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Class: LY IT Core

Assignment No. 3: Write and deploy a chaincode

## Execute the following commands

```
cd ../../test-network
```

```
export PATH=${PWD}/../bin:$PATH
```

```
export FABRIC_CFG_PATH=$PWD/../config/
```

Javascript Chaincode

```
peer lifecycle chaincode package basic.tar.gz --path ../asset-transfer-  
basic/chaincode-javascript/ --lang node --label basic_1.0
```

## Install Chaincode

### Setup Organization 1

```
export CORE_PEER_TLS_ENABLED=true  
export CORE_PEER_LOCALMSPID="Org1MSP"  
export  
CORE_PEER_TLS_ROOTCERT_FILE=${PWD}/organizations/peerOrganizations/org1.  
example.com/peers/peer0.org1.example.com/tls/ca.crt  
export  
CORE_PEER_MSPCONFIGPATH=${PWD}/organizations/peerOrganizations/org1.exa  
mple.com/users/Admin@org1.example.com/msp  
export CORE_PEER_ADDRESS=localhost:7051
```

### Setup Organization 2

```
export CORE_PEER_LOCALMSPID="Org2MSP"  
export  
CORE_PEER_TLS_ROOTCERT_FILE=${PWD}/organizations/peerOrganizations/org2.  
example.com/peers/peer0.org2.example.com/tls/ca.crt  
export  
CORE_PEER_MSPCONFIGPATH=${PWD}/organizations/peerOrganizations/org2.exa  
mple.com/users/Admin@org2.example.com/msp  
export CORE_PEER_ADDRESS=localhost:9051
```

```
peer lifecycle chaincode install basic.tar.gz
```

## Approve Chaincode

Get the package id  
peer lifecycle chaincode queryinstalled

```
export CC_PACKAGE_ID=<Package_ID>
```

```
peer lifecycle chaincode approveformyorg -o localhost:7050 --  
ordererTLSHostnameOverride orderer.example.com --channelID mychannel --  
name basic --version 1.0 --package-id $CC_PACKAGE_ID --sequence 1 --tls  
-cafile  
"${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer  
.example.com/msp/tlscacerts/tlsca.example.com-cert.pem"
```

```
export CORE_PEER_LOCALMSPID="Org1MSP"  
export  
CORE_PEER_MSPCONFIGPATH=${PWD}/organizations/peerOrganizations/org1.exa  
mple.com/users/Admin@org1.example.com/msp  
export  
CORE_PEER_TLS_ROOTCERT_FILE=${PWD}/organizations/peerOrganizations/org1  
.example.com/peers/peer0.org1.example.com/tls/ca.crt  
export CORE_PEER_ADDRESS=localhost:7051
```

```
peer lifecycle chaincode approveformyorg -o localhost:7050 --  
ordererTLSHostnameOverride orderer.example.com --channelID mychannel --  
name basic --version 1.0 --package-id $CC_PACKAGE_ID --sequence 1 --tls  
--cafile  
"${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer  
.example.com/msp/tlscacerts/tlsca.example.com-cert.pem"
```

