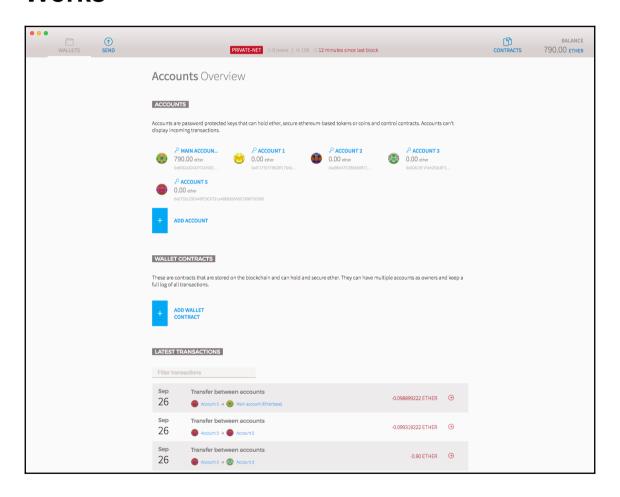
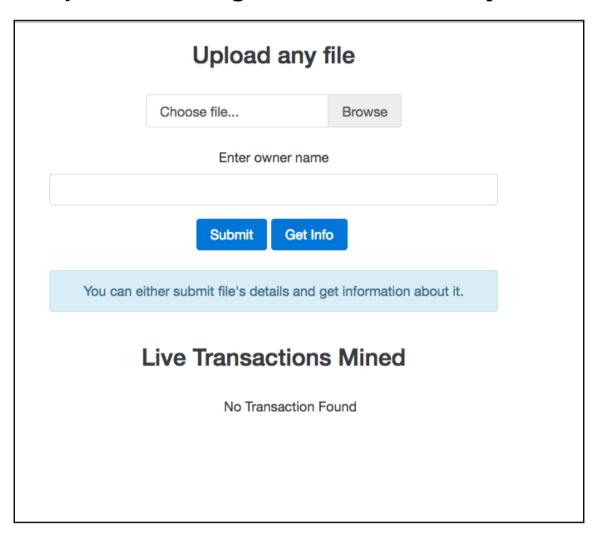
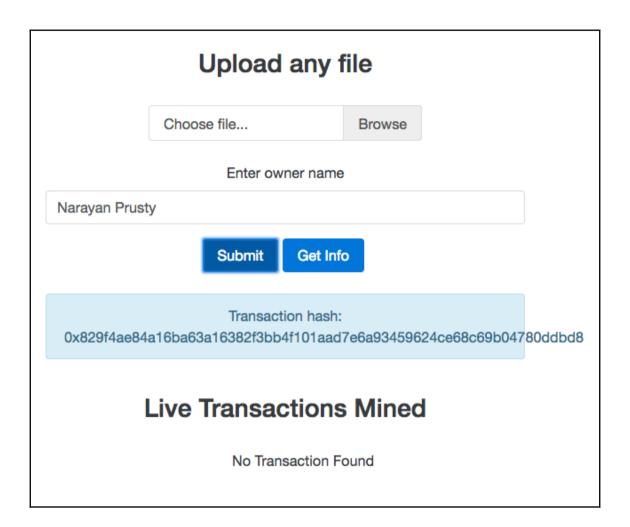
## **Graphic Bundle**

# **Chapter 2: Understanding How Ethereum Works**



#### **Chapter 4: Getting Started with web3.js**

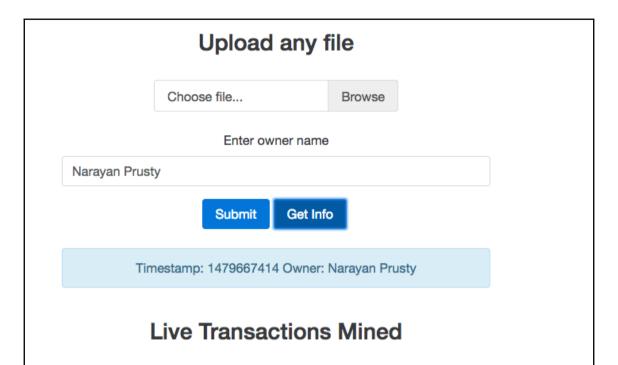




# Upload any file Choose file... Browse Enter owner name Narayan Prusty Submit Get Info Transaction hash: 0x829f4ae84a16ba63a16382f3bb4f101aad7e6a93459624ce68c69b04780ddbd8 Live Transactions Mined 1. Txn Hash:

