

DISTRIBUTED SYSTEMS

PROJECT – 3

PHASE – 1

Working With Ethereum Blockchain

Submitted By:
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INTRODUCTION

In this project we aim at exploring installation of Blockchain on Center for Computational Research (CCR) by testing a decentralized application and also by designing and deploying application on blockchain. Blockchain is an emerging technology and it enables distributed public ledgers that hold data that is immutable in a secured way. In simple words blockchain ensures that transaction can never be altered.

In the Phase 1 of the project we will install Ethereum Blockchain node. We will create a key pair and account number for coin transfer. We will be interacting with a coin app for sending and receiving the coins that we are provided with.

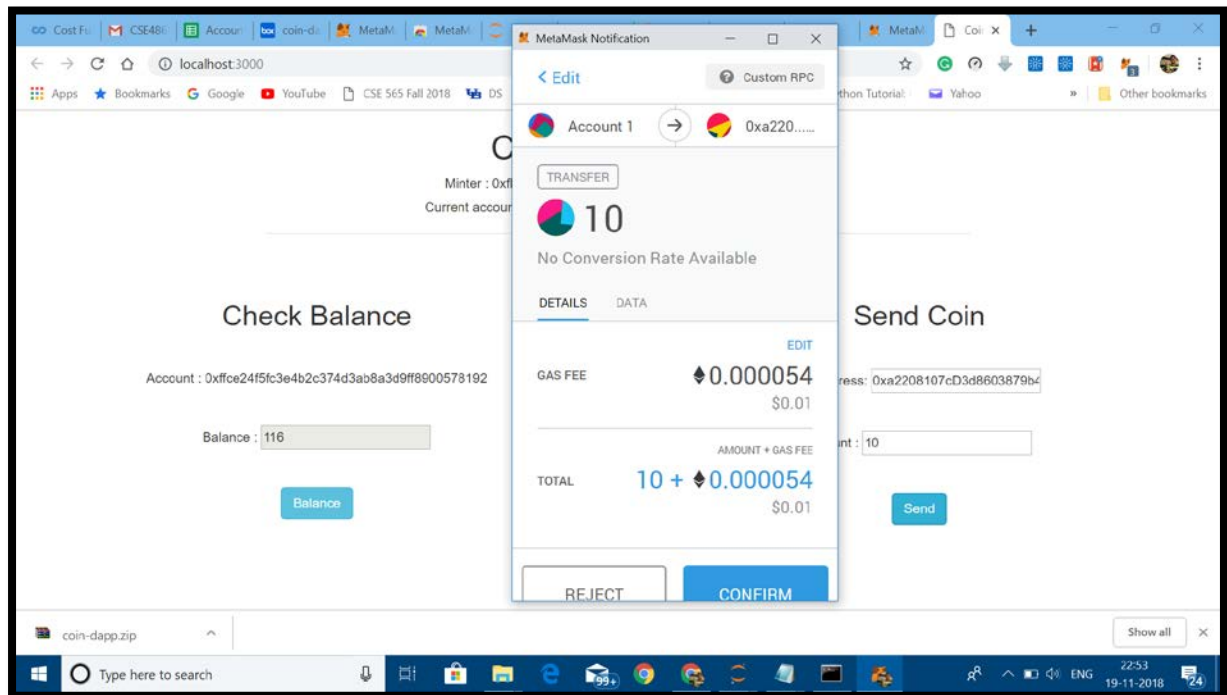
PREREQUISITES AND INSTALLATIONS

- Install node js with npm packet manager.
- Install Truffle using command `npm install -g truffle`.
- Install metmask, which is a browser plugin that allows your browser to interact with the blockchain.

