

lab 5

Develop a blockchain application from scratch in Python

install requirement.txt

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prashanth@prashanth-VirtualBox: ~/python_blockchain_app
prashanth@prashanth-VirtualBox:~/python_blockchain_app$ pip install -r requirements.txt
Collecting Flask==1.1 (from -r requirements.txt (line 1))
  Downloading https://files.pythonhosted.org/packages/f2/28/2a03252dfb9ebf377f40fba6a7841b47083260bf8bd8e737b0c6952df83f/Flask-1.1.2-py3-none-any.whl (94kB)
  100% |#####| 102kB 215kB/s
Collecting requests==2.22 (from -r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/39/fc/f91eac5a39a65f75a7adb58eac7fa78871ea9872283fb9c44e6455998134/requests-2.25.0-py2.py3-none-any.whl (61kB)
  100% |#####| 61kB 804kB/s
Collecting itsdangerous==0.24 (from Flask==1.1->-r requirements.txt (line 1))
  Downloading https://files.pythonhosted.org/packages/76/ae/44b03b253d6fade317f32c24d100b3b35c2239807046a4c953c7b89fa49e/itsdangerous-1.1.0-py2.py3-none-any.whl
Collecting Jinja2==2.10.1 (from Flask==1.1->-r requirements.txt (line 1))
  Downloading https://files.pythonhosted.org/packages/30/9e/f663a2aa66a09d838042ae1a2c5659828bb9b41ea3a6efa20a20fd92b121/Jinja2-2.11.2-py2.py3-none-any.whl (125kB)
  100% |#####| 133kB 226kB/s
Collecting click==5.1 (from Flask==1.1->-r requirements.txt (line 1))
  Downloading https://files.pythonhosted.org/packages/d2/3d/fa76db83bf75c4f8d338c2fd15c8d33fdd7ad23a9b5e57eb6c5de26b430e/click-7.1.2-py2.py3-none-any.whl (82kB)
  100% |#####| 92kB 207kB/s
Collecting Werkzeug==0.15 (from Flask==1.1->-r requirements.txt (line 1))
  Downloading https://files.pythonhosted.org/packages/cc/94/5f7079a0e00bd6863ef8f1da638721e9da21e5bacee597595b318f71d62e/Werkzeug-1.0.1-py2.py3-none-any.whl (298kB)
  100% |#####| 307kB 196kB/s
Collecting chardet<4,>=3.0.2 (from requests==2.22->-r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/bc/a9/01ffebfb562e4274b6487b4bb1ddcc7ca55ec7510b22e4c51f14098443b8/chardet-3.0.4-py2.py3-none-any.whl (133kB)
  100% |#####| 143kB 114kB/s
Collecting certifi<=2017.4.17 (from requests==2.22->-r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/c1/6f/3d85f850962279a7e4c622695d7b3171e95ac65308a57d3b29738b27149/certifi-2020.11.8-py2.py3-none-any.whl (155kB)
  100% |#####| 163kB 81kB/s
Collecting urllib3<1.27,>=1.21.1 (from requests==2.22->-r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/f5/71/45d36a8df68f3ebb098d6861b2c017f3d094538c0fb98fa61d4dc43e69b9/urllib3-1.26.2-py2.py3-none-any.whl (136kB)
  100% |#####| 143kB 119kB/s
Collecting idna<3,>=2.5 (from requests==2.22->-r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/a2/38/928ddce2273eaa564f6f50de919327bf3a0f091b5baba8dfa9460f3a8a8/idna-2.10-py2.py3-none-any.whl (58kB)
  100% |#####| 61kB 96kB/s
Collecting MarkupSafe==0.23 (from Jinja2==2.10.1->Flask==1.1->-r requirements.txt (line 1))
  Downloading https://files.pythonhosted.org/packages/fb/40/f3adb7cf24a8012813c5edb20329eb22d5d8e2a0ecf73d21d6b85865da11/MarkupSafe-1.1.1-cp27-cp27mu-manylinux1_x86_64.w
  100% |#####| 61kB 96kB/s
Installing collected packages: itsdangerous, MarkupSafe, Jinja2, click, Werkzeug, Flask, chardet, certifi, urllib3, idna, requests
Successfully installed Flask-1.1.2 Jinja2-2.10.1 MarkupSafe-0.23 Werkzeug-0.15.1 chardet-3.0.4 certifi-2020.11.8 click-7.1.2 idna-2.10 requests-2.25.0
You are using pip version 8.1.1, however version 20.2.4 is available.
