivingPermitTransactions
recordTrafficViolations
<<include>>
<<include>>
gettingPermit
gettingRenewalTransactions

DEPENDENCIES

The following details are required to built Secure Distributed Transaction Recording System:

Software Requirements:

Cloud based Infrastructure to add different nodes to a network (citizens and any government department) in order to check the record of transactions and to verify whether the transactions are non-falsifiable.