



Activity 2: Representing transaction

Libraries to install:

1. pip install web3
2. pip install blockchain

Instructions:

1. Create your ganache account
2. Link to download ganache <https://trufflesuite.com/ganache/>
3. Ganache gives us fake wallet account address
4. Use any 2 account address for the activity
5. To get private key

step 1:

The screenshot shows the Ganache web interface. At the top, there are tabs for ACCOUNTS, BLOCKS, TRANSACTIONS, CONTRACTS, EVENTS, and LOGS. Below these tabs, there are various status indicators: CURRENT BLOCK (0), GAS PRICE (2000000000), GAS LIMIT (6721975), HARDFORK (MERGE), NETWORK ID (5777), RPC SERVER (HTTP://127.0.0.1:7545), and MINING STATUS (AUTOMINING). There are also buttons for WORKSPACE QUICKSTART, SAVE, SWITCH, and a settings gear icon.

Below the status bar, there is a section for the MNEMONIC (poem drink tag water glimpse thrive extra elbow ceiling grit guard six) and the HD PATH (m44'60'0'0account_index). A "Show Keys" button is visible next to the HD PATH.

The main part of the interface is a table listing accounts. Each row contains the ADDRESS, BALANCE, TX COUNT, INDEX, and a key icon. The first account is highlighted with a red circle and a red arrow pointing to the "Show Keys" button.

ADDRESS	BALANCE	TX COUNT	INDEX	KEY
0x0a54769077995543afAc7b810400Ba6A57308b82	100.00 ETH	0	0	🔑
0x4f506C13cFFEADED856a1a679AF0BFA325E49EC	100.00 ETH	0	1	🔑
0x4A0408E73f09d26B366a1D1300F2cb1B5C7bfE12	100.00 ETH	0	2	🔑
0x9485d7D4b3e41C3190CcC4923Ff0908Ec41ee442	100.00 ETH	0	3	🔑
0x0a803f7C14435E8c91b42BcAd7645b3AE824402e	100.00 ETH	0	4	🔑
0xe0B63f1DC73F5eBfd1173d170D826336f41f8880	100.00 ETH	0	5	🔑
0x1374b84A6E59Eb7483722a95D8D6677318D0257A	100.00 ETH	0	6	🔑

step 2:



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BALANCE	TX COUNT
ACCOUNT INFORMATION	
ACCOUNT ADDRESS 0x0a54769077995543afAc7b810400Ba6A57308b82	
PRIVATE KEY 0xd5cdc54845b7bdfb7180d2d0c851b83b212c4ab5cb2fb4b118ff707b4b6dba9f <small>Do not use this private key on a public blockchain; use it for development purposes only!</small>	
DONE	

```
from web3 import Web3
#ganache URL
#web3=Web3(Web3.HTTPProvider(InfuraUrl))
#ganache RPC server link can be used
w3=Web3(Web3.HTTPProvider("HTTP://127.0.0.1:7545"))
print(w3.is_connected())
if w3.is_connected():
    print("Transaction Initiated!")
else:
    print("Please open your ganache to see the results")

def balance(address):
    balance=w3.eth.get_balance(address)
    balance_eth=w3.fromWei(balance,"ether")
    print("The balance of account " + address + " is "
+str(balance_eth) +"ether")

#public key of acc1
acc1="0x4295b410e29573fd922787b2431d55482de0d979"
#private key of acc1
acc1_pk="0x0313b238f94e70f31a3bb3dfdfab782a56041c737f9fb2e49b380973b9d37e79"
#public key of acc2
acc2="0x4295b410e29573fd922787b2431d55482de0d979"
```



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```
balance(acc1)
balance(acc2)

#transaction
#step 1

nonce=w3.eth.get_transaction_count(acc1)
tx={
    'nonce':nonce,
    'to': acc2,
    'value':w3.toWei(10,'ether'),
    'gas':200000,
    'gasPrice':w3.toWei(50,'gwei')
}
print(tx)

#step2
signed_tx=w3.eth.account.signTransaction(tx,acc1_pk)

#step3
tx_hash=w3.eth.sendRawTransaction(signed_tx.rawTransaction)

print(w3.toHex(tx_hash))

balance(acc1)
balance(acc2)
```