You should consider upgrading via the 'pip install --upgrade pip' command.
prashanth@prashanth-VirtualBox:~/python_blockchain_app$

```

export variables and run flask server on port 8000

```

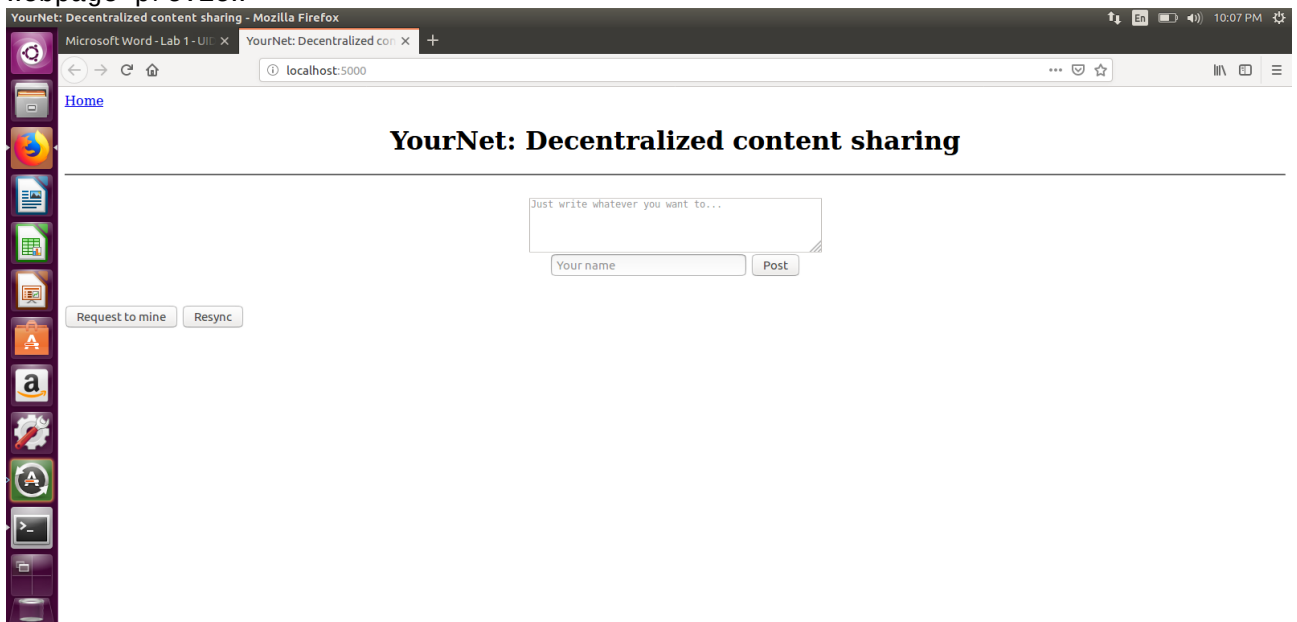
prashanth@prashanth-VirtualBox: ~/python_blockchain_app