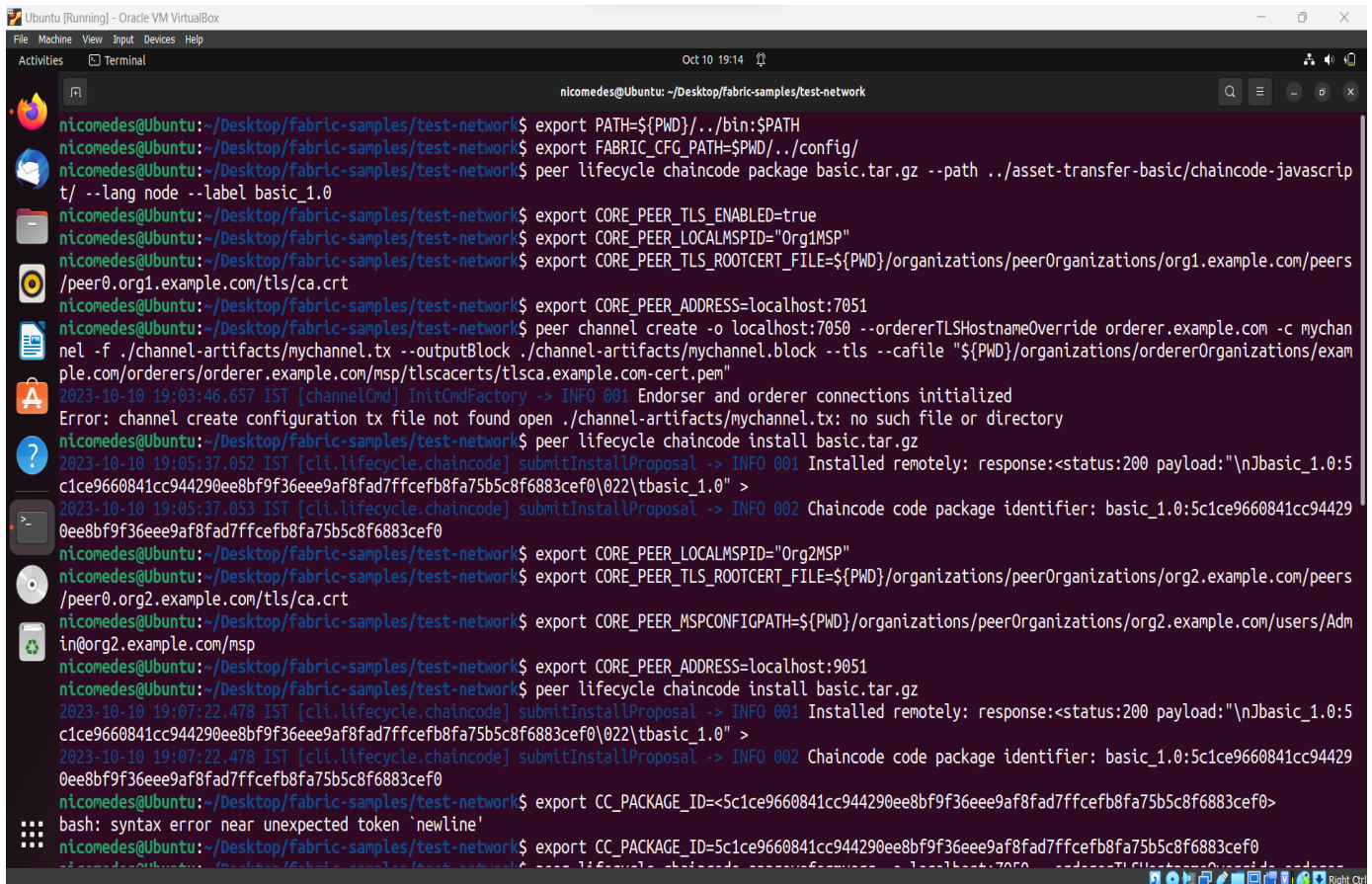
## Committing Chaincode

Check commit readiness  
peer lifecycle chaincode checkcommitreadiness --channelID mychannel --  
name basic --version 1.0 --sequence 1 --tls --cafile  
"\${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer  
.example.com/msp/tlscacerts/tlsca.example.com-cert.pem" --output json