0x829f4ae84a16ba63a16382f3bb4f101aad7e6a93459624ce68c69b04780ddbd8 Owner: Narayan Prusty File Hash:

0663f8458e52971cd7e257db0250ffac362d1af8



1. Txn Hash:

0x829f4ae84a16ba63a16382f3bb4f101aad7e6a93459624ce68c69b04780ddbd8 Owner: Narayan Prusty File Hash: 0663f8458e52971cd7e257db0250ffac362d1af8

### **Chapter 5: Building a Wallet Service**

Enter 12-word seed	1	
Generate Details	Generate New Seed	
Address,	Keys and Balances of seed	the
	Send ether	
From address		
To address		
Ether		

Create or use your existing wallet.  Enter 12-word seed  mutual obscure inch roast stable silent shine shy mail garbage cradle s  Generate Details Generate New Seed  Address, Keys and Balances of the seed  1. Address: 0xe922fec586b0578bb022fe148d667d0d37e6306f  Private Key: 0xc8be4ac85648777ba50b1741c0ea971e3ccddcd6f6309b052be5565b00805f9  Balance: 0 ether  2. Address: 0x76e0699914e6cd2e05353e3d52112fd1fa4f2e87  Private Key: 0x33a6b11f6e308b4c55a6ad392ab926baff19d1882228ef08afffee9a6eeabc28  Balance: 0 ether  Send ether  From address  Ether			)
mutual obscure inch roast stable silent shine shy mail garbage cradle s  Generate Details  Generate New Seed  Address, Keys and Balances of the seed  1. Address: 0xe922fec586b0578bb022fe148d667d0d37e6306f  Private Key: 0xc8be4ac85648777ba50b1741c0ea971e3ccddcd6f6309b052be5565b00805f9  Balance: 0 ether  2. Address: 0x76e0699914e6cd2e05353e3d52112fd1fa4f2e87  Private Key: 0x33a6b11f6e308b4c55a6ad392ab926baff19d1882228ef08afffee9a6eeabc28  Balance: 0 ether  Send ether  From address  Ether	Create or use your	r existing wallet.	
Generate Details  Generate New Seed  Address, Keys and Balances of the seed  1. Address: 0xe922fec586b0578bb022fe148d667d0d37e6306f  Private Key: 0xc8be4ac85648777ba50b1741c0ea971e3ccddcd6f6309b052be5565b00805f9  Balance: 0 ether  2. Address: 0x76e0699914e6cd2e05353e3d52112fd1fa4f2e87  Private Key: 0x33a6b11f6e308b4c55a6ad392ab926baff19d1882228ef08afffee9a6eeabc28  Balance: 0 ether  Send ether  From address  Ether	Enter 12-word seed		
Address, Keys and Balances of the seed  1. Address: 0xe922fec586b0578bb022fe148d667d0d37e6306f  Private Key: 0xc8be4ac85648777ba50b1741c0ea971e3ccddcd6f6309b052be5565b00805f9  Balance: 0 ether  2. Address: 0x76e0699914e6cd2e05353e3d52112fd1fa4f2e87  Private Key: 0x33a6b11f6e308b4c55a6ad392ab926baff19d1882228ef08afffee9a6eeabc28  Balance: 0 ether  Send ether  From address  Ether	mutual obscure inc	h roast stable silent shine shy mail garbage cradle s	
\$eed  1. Address: 0xe922fec586b0578bb022fe148d667d0d37e6306f  Private Key:	Generate Details	Generate New Seed	
1. Address: 0xe922fec586b0578bb022fe148d667d0d37e6306f  Private Key: 0xc8be4ac85648777ba50b1741c0ea971e3ccddcd6f6309b052be5565b00805f9  Balance: 0 ether  2. Address: 0x76e0699914e6cd2e05353e3d52112fd1fa4f2e87  Private Key: 0x33a6b11f6e308b4c55a6ad392ab926baff19d1882228ef08afffee9a6eeabc28  Balance: 0 ether  Send ether  From address  Ether	Address,		
0xc8be4ac85648777ba50b1741c0ea971e3ccddcd6f6309b052be5565b00805f9  Balance: 0 ether  2. Address: 0x76e0699914e6cd2e05353e3d52112fd1fa4f2e87  Private Key: 0x33a6b11f6e308b4c55a6ad392ab926baff19d1882228ef08afffee9a6eeabc28  Balance: 0 ether  Send ether  From address  Ether	1. Address: 0xe92		
2. Address: 0x76e0699914e6cd2e05353e3d52112fd1fa4f2e87  Private Key: 0x33a6b11f6e308b4c55a6ad392ab926baff19d1882228ef08afffee9a6eeabc28  Balance: 0 ether  Send ether  From address  Ether	-	18777ba50b1741c0ea971e3ccddcd6f6309b052be556	65b00805f9
Private Key: 0x33a6b11f6e308b4c55a6ad392ab926baff19d1882228ef08afffee9a6eeabc28  Balance: 0 ether  Send ether  From address  To address  Ether	Balance: 0 ethe	er	
0x33a6b11f6e308b4c55a6ad392ab926baff19d1882228ef08afffee9a6eeabc28  Balance: 0 ether  Send ether  From address  To address  Ether	2. <b>Address:</b> 0x76e	e0699914e6cd2e05353e3d52112fd1fa4f2e87	
Send ether  From address  To address  Ether		08b4c55a6ad392ab926baff19d1882228ef08afffee9a	6eeabc28
From address  To address  Ether	Balance: 0 ethe	er	
From address  To address  Ether		Send ether	
Ether	From address		
Ether			
	To address		
Send Ether	Ether		
Send Ether			
	Send Ether		

