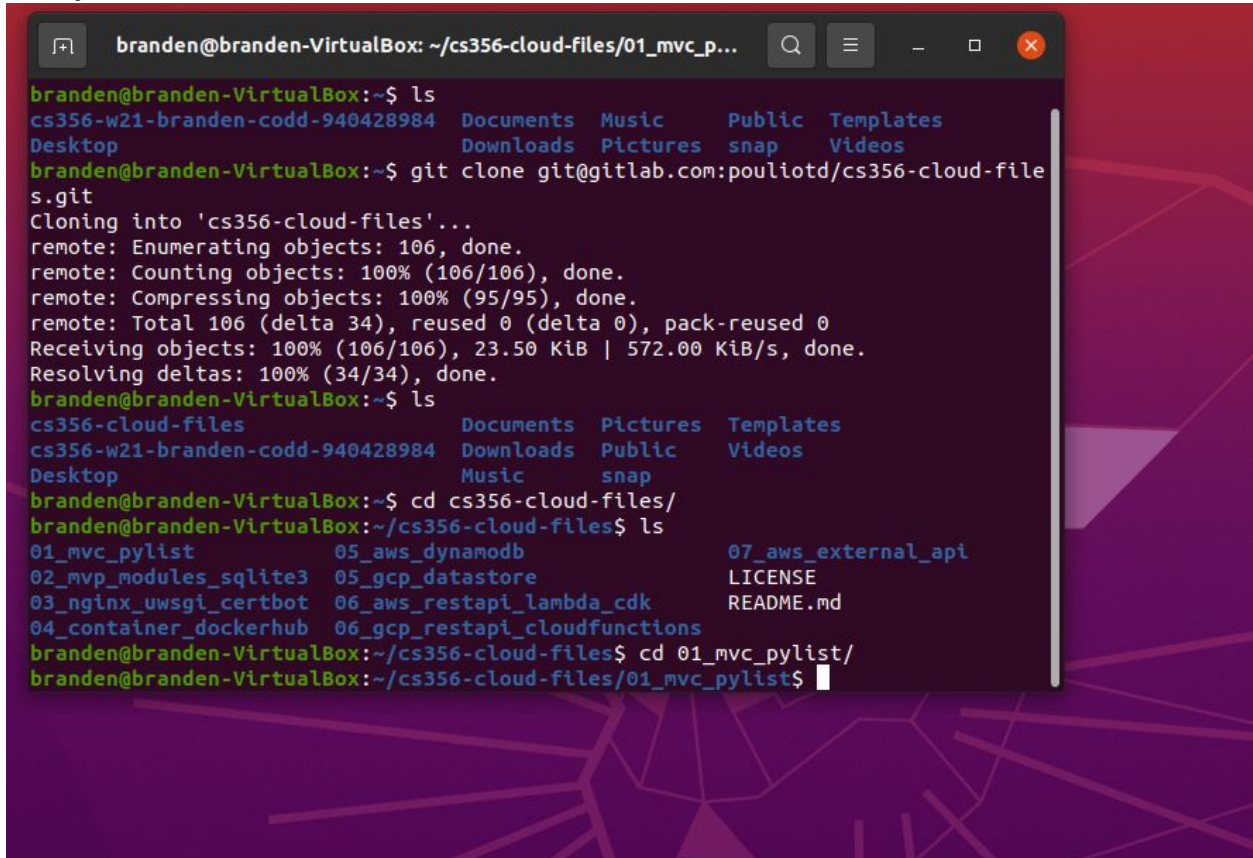


1. Python Flask



```
branden@branden-VirtualBox: ~/cs356-cloud-files/01_mvc_p...  
branden@branden-VirtualBox:~$ ls  
cs356-w21-branden-codd-940428984  Documents  Music      Public  Templates  
Desktop                          Downloads  Pictures   snap    Videos  
branden@branden-VirtualBox:~$ git clone git@gitlab.com:pouliotd/cs356-cloud-files.git  
Cloning into 'cs356-cloud-files'...  
remote: Enumerating objects: 106, done.  
remote: Counting objects: 100% (106/106), done.  
remote: Compressing objects: 100% (95/95), done.  
remote: Total 106 (delta 34), reused 0 (delta 0), pack-reused 0  
Receiving objects: 100% (106/106), 23.50 KiB | 572.00 KiB/s, done.  
Resolving deltas: 100% (34/34), done.  
branden@branden-VirtualBox:~$ ls  
cs356-cloud-files  Documents  Pictures  Templates  
cs356-w21-branden-codd-940428984  Downloads  Public    Videos  
Desktop            Music      snap  
branden@branden-VirtualBox:~$ cd cs356-cloud-files/  
branden@branden-VirtualBox:~/cs356-cloud-files$ ls  
01_mvc_pylist      05_aws_dynamodb      07_aws_external_api  
02_mvp_modules_sqlite3  05_gcp_datastore     LICENSE  
03_nginx_uwsgi_certbot  06_aws_restapi_lambda_cdk  README.md  
04_container_dockerhub  06_gcp_restapi_cloudfunctions  
branden@branden-VirtualBox:~/cs356-cloud-files$ cd 01_mvc_pylist/  
branden@branden-VirtualBox:~/cs356-cloud-files/01_mvc_pylist$
```

2. Model

- No questions or screenshots

3. Controller

- No questions or screenshots

4. View

- No questions or screenshots

5. Running the code

- First install the packages needed to support the use of Python and its Flask package

