CSE512M20: Hyperledger Assignment

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1 The assignment

This is a group assignment.

The objective is to create a basic network with an simple auction contract. This auction contract must be implemented by each student differently with the same interface and the same endorsement policy (you can leave it unspecified for default). The code for each of the smart contracts must be submitted along with any changed scripts and the "run script" used to run the whole execution. You do not need to write any applications (the run script will orchestrate the auction) or maintain any wallets (you can work with identities the way its done in the tutorials).

The auction is a First Price Auction (also known as an *English* Auction). Each of the three control an org. Each "org" has the chaincode implemented their own way. The orgs each submitBid and then a function is called to declareWinner.

The run script must do the following. The network must be instantiated and an org must be added. The chaincode must be deployed, you can either do this manually (step by step) or modify the existing relevant scripts. An asset must be created, the assetID must be passed along with bid value (ideally you should not pass the orgID, there is a simple way of getting the submitter's MSPID from the API) in submitBid. Once all orgs have submitBid then you can delareWinner.

The auction chaincode must have atleast have functions to submitBid and declareWinner, and ofcourse there has to be an asset to bid on. You can code all of this however you want in any of the supported languages. There is no need for complex code with excess functionality.

Useful tutorials:

- Using the Fabric test network
- Deploying a smart contract to a channel
- Adding an Org to a Channel
- Writing Your First Chaincode