inter 12-word se	inch roast stable silent shine shy mail garbage cradle s
Generate Detai	S Generate New Seed
Address	, Keys and Balances of the seed
1. Address: 0x	ba6406ddf8817620393ab1310ab4d0c2deda714d
Private Key 0x1a56e474	: 92bf3df9c9563fa7f66e4e032c661de9d68c3f36f358e6bc9a9f69f
Balance: 10	09.09663936 ether
2. Address: 0x	2bdbec0ccd70307a00c66de02789e394c2c7d549
Private Key 0x053c8a57	: 54ce99e3a909b968b23dcb3314f3c88e16ef00658f0aa3f255579
Balance: 0.9	9 ether
	Send ether
rom address	
o address	
ther	

Create or use your existing wallet.

Enter 12-word seed

mutual obscure inch roast stable silent shine shy mail garbage cradle s

**Generate Details** 

**Generate New Seed** 

## Address, Keys and Balances of the seed

1. Address: 0xba6406ddf8817620393ab1310ab4d0c2deda714d

Private Key:

0x1a56e47492bf3df9c9563fa7f66e4e032c661de9d68c3f36f358e6bc9a9f69f2

Balance: 1009.09663936 ether

2. Address: 0x2bdbec0ccd70307a00c66de02789e394c2c7d549

Private Key:

0x053c8a5754ce99e3a909b968b23dcb3314f3c88e16ef00658f0aa3f255579a7a

Balance: 0.9 ether

#### Send ether

From address

0xba6406ddf8817620393ab1310ab4d0c2deda714d

To address

0x2bdbec0ccd70307a00c66de02789e394c2c7d549

Ether

23

Send Ether

Txn hash:

