

PROJECT REPORT

Group Members:

1. Shivaditya Jatar - UF ID: 6203 9241

2. Ayush Mittal - UF ID: 3777 8171

We are showing the following items in Web Browser:

1. Bitcoins Mined along with total bitcoins mined
2. Charts (includes BTC amounts and public keys of participants)
 - Bar Chart 1 (Bitcoins before transactions)
 - Bar Chart 2 (Bitcoins after transactions)

For Printing Purposes:

Public Key: Starting 6 characters printed

Steps to Run Simulator

(Before running, Goto project4_2 directory, where mix.exs is present)

```
$ cd project4_2
```

```
$ mix deps.get
```

```
$ cd assets
```

```
$ npm install
```

```
$ cd ..
```

(Now we are under project4_2 directory, where mix.exs is present)

```
$ mix phx.server
```

Once the files have compiled, Open a browser and run
<https://localhost:4000>

Steps to Run Simulator

- *\$ cd project4_2*

```
Command Prompt - mix phx.server  
Y:\#STUDY\UFL\Fall 18\Distributed OS>cd project4_2
```

- *\$ mix deps.get*

```
Y:\#STUDY\UFL\Fall 18\Distributed OS\project4_2>mix deps.get  
warning: found quoted keyword "test" but the quotes are not required. Note t  
keywords with foreign characters in them  
mix.exs:57  
  
Resolving Hex dependencies...  
Dependency resolution completed:  
Unchanged:  
  connection 1.0.4  
  cowboy 1.1.2  
  cowlib 1.0.2  
  db_connection 1.1.2  
  decimal 1.4.1  
  ecto 2.2.7  
  file_system 0.2.2  
  gettext 0.13.1  
  mime 1.1.0  
  phoenix 1.3.0  
  phoenix_ecto 3.3.0  
  phoenix_html 2.10.5  
  phoenix_live_reload 1.1.3  
  phoenix_pubsub 1.0.2  
  plug 1.4.3  
  poison 3.1.0  
  poolboy 1.5.1  
  postgrex 0.13.3  
  ranch 1.3.2  
All dependencies up to date
```

- *\$ cd assets*
- *\$ npm install*

```
Y:\#STUDY\UFL\Fall 18\Distributed OS\project4_2>cd assets  
Y:\#STUDY\UFL\Fall 18\Distributed OS\project4_2\assets>npm install  
npm WARN assets No description  
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.4  
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platf  
added 68 packages in 32.39s
```

