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Blockchain Assignment 2

README

i) Install ecdsa

```
pip install ecdsa
```

ii) Install sqlite3

```
pip install sqlite3
```

iii) To create new database

- Delete tutorial.db if present
- run database.py

```
python database.py
```

iv) After creating the database just run ledger.py

```
python ledger.py
```

After which in terminal we can do all the functionalities mentioned in the problem. You will see something like this:

```
D:\Semeste7\Blockchain\ASSIGNMENT2_FINAL>python -u "d:\Semeste7\Blockchain\ASSIGNMENT2_FINAL\ledger.py"
0 => Print Blockchain
1 => Enter transactions
2 => Print the wallets of users and miners
3 => Print Genesis block
4 => Find the addresses and amounts of the transactions
5 => Show the block information of the block with the hash address
6 => the height of the most recent block stored
7 => Show the most recent block stored
8 => average number of transactions per block
9 => Summary report of the transactions in the block with height
Else => Exit
Enter operation: □
```

- To print whole blockchain enter 0

- To enter transactions enter 1, then enter number of transactions to be added after which add transaction in this order => **from to amount transactionfee**
- Note: User are number 1 to 20
- For all other functionality that were asked, you just need to enter number mentioned in the terminal. For example if you want the addresses and amounts of the transactions, enter 4.

```
Transaction Hash 154be302f13d6bcd5f4da24676cf103df00d5ddb47dc34964b53ea08c30c4e87
From 1
To 2
Amount 50
Transaction fee 49
```

```
Transaction Hash 1a049b474d35f0dfb2855fc67229a9212ce6dd26d268078e60d3134b9cd192db
From 1
To 2
Amount 0
Transaction fee 1
```

```
Transaction Hash a64126e65eafec22d1588db312753e5458b3a457ed8844eecb175a216cd76387
From 4
To 5
Amount 11
Transaction fee 1
```

```
Transaction Hash ea3b7a0b13caf617e6e22628e6dc62d51a9803e07f4fa4c6da6371eb1551af16
Transaction Hash 529d261cc98b5aa251c75916e3d1c2771dacd6e93379fb8f2238ae3a3385a71d
From 6
To 7
Amount 2
Transaction fee 3
```

- Similarly all functionality asked in the assignment can be done.

Note I have already provided tutorial.db file , if you wish create new database follow above steps of database creation.

Note Always exits by 10 or other value. Do not exit using ctrl+C as database may crash.

Note Block height starts from 0(Assumption).