prashanth@prashanth-VirtualBox:~/python_blockchain_app$ export FLASK_APP=node_server.py
prashanth@prashanth-VirtualBox:~/python_blockchain_app$ flask run --port 8000
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:8000/ (Press CTRL+C to quit)

```

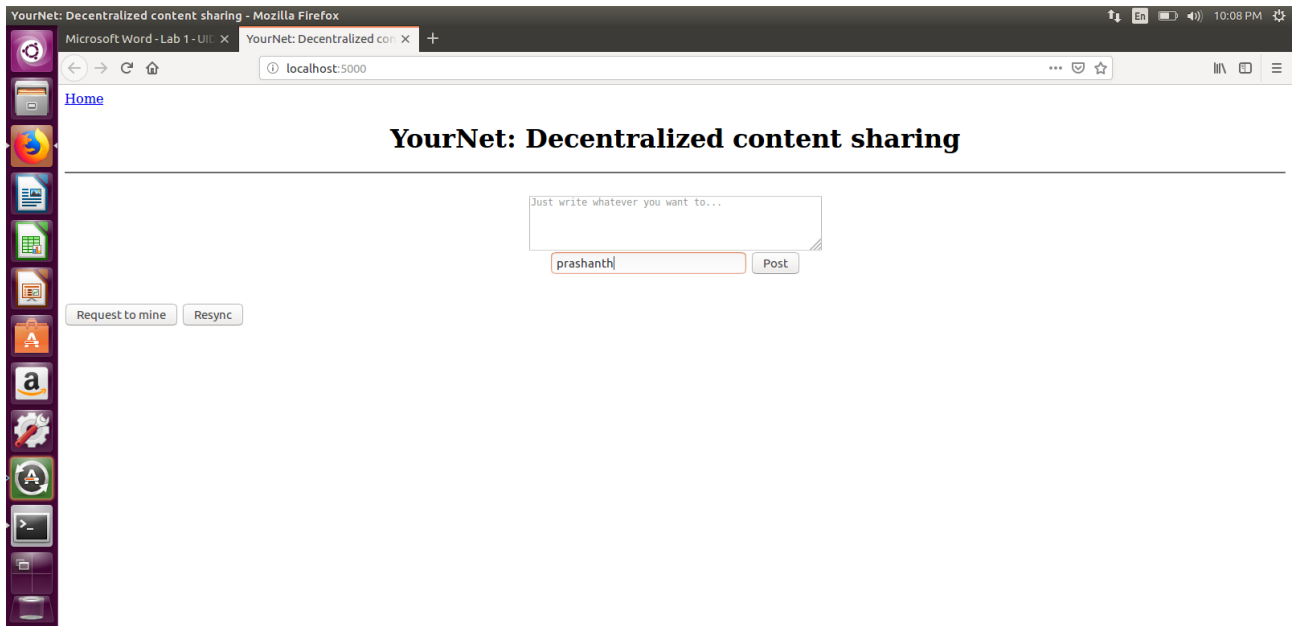
