Share-Market-Smart-Contract-Docs

Share-Market-Smart-Contract

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- The words share and stock have been used interchangeabliy throughout this project

Working

Main Working :

- users (all members of the network) can purchase stocks from the stock market
- users can post stocks for sale which other users can buy and/or buy directly from the company.
- Each seller can set their own Cost for the transaction
- the currency for the system is `StockToken` **(STT)**

Governence

- the initial governer is the contract owner
- can add other governers to the list of governers
- governers control :
    1. Company Approval
    2. Add Other Governers to the list of governers

Company

A company can be created by any user
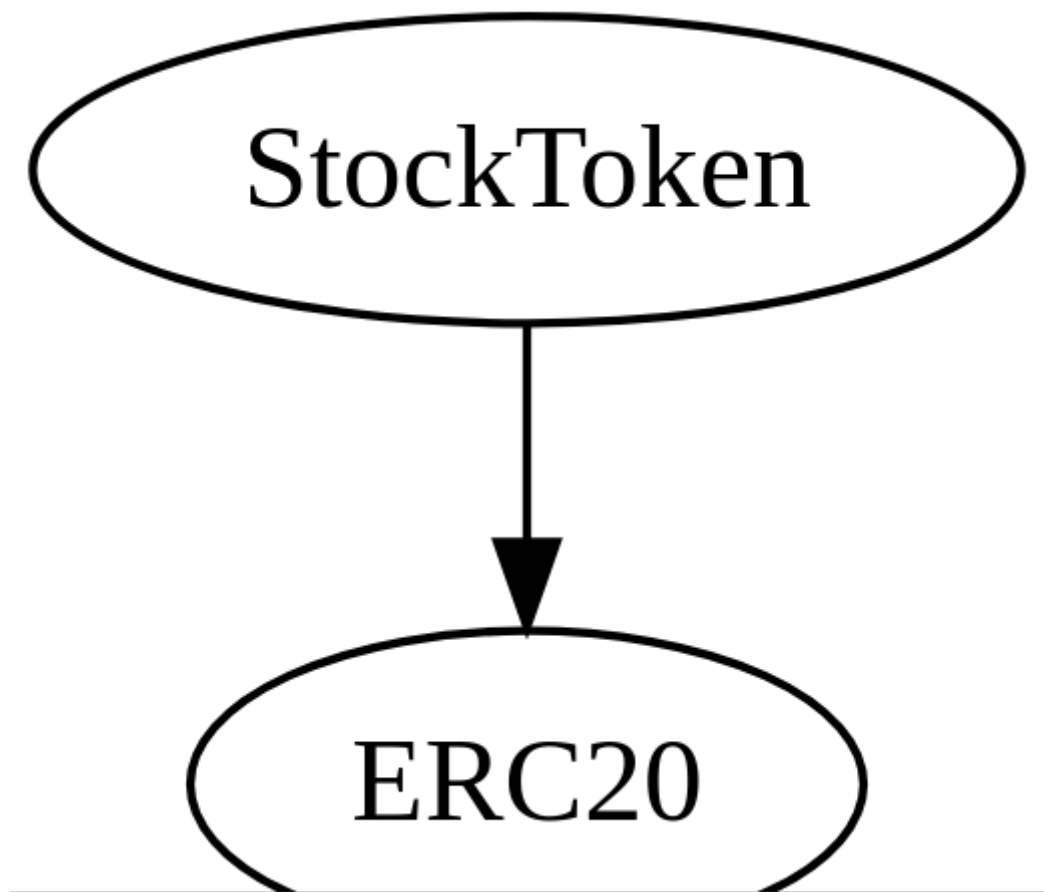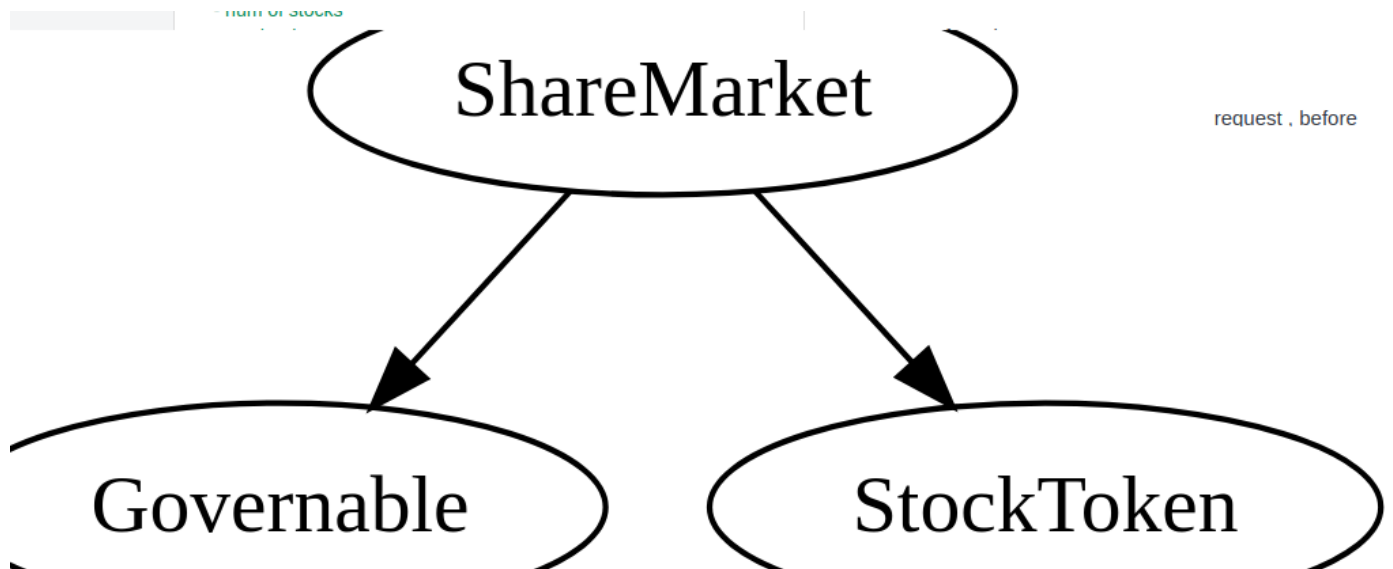
process :

1. - user request a company creation in which they are required to enter
    - Name
    - num of stocks
    - stock price
2. a governer then approves the company request , before that the company is not elligable to sell its stocks

Stock Token

- Simple ERC20 Token with top up facility
- initial supply is provided to the contract address

Diagrams

Inheritence

num of stocks

ShareMarket

request , before

Governable

StockToken

StockToken

ERC20

interaction

Legend

Internal Call
External Call
Defined Contract
Undefined Contract

StockToken

<Constructor> → _mint

TopUP → balanceOf
TopUP → _transfer

Migrations

restricted

setCompleted

Governable

<Constructor>

onlyGoverner

getGoverners

addGoverner

isGoverner

ShareMarket

<Constructor>
postStocksforSale → getNewSaleID
buyStockFromCompany → isCompanyApproved
buyStockFromCompany → getStockPrice
buyPostedStock → _transfer
requestRegisterMyCompany
approveCompany
getAllCompanies
isCompanyRegistered

CompaniesContract

<Constructor>
getCompanyDetails
getStockPrice → isApproved
reduceStock → isApproved
_requestRegisterMyCompany
_approveCompany
getAllCompanies
isRegistered