```
branden@branden-VirtualBox: ~/cs356-cloud-files/01_mvc_p...
branden@branden-VirtualBox:~$ cd cs356-cloud-files/
branden@branden-VirtualBox:~/cs356-cloud-files$ ls
01_mvc_pylist      05_aws_dynamodb      07_aws_external_api
02_mvp_modules_sqlite3  05_gcp_datastore      LICENSE
03_nginx_uwsgi_certbot  06_aws_restapi_lambda_cdk  README.md
04_container_dockerhub  06_gcp_restapi_cloudfunctions
branden@branden-VirtualBox:~/cs356-cloud-files$ cd 01_mvc_pylist/
branden@branden-VirtualBox:~/cs356-cloud-files/01_mvc_pylist$ ls
app.py  model_pylist.py  static  tutorial.rst
Model.py  requirements.txt  templates
branden@branden-VirtualBox:~/cs356-cloud-files/01_mvc_pylist$ sudo apt install python3-dev build-essential -y
[sudo] password for branden:
Reading package lists... Done
Building dependency tree
Reading state information... Done
python3-dev is already the newest version (3.8.2-0ubuntu2).
build-essential is already the newest version (12.8ubuntu1.1).
build-essential set to manually installed.
The following packages were automatically installed and are no longer required:
  libfprint-2-tod1 libllvm10
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 11 not upgraded.
branden@branden-VirtualBox:~/cs356-cloud-files/01_mvc_pylist$
```

- Within the directory containing the application, create a Python 3 virtual environment.

```
0 upgraded, 0 newly installed, 0 to remove and 11 not upgraded.
branden@branden-VirtualBox:~/cs356-cloud-files/01_mvc_pylist$ python3 -m venv env
branden@branden-VirtualBox:~/cs356-cloud-files/01_mvc_pylist$ source env/bin/activate
(env) branden@branden-VirtualBox:~/cs356-cloud-files/01_mvc_pylist$
```