## Invoke Chaincode

```
peer chaincode invoke -o localhost:7050 --ordererTLSHostnameOverride
orderer.example.com --tls --cafile
"${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer
.example.com/msp/tlscacerts/tlsca.example.com-cert.pem" -C mychannel -n
basic --peerAddresses localhost:7051 --tlsRootCertFiles
"${PWD}/organizations/peerOrganizations/org1.example.com/peers/peer0.or
g1.example.com/tls/ca.crt" --peerAddresses localhost:9051 --
tlsRootCertFiles
"${PWD}/organizations/peerOrganizations/org2.example.com/peers/peer0.or
g2.example.com/tls/ca.crt" -c '{"function":"InitLedger","Args":[]}'
```

```
peer chaincode query -C mychannel -n basic -c
'{"Args":["GetAllAssets"]}'
```



```
nicomedes@Ubuntu: ~/Desktop/fabric-samples/test-network$ export PATH=${PWD}/../bin:$PATH
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export FABRIC_CFG_PATH=$PWD/./config/
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ peer lifecycle chaincode package basic.tar.gz --path ../asset-transfer-basic/chaincode-javascript/ --lang node --label basic_1.0
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_TLS_ENABLED=true
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_LOCALMSPID="Org1MSP"
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_TLS_ROOTCERT_FILE=${PWD}/organizations/peerOrganizations/org1.example.com/peers/peer0.org1.example.com/tls/ca.crt
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_ADDRESS=localhost:7051
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ peer channel create -o localhost:7050 --ordererTLSHostnameOverride orderer.example.com -c mychannel -f ./channel-artifacts/mychannel.tx --outputBlock ./channel-artifacts/mychannel.block --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem"
2023-10-10 19:03:46.657 IST [channelCmd] InitChdFactory -> INFO 001 Endorser and orderer connections initialized
Error: channel create configuration tx file not found open ./channel-artifacts/mychannel.tx: no such file or directory
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ peer lifecycle chaincode install basic.tar.gz
2023-10-10 19:05:37.052 IST [cli.lifecycle.chaincode] submitInstallProposal -> INFO 001 Installed remotely: response:<status:200 payload:"\nbasic_1.0:5c1ce9660841cc944290ee8bf9f36eee9af8fad7ffcefb8fa75b5c8f6883cef0\022\tbasic_1.0" >
2023-10-10 19:05:37.053 IST [cli.lifecycle.chaincode] submitInstallProposal -> INFO 002 Chaincode code package identifier: basic_1.0:5c1ce9660841cc944290ee8bf9f36eee9af8fad7ffcefb8fa75b5c8f6883cef0
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_LOCALMSPID="Org2MSP"
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_TLS_ROOTCERT_FILE=${PWD}/organizations/peerOrganizations/org2.example.com/peers/peer0.org2.example.com/tls/ca.crt
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_MSPCONFIGPATH=${PWD}/organizations/peerOrganizations/org2.example.com/users/Admin@org2.example.com/msp
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_ADDRESS=localhost:9051
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ peer lifecycle chaincode install basic.tar.gz
2023-10-10 19:07:22.478 IST [cli.lifecycle.chaincode] submitInstallProposal -> INFO 001 Installed remotely: response:<status:200 payload:"\nbasic_1.0:5c1ce9660841cc944290ee8bf9f36eee9af8fad7ffcefb8fa75b5c8f6883cef0\022\tbasic_1.0" >
2023-10-10 19:07:22.478 IST [cli.lifecycle.chaincode] submitInstallProposal -> INFO 002 Chaincode code package identifier: basic_1.0:5c1ce9660841cc944290ee8bf9f36eee9af8fad7ffcefb8fa75b5c8f6883cef0
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CC_PACKAGE_ID=<5c1ce9660841cc944290ee8bf9f36eee9af8fad7ffcefb8fa75b5c8f6883cef0>
bash: syntax error near unexpected token `newline'
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CC_PACKAGE_ID=5c1ce9660841cc944290ee8bf9f36eee9af8fad7ffcefb8fa75b5c8f6883cef0
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ peer chaincode invoke -o localhost:7050 --ordererTLSHostnameOverride orderer.example.com --tls --cafile
```

```
Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal
Oct 10 19:15
nicomedes@Ubuntu: ~/Desktop/fabric-samples/test-network

nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CC_PACKAGE_ID=<5c1ce9660841cc944290ee8bf9f36eee9af8fad7ffcefb8fa75b5c8f6883cef0>
bash: syntax error near unexpected token `newline'
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CC_PACKAGE_ID=5c1ce9660841cc944290ee8bf9f36eee9af8fad7ffcefb8fa75b5c8f6883cef0
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ peer lifecycle chaincode approveformyorg -o localhost:7050 --ordererTLSHostnameOverride orderer.
example.com --channelID mychannel --name basic --version 1.0 --package-id $CC_PACKAGE_ID --sequence 1 --tls --cafile "${PWD}/organizations/ordererOrgani
zations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem"
Error: proposal failed with status: 500 - channel 'mychannel' not found
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ peer lifecycle chaincode approveformyorg -o localhost:7050 --ordererTLSHostnameOverride orderer.
example.com --channelID channelnew --name basic --version 1.0 --package-id $CC_PACKAGE_ID --sequence 1 --tls --cafile "${PWD}/organizations/ordererOrgan
izations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem"
2023-10-10 19:10:07.112 IST [chaincodeCmd] ClientWait -> INFO 001 txid [0dfd178498d084c0411408afb7364e5808614a57982407e3e8fc8c990c663825] committed with
status (VALID) at localhost:9051
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_LOCALMSPID="Org1MSP"
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_MSPCONFIGPATH=${PWD}/organizations/peerOrganizations/org1.example.com/users/Adm
in@org1.example.com/msp
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_TLS_ROOTCERT_FILE=${PWD}/organizations/peerOrganizations/org1.example.com/peers
/peer0.org1.example.com/tls/ca.crt
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ export CORE_PEER_ADDRESS=localhost:7051
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ peer lifecycle chaincode approveformyorg -o localhost:7050 --ordererTLSHostnameOverride orderer.
example.com --channelID channelnew --name basic --version 1.0 --package-id $CC_PACKAGE_ID --sequence 1 --tls --cafile "${PWD}/organizations/ordererOrgan
izations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem"
2023-10-10 19:12:49.971 IST [chaincodeCmd] ClientWait -> INFO 001 txid [5bd5182941a825b3bb220a0c65a5c7af99e670fdd19dde1e147fe2226f2202c3] committed with
status (VALID) at localhost:7051
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$ peer lifecycle chaincode checkcommitreadiness --channelID channelnew --name basic --version 1.0
--sequence 1 --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pe
m" --output json
{
  "approvals": {
    "Org1MSP": true,
    "Org2MSP": true
  }
}
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$
```