Roles

+ Role: struct

~ add(Role storage role, address account): void
~ remove(Role storage rolle, addresss account): void
~ has(Role storage role, address account): void
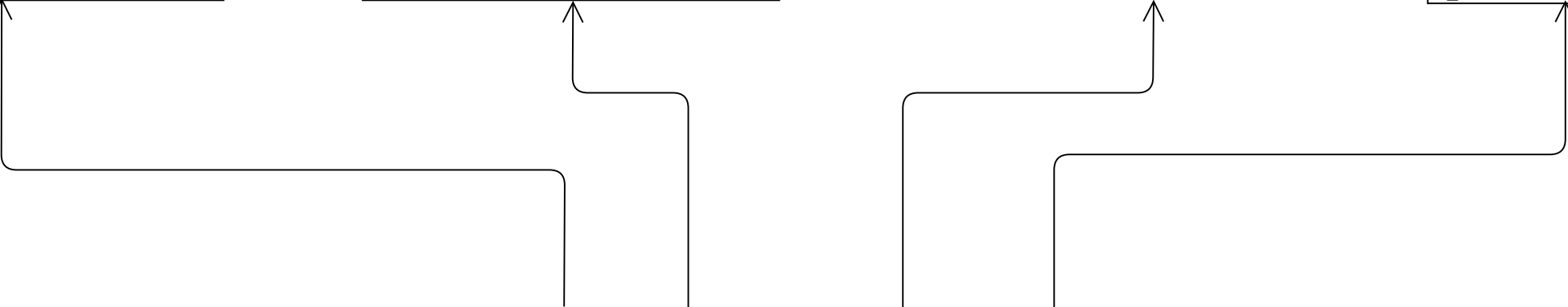
ConsumerRole

- consumer: Roles.Role

- ConsumerAdded(adrress account)
- ConsumerRemoved(address account)
onlyConsumer()
+ isConsumer(address account):bool
+ addConsumer(address account)
+ renounceConsumer()
- _addConsumer(address account)
- _removeConsumer(address account)

DistributorRole

- distributors: Roles.Role

- DistributorAdded(address account)
- DisributorRemoved(address account)
onlyDistributor()
+ isDistributor(address account):bool
+ addDistributor(address account)
+ renounceDistributor()
- _addDistributor(address account)
- _removdDistributor(address account)

FarmerRole

- farmer: Roles.Role

- FarmerAdded(address indexed account)
- FarmerRemoved((address indexed account)
onlyFarmer()
+ isFarmer(address account): bool
+ addFarmer(address account)
+ renounceFarmer()
- _addFarmer(address account)
- _removeFarmer(address account)

RetailerRole

- retailers: Roles.Role

- RetailerAdded(address account)
- RetailerRemoved((address account)
onlyRetailer()
+ isRetailer(address account): bool
+ addRetailer(address account)
+ renounceRetailer()
- _addRetailer(address account)
- _removeRetailer(address account)

SupplyChain

+ owner: address
+ upc: uint
+ sku: uint
+ items: mapping
+ State: enum
+ Item: struct

- Harvested(uint upc)
- Processed(uint upc)
- Packed(uint upc)
- ForSale(uint upc)
- Sold(uint upc)
- Shipped(uint upc)
- Received(uint upc)
- Purchased(uint upc)
- ImageUploaded(uint upc)
- onlyOwner()
- verifyCaller(address _address)
- paidEnough(uint _price)
- checkValue(unit _upc)
- harvested(uint _upc)
- processed(uint _upc)
- packed(uint _upc)

- forSale(uint _upc)
- sold(uint _upc)
- shipped(uint _upc)
- received(uint _upc)
- purchased(uint _upc)

+ kill()
+ harvestItem(uint _upc, address _originFarmerID, string _originFarmName,
string _originFarmInformation, string _originFarmLatitude, string _originFarmLongitude,
string _productNotes)
+ saveImageHash(uint _upc, string cid)
+ fetchCid(uint _upc)
+ processItem(uint _upc)
+ packItem(uint _upc)
+ sellItem(uint _upc, uint _price)
+ buyItem(uint _upc)
+ shipItem(uint _upc)
+ receiveItem(uint _upc)
+ purchaseItem(uint _upc)
+ fetchItemBufferOne(uint _upc)
+ fetchItemBufferTwo(uint _upc)