

1 Overview

In this assignment, the objective is to create a basic hyperledger fabric network with an simple auction contract. The auction contract needs to have 3 different implementations (4, if your team has 4 members)(1 implementation from each person in the team) with the same interface and endorsement policy (you can leave it as default by not specifying it).

2 Organisations

There should be 3 (4, if your team has 4 members) “orgs”, each controlled by a team member. Each “org” has the chaincode implemented their own way.

3 Auctions

A simple first price auction needs to implemented. Each “org” will submit their bids and then a Winner will be declared by calling appropriate function.

The auction chaincode must have atleast two functions: 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.

4 Run Script

The code for each of the smart contracts must be submitted along with any changed scripts and a “run script” used to run the whole execution (you don’t need to write any applications, the run script should orchestrate the auction).

The run script must do the following. The network must be instantiated and an org (or 2 if need be) 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 in submitBid. Once all orgs have submitBid then you can delareWinner.

5 Submission Requirements

Each submission should contain the smart contract implementations, the run script as well as scripts (modified or otherwise) being used. All relevant code should properly be explained with **Doxygen comments**. Additionally, each submission should contain a brief about Hyperledger fabric as well as the implementation.

6 Useful Resources

[Hyperledger Fabric - Key Concepts](#)

[Using the Fabric test network](#)

[Adding an org to a Channel](#)

[Writing Your First Chaincode](#)

[Deploying a smart contract to a channel](#)