0xdebe745a82850cc56e76e228c39d0421ad0ec6b28543b5ec360b405b20e9bd1e

Enter 12-word seed

mutual obscure inch roast stable silent shine shy mail garbage cradle s

**Generate Details** 

**Generate New Seed** 

## Address, Keys and Balances of the seed

1. Address: 0xba6406ddf8817620393ab1310ab4d0c2deda714d

Private Key:

0x1a56e47492bf3df9c9563fa7f66e4e032c661de9d68c3f36f358e6bc9a9f69f2

Balance: 986.09663936 ether

2. Address: 0x2bdbec0ccd70307a00c66de02789e394c2c7d549

Private Key:

0x053c8a5754ce99e3a909b968b23dcb3314f3c88e16ef00658f0aa3f255579a7a

Balance: 23.9 ether

#### Send ether

From address

0xba6406ddf8817620393ab1310ab4d0c2deda714d

To address

0x2bdbec0ccd70307a00c66de02789e394c2c7d549

Ether

23

Send Ether

# **Chapter 6: Building a Smart Contract Deployment Platform**

Compile

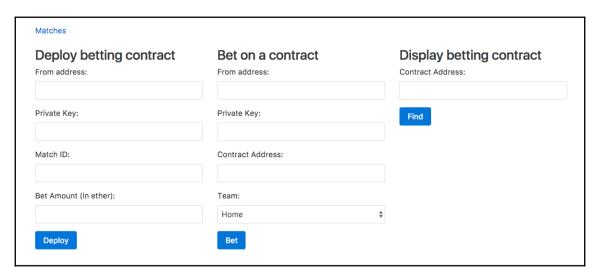
1	Address Prefixed with 0x
Compile	Private Key Prefixed with 0x  Deploy
1 pragma solidity 0.4.8;	Address
	Address Prefixed with 0x  Private Key Prefixed with 0x

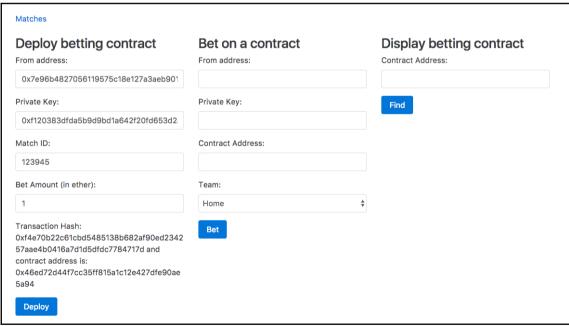
Deploy

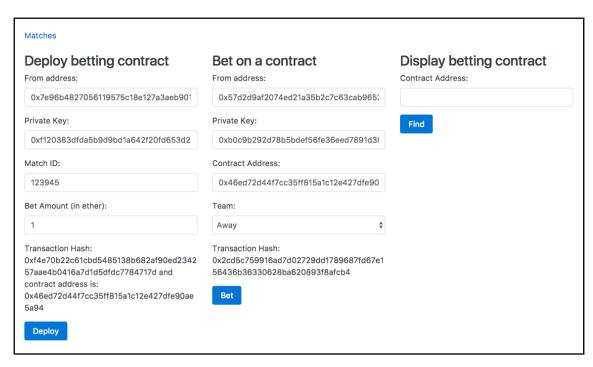


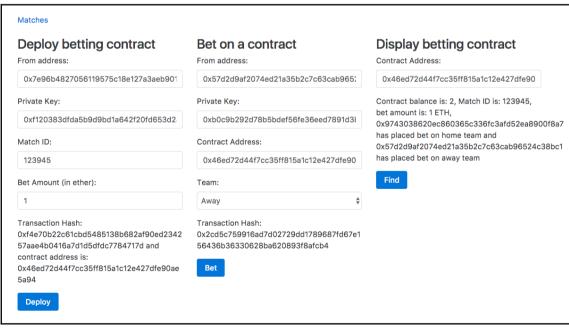
### **Chapter 7: Building a Betting App**