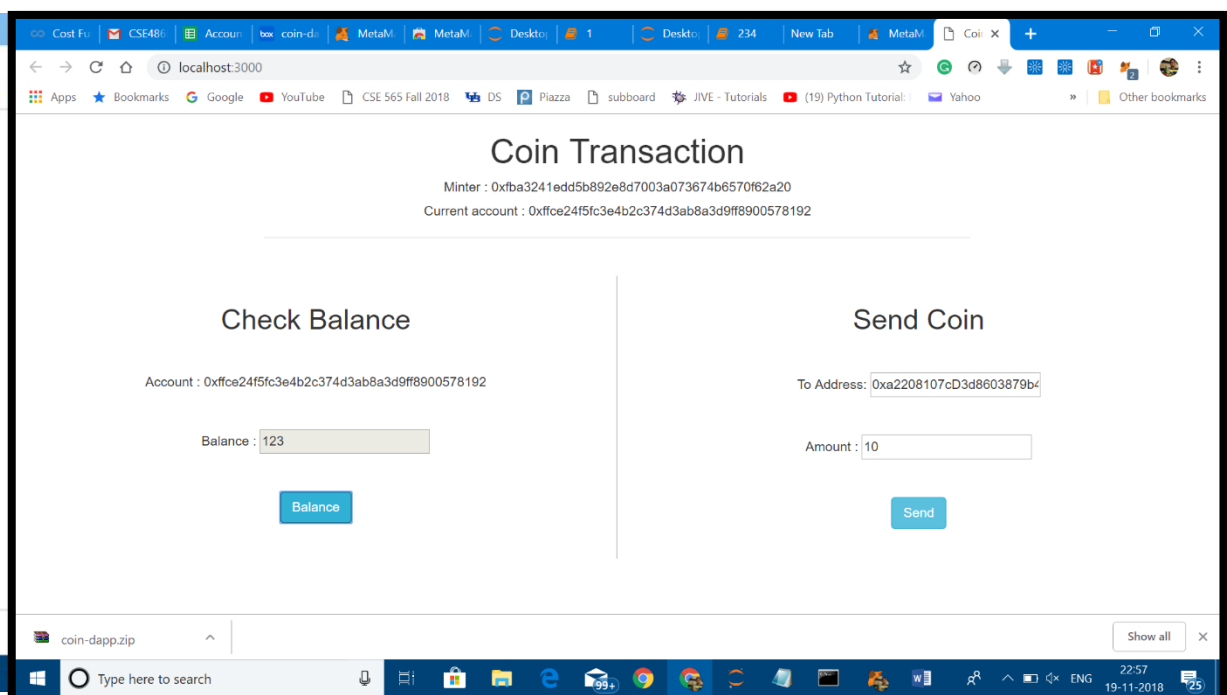
[Note: We follow further instructions as written in project description document for sending and receiving coins using coin app. The screenshots of the coin app are attached below.]