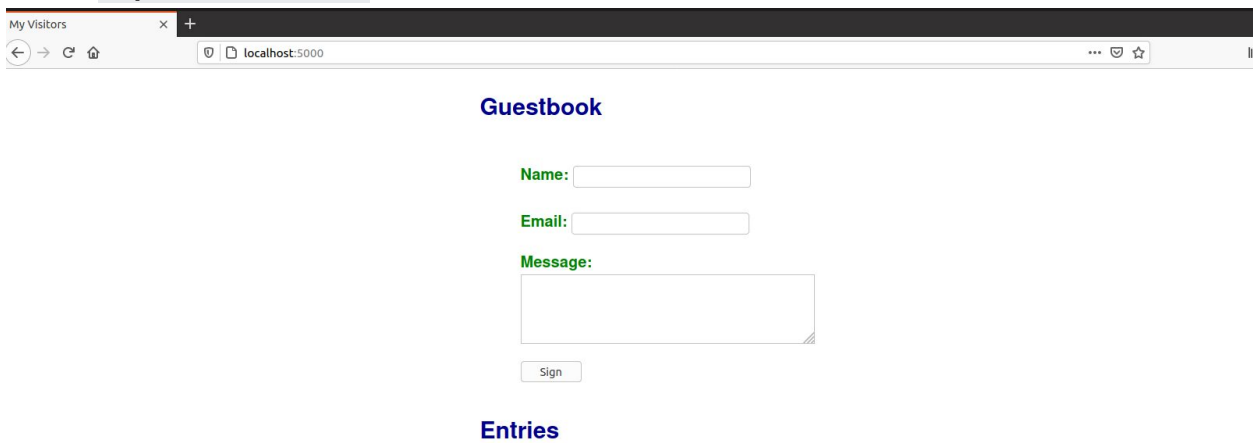
- To install the packages, we'll run pip and point it to this file.

```
(env) branden@branden-VirtualBox:~/cs356-cloud-files/01_mvc_pylist$ pip install -r requirements.txt
Collecting flask
  Downloading Flask-1.1.2-py2.py3-none-any.whl (94 kB)
    |#####| 94 kB 1.6 MB/s
Collecting Jinja2>=2.10.1
  Downloading Jinja2-2.11.2-py2.py3-none-any.whl (125 kB)
    |#####| 125 kB 11.1 MB/s
Collecting click>=5.1
  Downloading click-7.1.2-py2.py3-none-any.whl (82 kB)
    |#####| 82 kB 3.2 MB/s
Collecting Werkzeug>=0.15
  Downloading Werkzeug-1.0.1-py2.py3-none-any.whl (298 kB)
    |#####| 298 kB 13.7 MB/s
Collecting itsdangerous>=0.24
  Downloading itsdangerous-1.1.0-py2.py3-none-any.whl (16 kB)
Collecting MarkupSafe>=0.23
  Downloading MarkupSafe-1.1.1-cp38-cp38-manylinux1_x86_64.whl (32 kB)
Installing collected packages: MarkupSafe, Jinja2, click, Werkzeug, itsdangerous, flask
Successfully installed Jinja2-2.11.2 MarkupSafe-1.1.1 Werkzeug-1.0.1 click-7.1.2 flask-1.1.2 itsdangerous-1.0
1.0
(env) branden@branden-VirtualBox:~/cs356-cloud-files/01_mvc_pylist$
```

- Finally, we'll run the application

```
(env) branden@branden-VirtualBox:~/cs356-cloud-files/01_mvc_pylist$ python 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://0.0.0.0:5000/ (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 474-256-544
```

- Launch a browser on your local Ubuntu VM and visit the site running via **http://localhost:5000**



- Add an entry that includes your name and SOU e-mail address in it and the message "python/flask guestbook". Take a screenshot of the resulting page for your lab notebook.

My Visitors x +

localhost:5000/index.html

Guestbook

Name:

Email:

Message:

Entries

Branden Codd <codd@sou.edu>
signed on 2021-01-26
python/flask Guestbook

- Then, view the requests that show up in the terminal running the server. Within the terminal, type "Ctrl+c" to stop it.

```
(env) branden@branden-VirtualBox:~/cs356-cloud-files/01_mvc_pylist$ python 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://0.0.0.0:5000/ (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 474-256-544
127.0.0.1 - - [26/Jan/2021 02:08:36] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [26/Jan/2021 02:08:36] "GET /static/style.css HTTP/1.1" 200 -
127.0.0.1 - - [26/Jan/2021 02:08:36] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [26/Jan/2021 02:09:58] "POST /sign HTTP/1.1" 302 -
127.0.0.1 - - [26/Jan/2021 02:09:58] "GET /index.html HTTP/1.1" 200 -
```