Match ID	Start Time	Home Team	Away Team	Winner
123945	2017 Feb 27 04:30:00	Lokomotiv Tashkent	Al Ahli (UAE)	home
123063	2017 Feb 27 05:00:00	Home United	Courts Young Lions	home
123061	2017 Feb 27 05:00:00	Hougang United	Geylang International	home
90293	2017 Feb 27 08:30:00	Mersin İdmanyurdu	Denizlispor	draw
126758	2017 Feb 27 08:30:00	Ashanti Gold	Asante Kotoko	away
123641	2017 Feb 27 08:40:00	Al Fateh	Lekhwiya	draw
124173	2017 Feb 27 09:00:00	Al Jazira	Esteghlal Khuzestan	away
123667	2017 Feb 27 09:00:00	Esteghlal	Al Taawoun	home
126759	2017 Feb 27 09:30:00	Lyngby	Esbjerg	draw
86683	2017 Feb 27 10:30:00	Galatasaray	Beşiktaş	away
68211	2017 Feb 27 10:30:00	Ruch Chorzów	Śląsk Wrocław	home
68346	2017 Feb 27 11:30:00	Viborg	AGF Aarhus	draw
119466	2017 Feb 27 11:30:00	Melgar	USMP	home
76297	2017 Feb 28 12:45:00	St Pauli	Karlsruher	home
96417	2017 Feb 28 01:00:00	Bari	Brescia	home
91822	2017 Feb 28 01:15:00	Fiorentina	Torino	draw
67919	2017 Feb 28 01:15:00	Stade de Reims	Brest	draw
69287	2017 Feb 28 01:30:00	Leicester City	Liverpool	home
85271	2017 Feb 28 01:30:00	Arouca	Belenenses	away
119697	2017 Feb 28 02:00:00	Deportivo Lara	Portuguesa (VEN)	home
114730	2017 Feb 28 03:30:00	Deportes Valdivia	San Marcos de Arica	draw
119692	2017 Feb 28 04:30:00	Zamora	Estudiantes de Mérida	home
120929	2017 Feb 28 05:00:00	Curicó Unido	Deportivo Ñublense	draw
119470	2017 Feb 28 05:30:00	Cantolao	Alianza Atlético	away
119076	2017 Feb 28 06:15:00	Deportes Quindío	Unión Magdalena	home