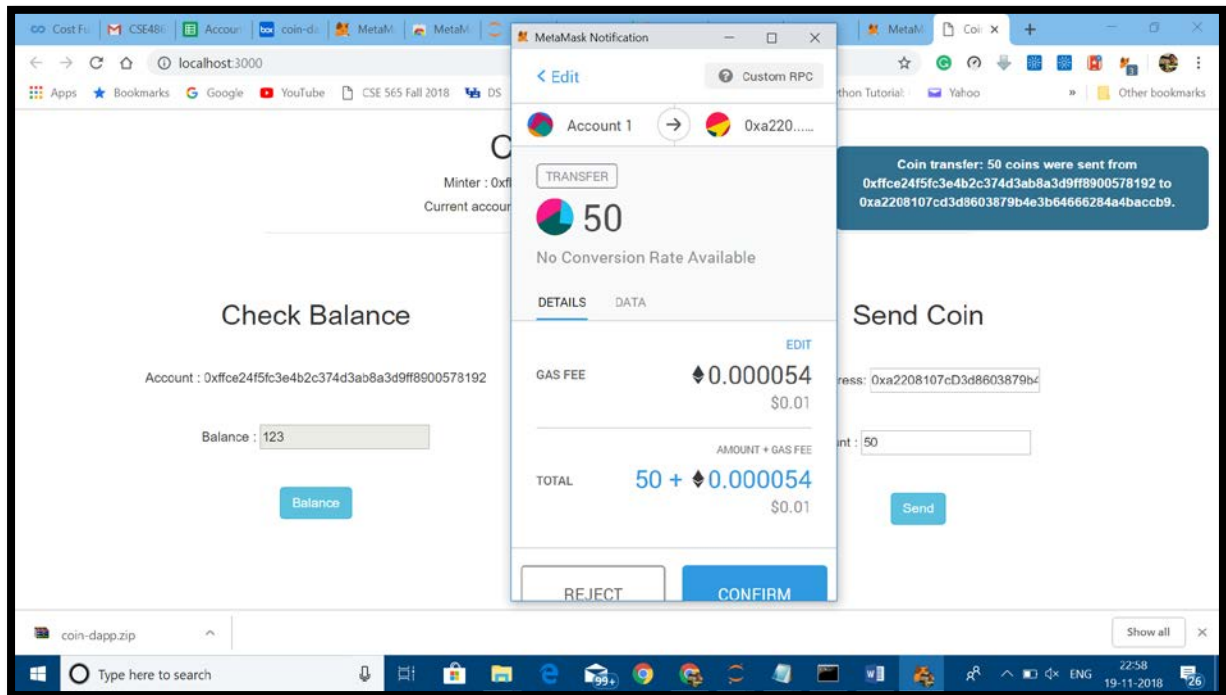
SCREENSHOTS

Below shown are the screenshots of coin transfer done by Karan Manchandia:

