

```
+ multichain-cli chain1
~ hamzabhatti18 MyDevBoard:pts/7
(22:22:13) → multichaind chain1 -daemon --(Thu, Apr 03)

MultiChain 2.3.3 Daemon (Community Edition, latest protocol 20013)

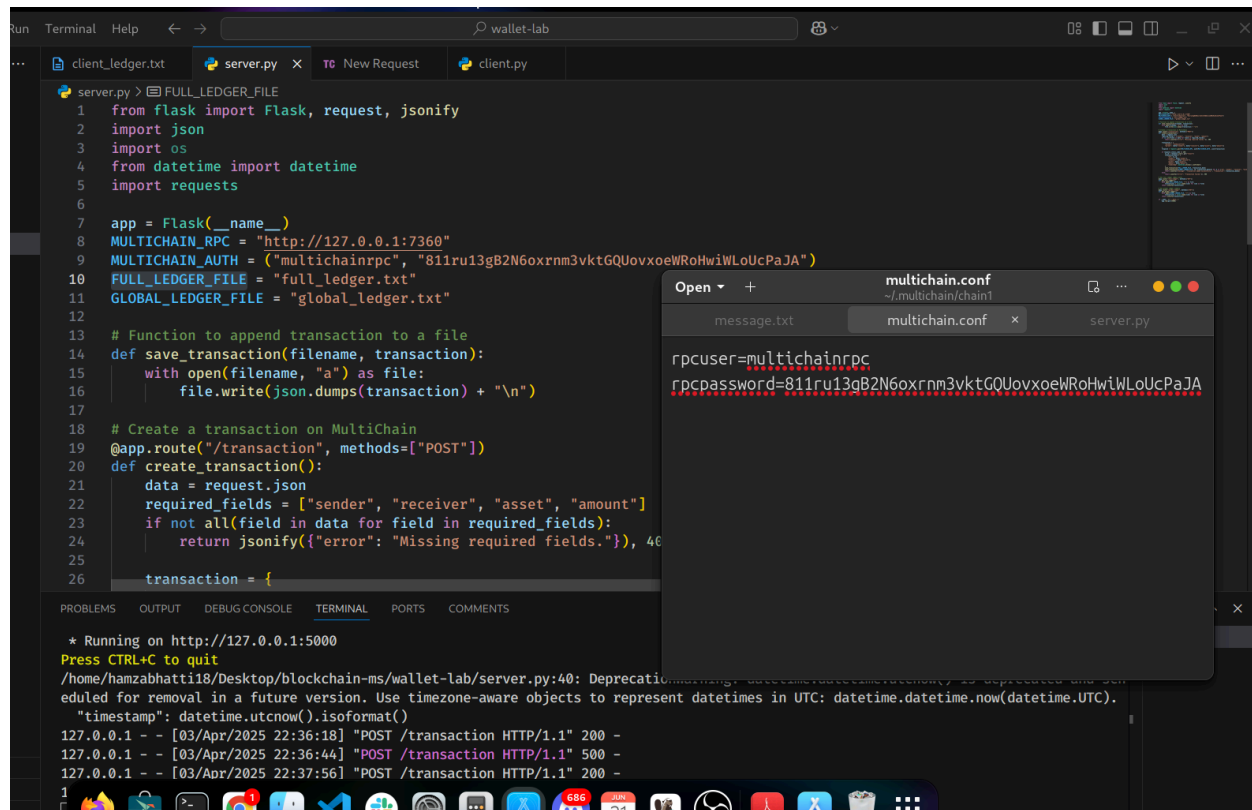
Starting up node...

Other nodes can connect to this node using:
multichaind chain1@192.168.1.117:7361

This host has multiple IP addresses, so from some networks:
multichaind chain1@172.17.0.1:7361

Listening for API requests on port 7360 (local only - see rpcallowip setting)

Node ready.
```

