- Create a Django starter project in a separate virtual environment.
- Deploy the 3 instances of application using Gunicorn in 8089 port.
- Dump access log in a file in non-default pattern.
- Dump error log in a file.

The required packages are installed like python3, pip, python3-venv
Sudo apt install pip
Sudo apt install python3
Sudo apt install python3-venv

Then a virtual environment 'testenv' is created
Python3 -m venv testenv
And the virtual environment is activated:
Source testenv/bin/activate
Inside the virtual environment, django and unicorn are installed.
Pip install django
Pip install gunicorn

To start a django project named server,
Django-admin startproject server

```
Collecting django
  Using cached Django-3.2.9-py3-none-any.whl (7.9 MB)
Collecting pytz
  Downloading pytz-2021.3-py2.py3-none-any.whl (503 kB)
     |                                | 503 kB 181 kB/s
Collecting asgiref<4,>=3.3.2
  Using cached asgiref-3.4.1-py3-none-any.whl (25 kB)
Collecting sqlparse>=0.2.2
  Using cached sqlparse-0.4.2-py3-none-any.whl (42 kB)
Installing collected packages: pytz, asgiref, sqlparse, django
Successfully installed asgiref-3.4.1 django-3.2.9 pytz-2021.3 sqlparse-0.4.2
(testenv) bijay@batman:~/Desktop$ pip install gunicorn
Collecting gunicorn
  Downloading gunicorn-20.1.0-py3-none-any.whl (79 kB)
     |                                | 79 kB 223 kB/s
Requirement already satisfied: setuptools>=3.0 in ./testenv/lib/python3.8/site-packages (from gunicorn) (44.0.0)
Installing collected packages: gunicorn
Successfully installed gunicorn-20.1.0
(testenv) bijay@batman:~/Desktop$ django-admin startproject server
(testenv) bijay@batman:~/Desktop$ ls
del  githubtoken  server  testenv
(testenv) bijay@batman:~/Desktop$ cd server
(testenv) bijay@batman:~/Desktop/server$ ls
manage.py  server
(testenv) bijay@batman:~/Desktop/server$ cd ..
(testenv) bijay@batman:~/Desktop$ ls
del  githubtoken  server  testenv
(testenv) bijay@batman:~/Desktop$ cd testenv/
(testenv) bijay@batman:~/Desktop/testenv$ ls
bin  include  lib  lib64  pyvenv.cfg  share
(testenv) bijay@batman:~/Desktop/testenv$ cd ..
(testenv) bijay@batman:~/Desktop$ mkdir config
(testenv) bijay@batman:~/Desktop$ cd config
(testenv) bijay@batman:~/Desktop/config$ nano gunicorn_config.py
(testenv) bijay@batman:~/Desktop/config$ ip a
1: lo: <LOOPBACK,UP,LOWER UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
```

Then inside the server project lies a file settings.py. That file is edited to allow hosts:
Sudo nano /server/settings.py

And with allowed hosts, we allow our ip as:
ALLOWED_HOSTS = ['192.168.1.67']

```
DEBUG = True

ALLOWED_HOSTS = ['192.168.1.67']
```

A file is created for configuration of gunicorn.
For that, we created a directory and inside it a file gunicorn_config.py.
Nano config/gunicorn_config.py

And inside that file following content is entered:

```
                                          bijay@batman: ~/Desktop/config

  GNU nano 4.8                      gunicorn_config.py
command = '/home/bj/Desktop/testenv/bin/gunicorn'
pythonpath = '/home/bj/Desktop/server'
bind = '192.168.1.67:8089'
workers = 3
```

Now we go to the directory containing manage.py and migrate our settings.
Python3 manage.py makemigrations
Python3 manage.py migrate

We allow our port in firewall as
Sudo ufw allow 8089

Now when we runserver in this port using command:
Python3 manage.py runserver 192.168.1.67:8089

```
(testenv) bijay@batman:~/Desktop/server$ python3 manage.py runserver 192.1
68.1.67:8089
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).
November 14, 2021 - 14:12:05
Django version 3.2.9, using settings 'server.settings'
Starting development server at http://192.168.1.67:8089/
Quit the server with CONTROL-C.
[14/Nov/2021 14:12:13] "GET / HTTP/1.1" 200 10697
[14/Nov/2021 14:12:13] "GET /static/admin/css/fonts.css HTTP/1.1" 200 423
Not Found: /favicon.ico
[14/Nov/2021 14:12:13] "GET /favicon.ico HTTP/1.1" 404 2113
[14/Nov/2021 14:12:13] "GET /static/admin/fonts/Roboto-Bold-webfont.woff H
TTP/1.1" 200 86184
[14/Nov/2021 14:12:13] "GET /static/admin/fonts/Roboto-Light-webfont.woff
HTTP/1.1" 200 85692
[14/Nov/2021 14:12:13] "GET /static/admin/fonts/Roboto-Regular-webfont.wof
f HTTP/1.1" 200 85876
```

On the browser, when we enter the socket address : 192.168.1.67:8089,  we get the following
result:
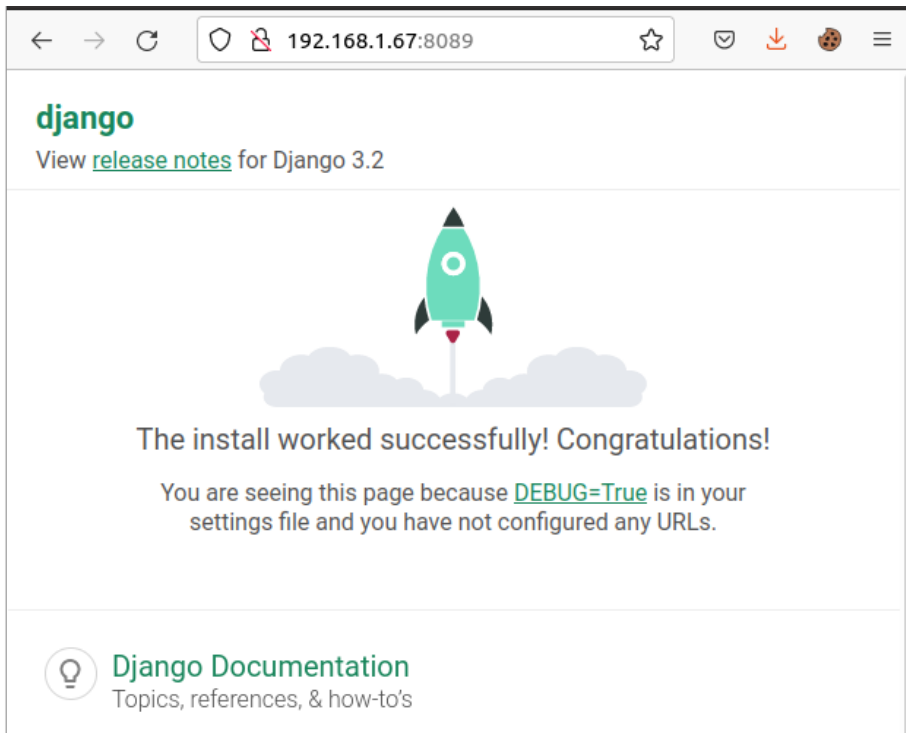


For access logs:
The config file of Gunicorn is updated as:
Nano gunicorn_config.py