run run_app.py flask server on port 5000

```
prashanth@prashanth-VirtualBox: ~/python_blockchain_app
prashanth@prashanth-VirtualBox:~/python_blockchain_app$ python run_app.py
* Serving Flask app "app" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 923-158-738
```

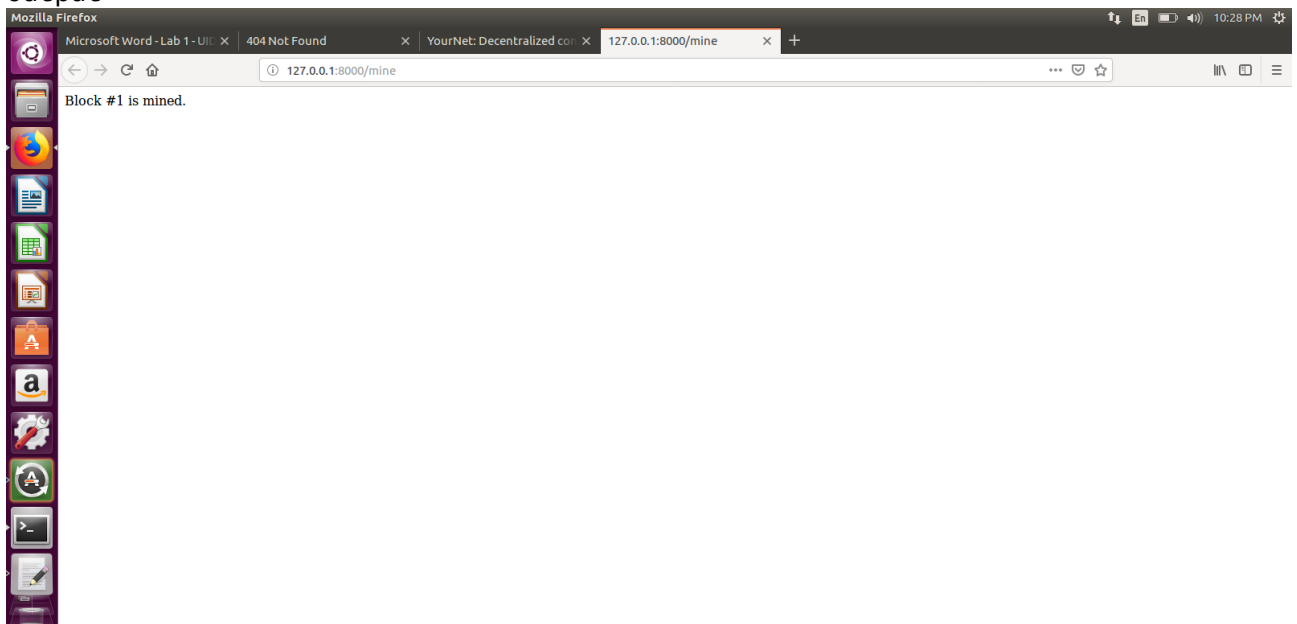