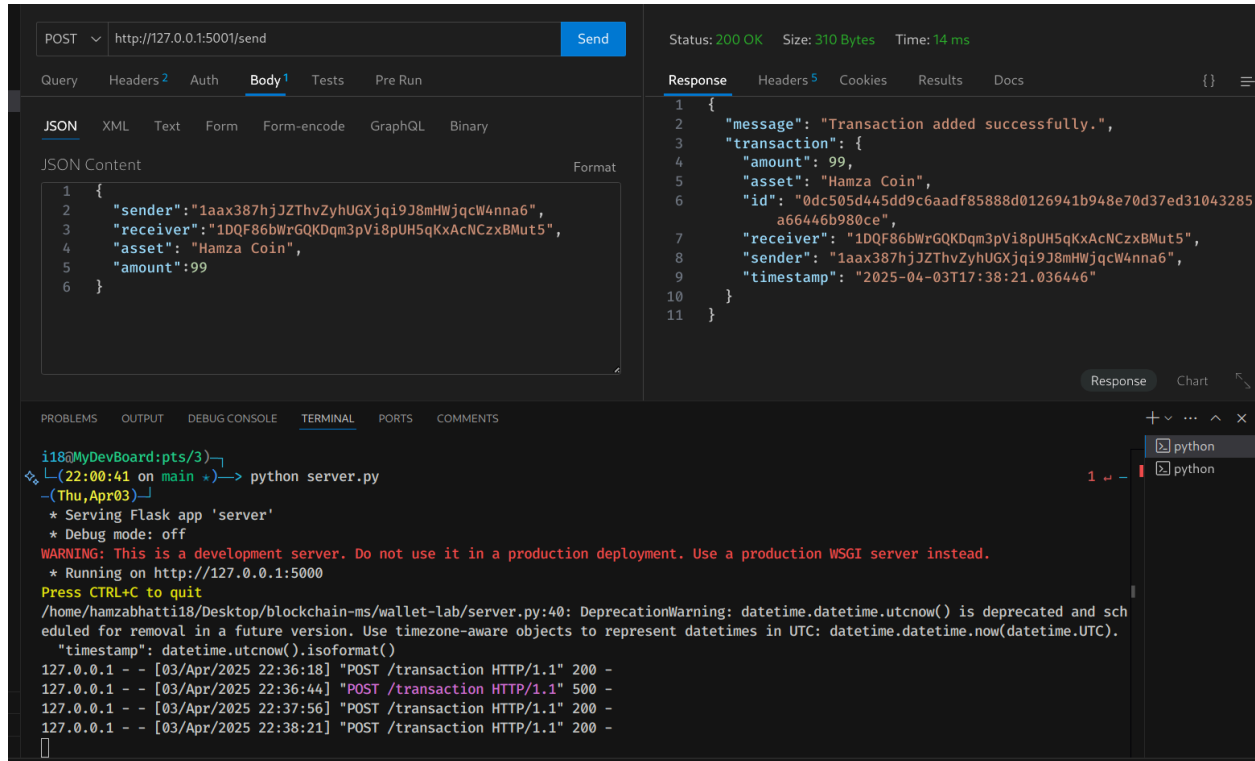


```
server.py > FULL_LEDGER_FILE
1 from flask import Flask, request, jsonify
2 import json
3 import os
4 from datetime import datetime
5 import requests
6
7 app = Flask(__name__)
8 MULTICHAIN_RPC = "http://127.0.0.1:7360"
9 MULTICHAIN_AUTH = ("multichainrpc", "811ru13gB2N6oxrnm3vktGQovvxoeWROhwiWLoUcPaJA")
10 FULL_LEDGER_FILE = "full_ledger.txt"
11 GLOBAL_LEDGER_FILE = "global_ledger.txt"
12
13 # Function to append transaction to a file
14 def save_transaction(filename, transaction):
15     with open(filename, "a") as file:
16         file.write(json.dumps(transaction) + "\n")
17
18 # Create a transaction on MultiChain
19 @app.route("/transaction", methods=["POST"])
20 def create_transaction():
21     data = request.json
22     required_fields = ["sender", "receiver", "asset", "amount"]
23     if not all(field in data for field in required_fields):
24         return jsonify({"error": "Missing required fields."}), 400
25
26     transaction = {
27         "timestamp": datetime.utcnow().isoformat(),
28         "sender": data["sender"],
29         "receiver": data["receiver"],
30         "asset": data["asset"],
31         "amount": data["amount"]
32     }
33     save_transaction(FULL_LEDGER_FILE, transaction)
34     return jsonify(transaction), 200
```

```
multichain.conf
~/multichain/chain1
message.txt
multichain.conf
server.py

rpcuser=multichainrpc
rpcpassword=811ru13gB2N6oxrnm3vktGQovvxoeWROhwiWLoUcPaJA
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
/home/hamzabhatti18/Desktop/blockchain-ms/wallet-lab/server.py:40: DeprecationWarning: datetime.datetime.utcnow() is deprecated and scheduled for removal in a future version. Use timezone-aware objects to represent datetimes in UTC: datetime.datetime.now(datetime.UTC).
  "timestamp": datetime.utcnow().isoformat()
127.0.0.1 - - [03/Apr/2025 22:36:18] "POST /transaction HTTP/1.1" 200 -
127.0.0.1 - - [03/Apr/2025 22:36:44] "POST /transaction HTTP/1.1" 500 -
127.0.0.1 - - [03/Apr/2025 22:37:56] "POST /transaction HTTP/1.1" 200 -
```