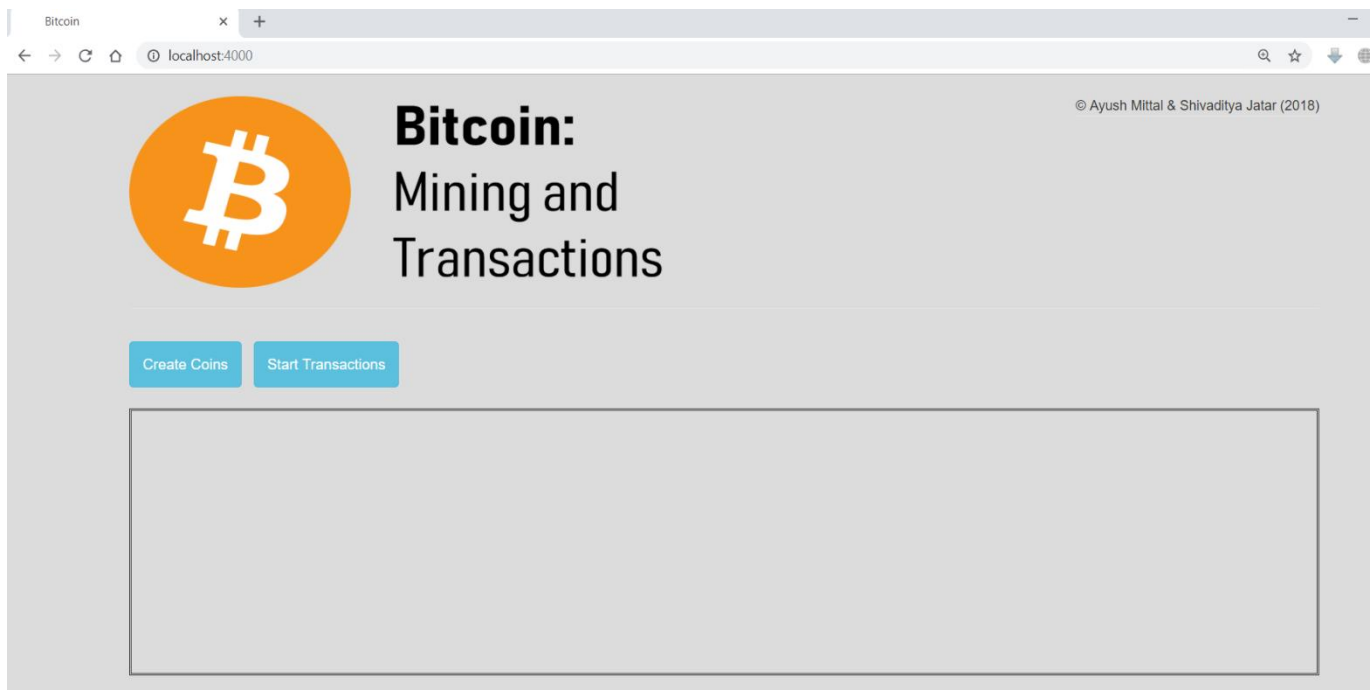
- `$ cd ..`

```
Y:\#STUDY\UFL\Fall 18\Distributed OS\project4_2\assets>cd ..
```

- `$ mix phx.server`

```
Y:\#STUDY\UFL\Fall 18\Distributed OS\project4_2>mix phx.server
```


- *Open Web Browser and GOTO <https://localhost:4000>*



- *Click on Create Coins (Mining of bitcoins is started. You can see [Mining bitcoins progress bar](#))*



- *Mined bitcoins can be seen inside container by scrolling.*



Bitcoin: Mining and Transactions

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Create Coins

Start Transactions

<- Click to begin Transactions

Mining bitcoins

Total coins created: 2236
Bitcoins Generated:

bitcoin;ayushivarwPc9izN1f4219 000a0e1c8c0a3bf81240f6b21a264c52613c55cdec92c9b989022f13dfc2fd2

bitcoin;ayushivarwPc9izN1f6138 00010fb0426d81d9cb10d17a114d940a33c953bd11ffd685a7930a2a5789502e

bitcoin;ayushivarwPc9izN1f14143 00067dac6dd879f45a37ceb74d605de76cf02121ca357b44957844bf5ead9f39

bitcoin;ayushivarwPc9izN1f17325 0003571e2fc52300cbf47495985c7e1eadcda0b8ae06b8531e8c11399fbe85ab

bitcoin;ayushivarwPc9izN1f17452 00084dad090214d6aace3720f4fd1cfbd3bf067194708becb1287cd122643f2d

bitcoin;ayushivarwPc9izN1f21710 0007b88901ef593f3148dfed55d5303205b4d01976447616e223fadc8231363f

Bitcoins Distribution (BTC)

- *Bitcoins can be seen along with Total bitcoins mined.*

Total coins created: 2236
Bitcoins Generated:

bitcoin;ayushivarwPc9izN1f4219 000a0e1c8c0a3bf81240f6b21a264c52613c55cdec92c9b989022f13dfc2fd2

bitcoin;ayushivarwPc9izN1f6138 00010fb0426d81d9cb10d17a114d940a33c953bd11ffd685a7930a2a5789502e