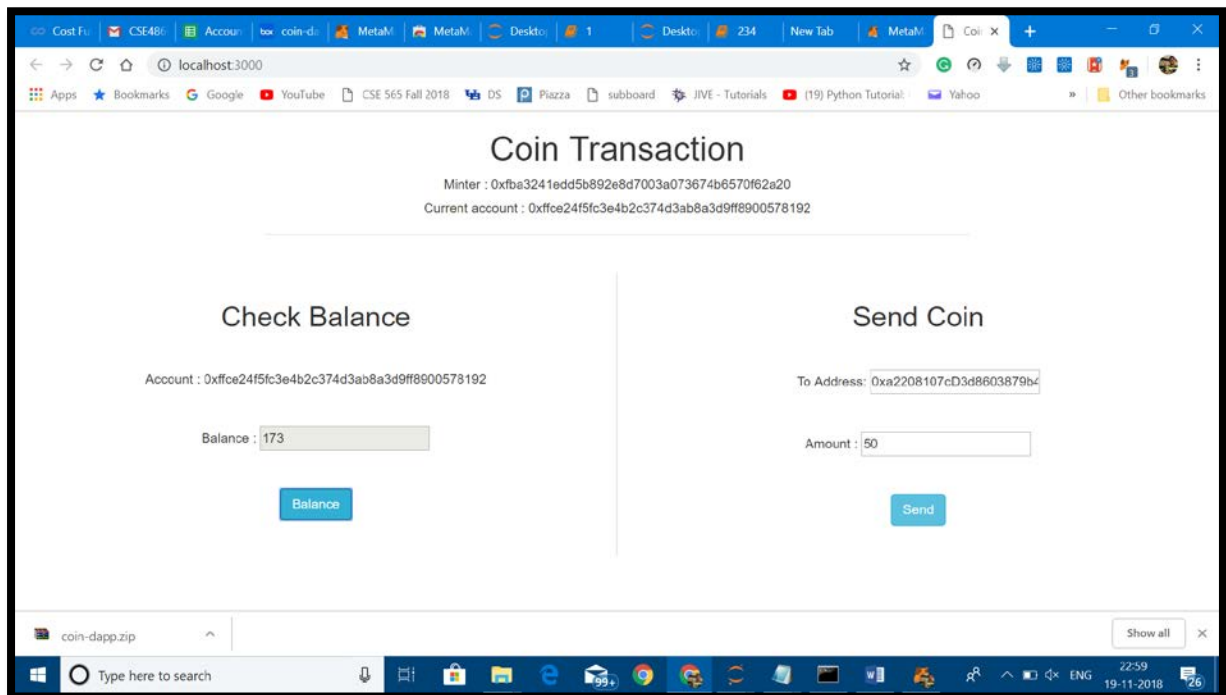


Screenshot Showing Transfer of 10 coins





Screenshot Showing Transfer of 50 coins



```
lite-server
^ (Relevant source part starts here and spans across multiple lines).
./C:/Users/karan/Desktop/ds/coin-dapp/contracts/Coin.sol:29:9: Warning: Invoking events without "emit" prefix is deprecated.
    Sent(msg.sender, receiver, amount);
    ^~~~~~
Writing artifacts to .\build\contracts

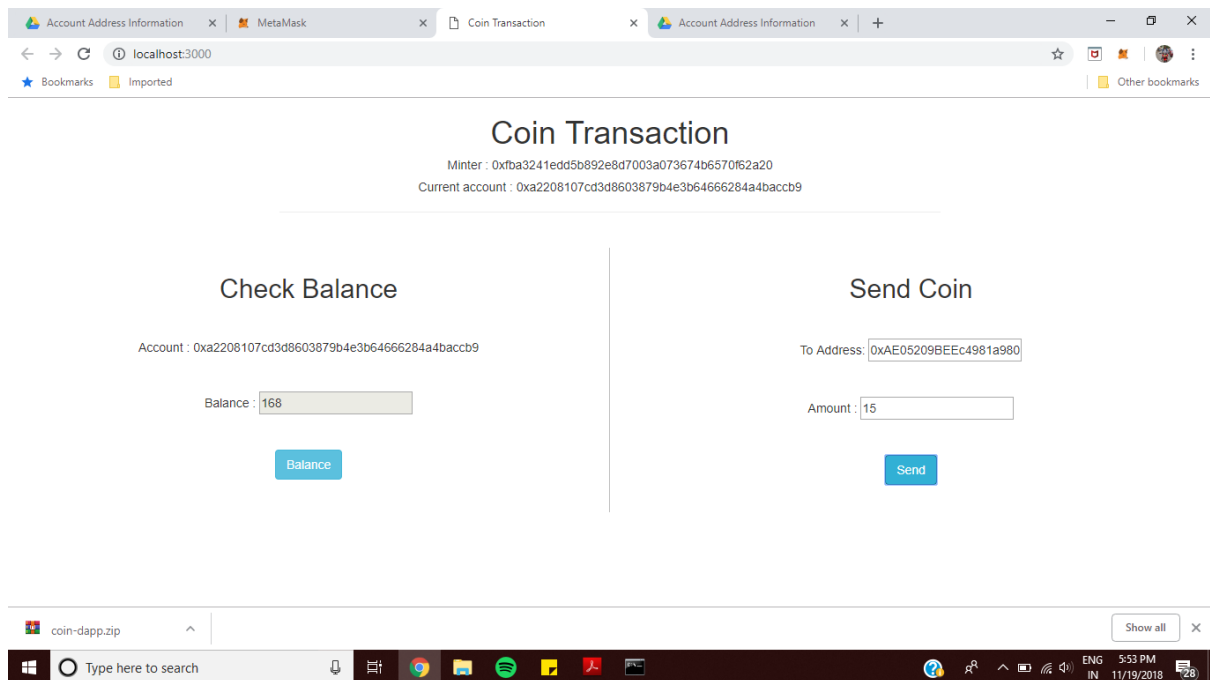
C:\Users\karan\Desktop\ds\coin-dapp>npm run dev

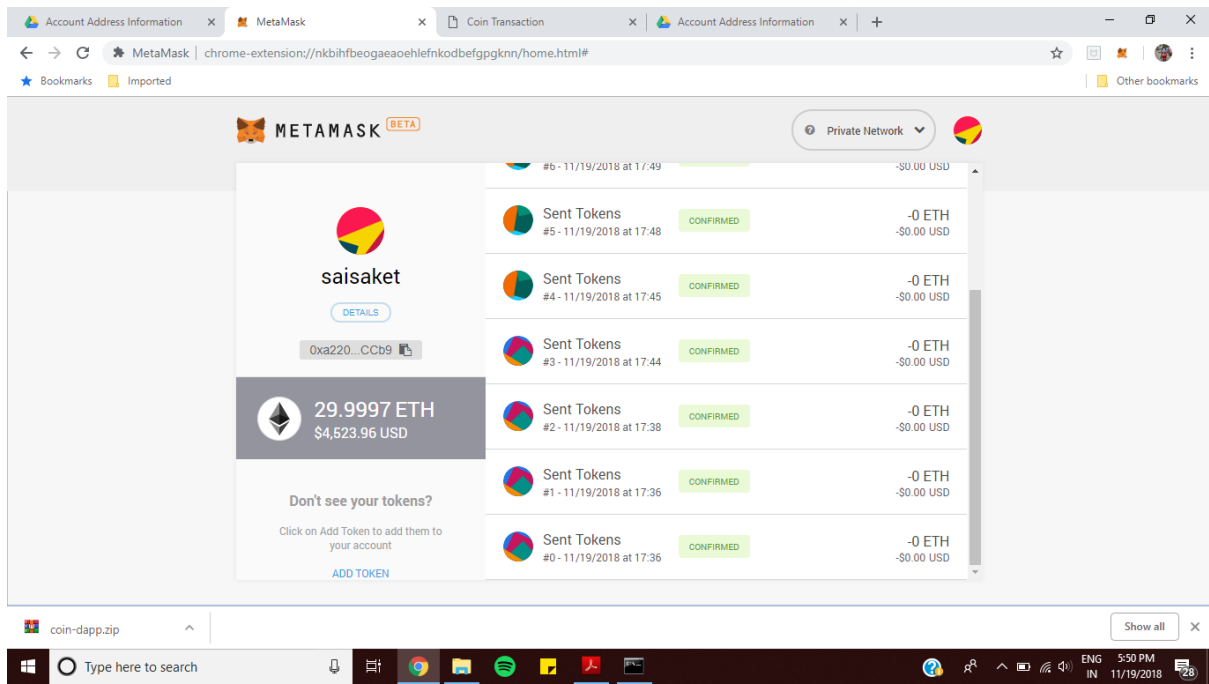
> Coin@1.0.0 dev C:\Users\karan\Desktop\ds\coin-dapp
> lite-server

** browser-sync config **
{ injectChanges: false,
  files: [ '**/*.{html,htm,css,js}' ],
  watchOptions: { ignored: 'node_modules' },
  server: {
    baseDir: [ './src', './build/contracts' ],
    middleware: [ [Function], [Function] ] } }
[BrowserSync] Access URLs:
-----
  Local: http://localhost:3000
  External: http://192.168.56.1:3000
-----
  UI: http://localhost:3001
  UI External: http://localhost:3001
-----
[BrowserSync] Serving files from: ./src
[BrowserSync] Serving files from: ./build/contracts
[BrowserSync] Watching files...
18.11.19 22:33:17 200 GET /index.html
18.11.19 22:33:17 200 GET /js/bootstrap.min.js
18.11.19 22:33:17 200 GET /js/app.js
18.11.19 22:33:17 200 GET /css/bootstrap.min.css
18.11.19 22:33:17 200 GET /js/web3.min.js
18.11.19 22:33:18 200 GET /js/truffle-contract.js
18.11.19 22:33:20 200 GET /Coin.json
18.11.19 22:33:20 404 GET /favicon.ico
```

Screenshot showing steps to start the coin app

Below shown are the screenshots of coin transfer done by Sai Saket Regulapati:





Screenshots Showing all Coin Transfers