POST `http://127.0.0.1:5001/send` Send

Query Headers Auth **Body** Tests Pre Run

JSON XML Text Form Form-encode GraphQL Binary

JSON Content

```
1 {
2   "sender": "1aax387hjJZThvZyhUGXjq9J8mHWjqcW4nna6",
3   "receiver": "1DQF86bWrGQKQm3pVi8pUH5qKxAcNCzx8Mut5",
4   "asset": "Hamza Coin",
5   "amount": 99
6 }
```

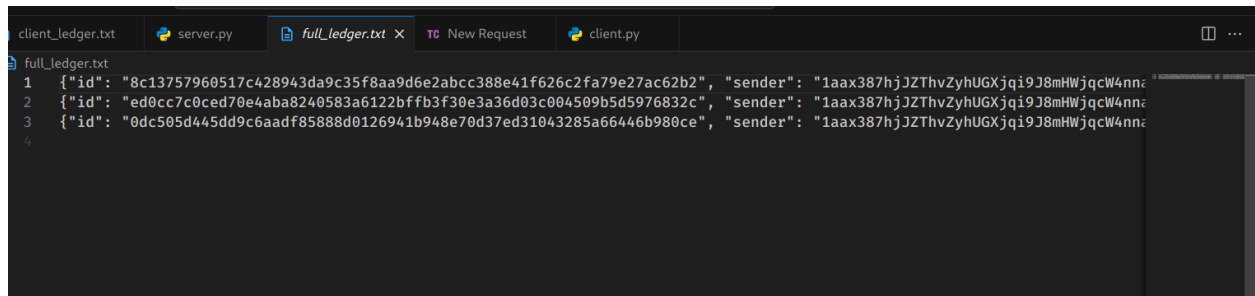
Status: 200 OK Size: 310 Bytes Time: 14 ms

Response Headers Cookies Results Docs

```
1 {
2   "message": "Transaction added successfully.",
3   "transaction": {
4     "amount": 99,
5     "asset": "Hamza Coin",
6     "id": "0dc505d445dd9c6aadf85888d0126941b948e70d37ed31043285a66446b980ce",
7     "receiver": "1DQF86bWrGQKQm3pVi8pUH5qKxAcNCzx8Mut5",
8     "sender": "1aax387hjJZThvZyhUGXjq9J8mHWjqcW4nna6",
9     "timestamp": "2025-04-03T17:38:21.036446"
10  }
11 }
```

PROBLEMS OUTPUT DEBUG CONSOLE **TERMINAL** PORTS COMMENTS

```
i18@MyDevBoard:pts/3~
└─(22:00:41 on main *)─> python server.py
-(Thu, Apr 03)-
* Serving Flask app 'server'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
/home/hamzabhatti18/Desktop/blockchain-ms/wallet-lab/server.py:40: DeprecationWarning: datetime.datetime.utcnow() is deprecated and scheduled for removal in a future version. Use timezone-aware objects to represent datetimes in UTC: datetime.datetime.now(datetime.UTC).
  "timestamp": datetime.utcnow().isoformat()
127.0.0.1 - - [03/Apr/2025 22:36:18] "POST /transaction HTTP/1.1" 200 -
127.0.0.1 - - [03/Apr/2025 22:36:44] "POST /transaction HTTP/1.1" 500 -
127.0.0.1 - - [03/Apr/2025 22:37:56] "POST /transaction HTTP/1.1" 200 -
127.0.0.1 - - [03/Apr/2025 22:38:21] "POST /transaction HTTP/1.1" 200 -
```



client_ledger.txt server.py **full_ledger.txt** TC New Request client.py

```
full_ledger.txt
1 {"id": "8c13757960517c428943da9c35f8aa9d6e2abcc388e41f626c2fa79e27ac62b2", "sender": "1aax387hjJZThvZyhUGXjq9J8mHWjqcW4nna6",
2 {"id": "ed0cc7c0ced70e4aba8240583a6122bffb3f30e3a36d03c004509b5d5976832c", "sender": "1aax387hjJZThvZyhUGXjq9J8mHWjqcW4nna6",
3 {"id": "0dc505d445dd9c6aadf85888d0126941b948e70d37ed31043285a66446b980ce", "sender": "1aax387hjJZThvZyhUGXjq9J8mHWjqcW4nna6",
4
```