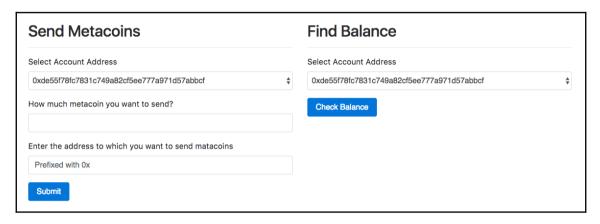


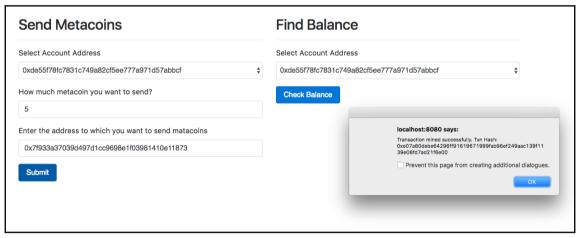


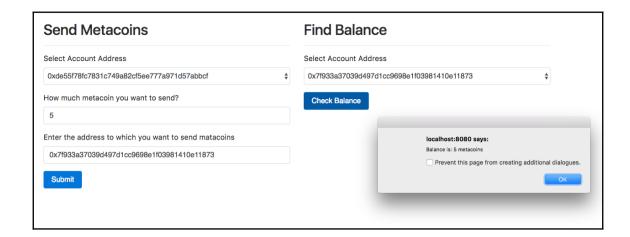


#### Matches **Deploy betting contract** Display betting contract Bet on a contract Contract Address: From address: From address: 0x7e96b4827056119575c18e127a3aeb901 0x57d2d9af2074ed21a35b2c7c63cab9652 0x46ed72d44f7cc35ff815a1c12e427dfe90 Private Key: Private Key: Contract balance is: 0, Match ID is: 123945, bet amount is: 1 ETH, 0xb0c9b292d78b5bdef56fe36eed7891d3l 0xf120383dfda5b9d9bd1a642f20fd653d2 0x9743038620ec860365c336fc3afd52ea8900f8a7 has placed bet on home team and Match ID: Contract Address: 0x57d2d9af2074ed21a35b2c7c63cab96524c38bc1 has placed bet on away team 123945 0x46ed72d44f7cc35ff815a1c12e427dfe90 Find Bet Amount (in ether): Team: Away \$ Transaction Hash: Transaction Hash: 0xf4e70b22c61cbd5485138b682af90ed2342 0x2cd5c759916ad7d02729dd1789687fd67e1 57aae4b0416a7d1d5dfdc7784717d and 56436b36330628ba620893f8afcb4 contract address is: 0x46ed72d44f7cc35ff815a1c12e427dfe90ae Bet Deploy

# **Chapter 8: Building Enterprise Level Smart Contracts**







## Chapter 9: Building a Consortium Blockchain

```
2017-04-19 00:29:59
                     Imported #868 bc6f...dfa8 (0 txs, 0.00 Mgas, 0.57 ms, 0.56 KiB)
2017-04-19 00:30:04
                     Imported #869 080b...7964 (0 txs, 0.00 Mgas, 0.60 ms, 0.56 KiB)
2017-04-19 00:30:10
                    Imported #870 552c...4fd8 (0 txs, 0.00 Mgas, 0.51 ms, 0.56 KiB)
                    Imported #871 2fed...27d4 (0 txs, 0.00 Mgas, 0.58 ms, 0.56 KiB)
2017-04-19 00:30:15
2017-04-19 00:30:17
                        0/ 1/25 peers
                                      309 KiB db 302 KiB chain 0 bytes queue
2017-04-19 00:30:19 Imported #872 834c...9d78 (0 txs, 0.00 Mgas, 0.49 ms, 0.56 KiB)
2017-04-19 00:30:25 Imported #873 62ee...6335 (0 txs, 0.00 Mgas, 0.48 ms, 0.56 KiB)
                    Imported #874 8043...7a5d (0 txs, 0.00 Mgas, 0.51 ms, 0.56 KiB)
2017-04-19 00:30:29
2017-04-19 00:30:35 Imported #875 9b7d...a9c9 (0 txs, 0.00 Mgas, 0.46 ms, 0.56 KiB)
2017-04-19 00:30:40 Imported #876 493b...9cc6 (0 txs, 0.00 Mgas, 0.65 ms, 0.56 KiB)
2017-04-19 00:30:45 Imported #877 a672...f06f (0 txs, 0.00 Mgas, 0.53 ms, 0.56 KiB)
2017-04-19 00:30:47
                        0/ 1/25 peers
                                       311 KiB db 302 KiB chain 0 bytes queue
2017-04-19 00:30:49 Imported #878 cedf...lee5 (0 txs, 0.00 Mgas, 0.47 ms, 0.56 KiB)
2017-04-19 00:30:55 Imported #879 4381...8fcc (0 txs, 0.00 Mgas, 0.58 ms, 0.56 KiB)
2017-04-19 00:30:59 Imported #880 b383...ef90 (0 txs, 0.00 Mgas, 0.53 ms, 0.56 KiB)
2017-04-19 00:31:05 Imported #881 25cf...aeeb (0 txs, 0.00 Mgas, 0.46 ms, 0.56 KiB)
2017-04-19 00:31:10 Imported #882 8dee...ca2c (0 txs, 0.00 Mgas, 0.53 ms, 0.56 KiB)
2017-04-19 00:31:15 Imported #883 770a...f85b (0 txs, 0.00 Mgas, 0.53 ms, 0.56 KiB)
```