webpage preview



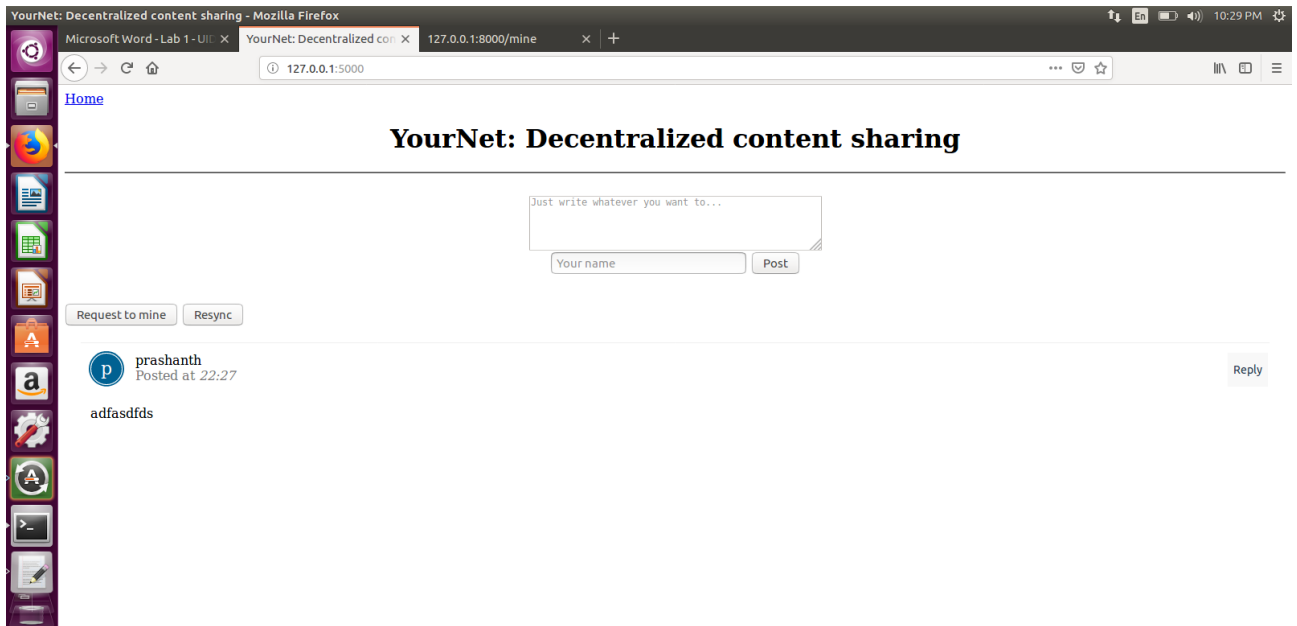
post something and request to mine the block



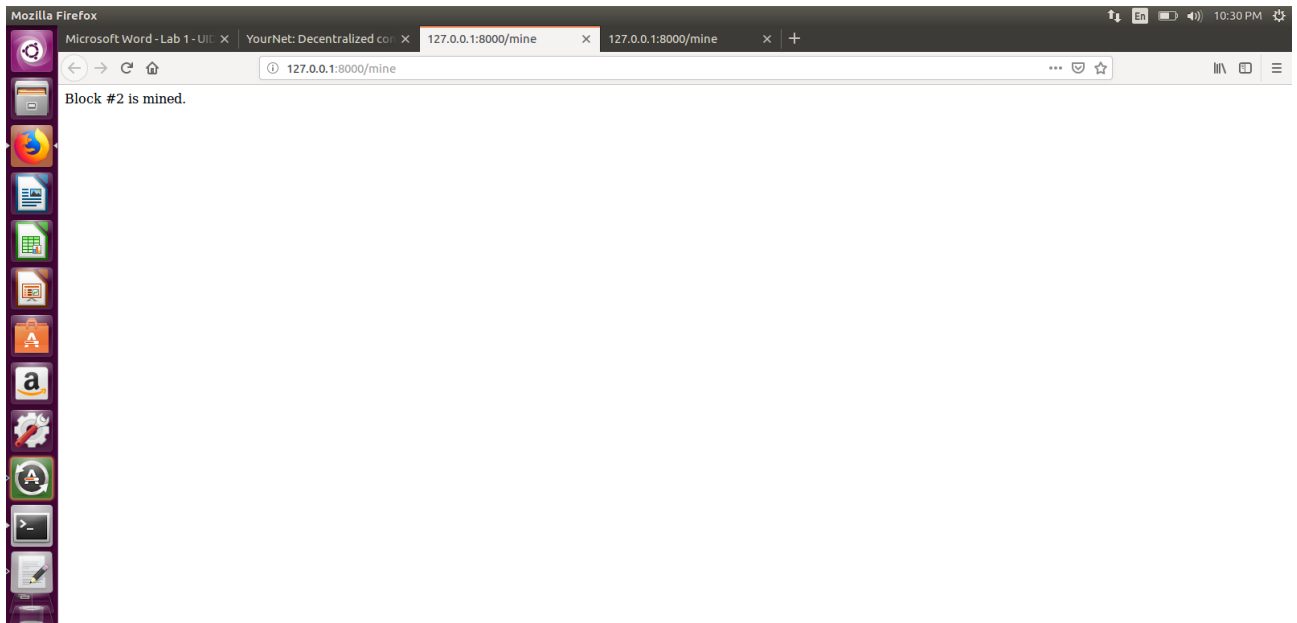
output



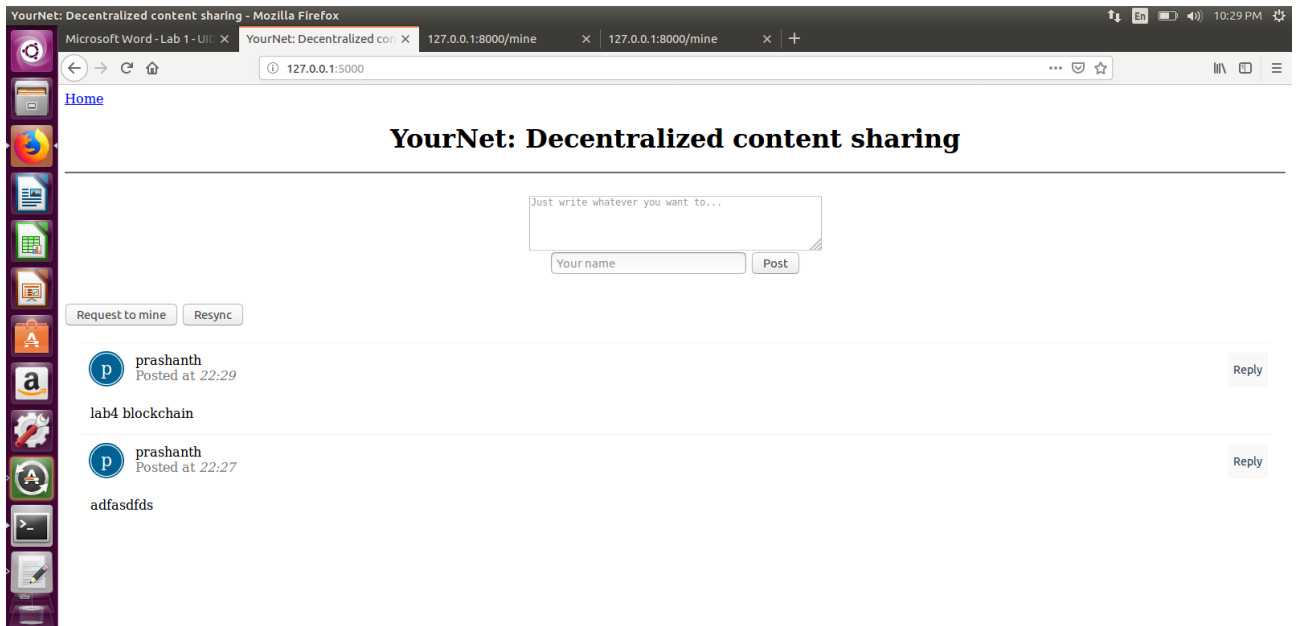
sync the block chain



mine the 2nd block



sync the 2nd block



thank you (The end)