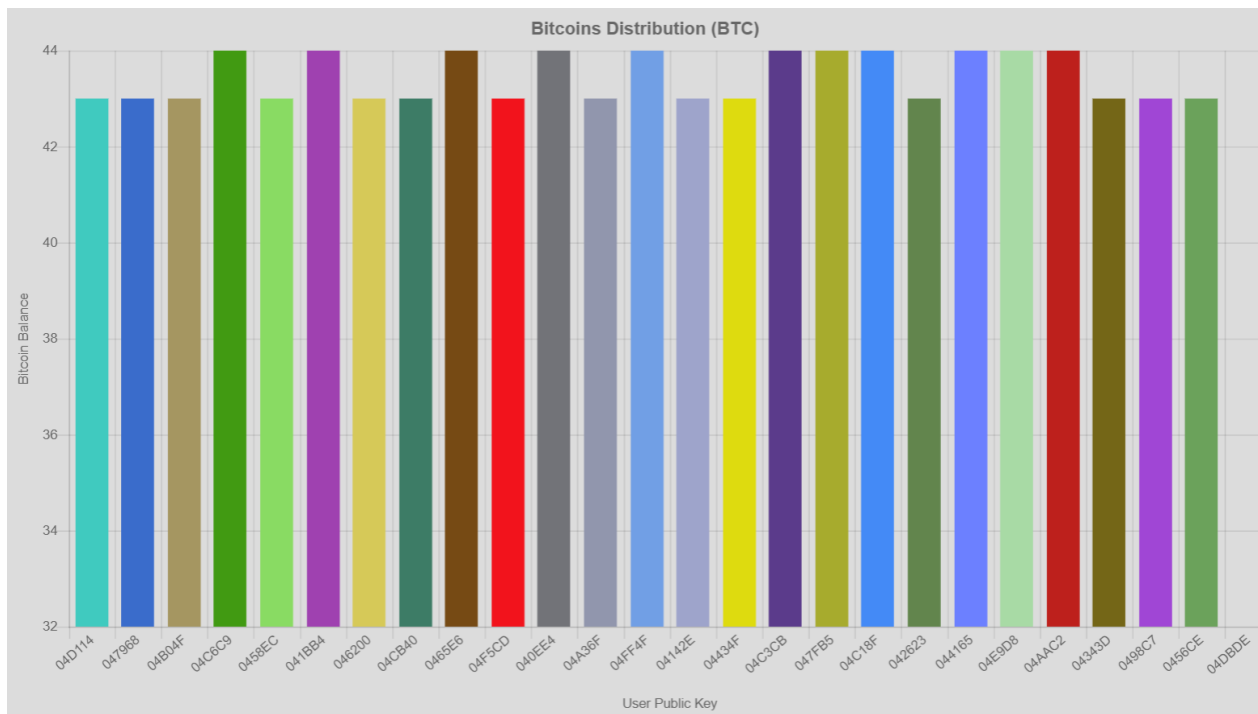
bitcoin;ayushivarwPc9izN1f14143 00067dac6dd879f45a37ceb74d605de76cf02121ca357b44957844bf5ead9f39

bitcoin;ayushivarwPc9izN1f17325 0003571e2fc52300cbf47495985c7e1eadcda0b8ae06b8531e8c11399fbe85ab

bitcoin;ayushivarwPc9izN1f17452 00084dad090214d6aace3720f4fd1cfbd3bf067194708becb1287cd122643f2d

bitcoin;ayushivarwPc9izN1f21710 0007b88901ef593f3148dfed55d5303205b4d01976447616e223fadc8231363f

- *Bitcoin distribution of 25 participants is shown using a bar chart. The chart shows public key on x-axis and BTC amount on y-axis.*



- *To start Transactions → Click on [Start Transaction](#) to perform transactions. The progress bar shows the progress of transactions.*



- *As the progress bar is filled, we have to scroll at the bottom of the screen to see the bar chart for bitcoin distribution after transactions are performed.*



- *This is the bar chart for bitcoin amount after the transactions are performed. (We are showing chart for 25 participants, since it is not feasible to show for more participants)*

