

Lab 6 Notes

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[Step 1] Create an EC2 instance

Create an EC2 instance and SSH into it.

Instance: i-06bdad384b0162a87 (22994257-lab)

Details	Security	Networking	Storage	Status checks	Monitorin
▼ Instance summary Info					
Instance ID			Public IPv4 address		
i-06bdad384b0162a87 (22994257-lab)			52.64.158.29 open addre		

Set up a virtual environment and activate it. Install Django.

```
ubuntu@ip-172-31-27-48:~$ sudo bash
root@ip-172-31-27-48:/home/ubuntu# mkdir -p /opt/www/mysites
root@ip-172-31-27-48:/home/ubuntu# cd /opt/www/mysites
root@ip-172-31-27-48:/opt/www/mysites# python3-m venv venv
python3-m: command not found
root@ip-172-31-27-48:/opt/www/mysites# ls
root@ip-172-31-27-48:/opt/www/mysites# apt install python3-pip
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
python3-pip is already the newest version (22.0.2+dfsg-1).
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
root@ip-172-31-27-48:/opt/www/mysites# python3-m venv venv
python3-m: command not found
root@ip-172-31-27-48:/opt/www/mysites# python3 -m venv venv
root@ip-172-31-27-48:/opt/www/mysites# source venv/bin/activate
(venv) root@ip-172-31-27-48:/opt/www/mysites# pip3 install django
Collecting django
  Downloading Django-4.1.1-py3-none-any.whl (8.1 MB)
    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 8.1/8.1 MB 51.9 MB/s eta 0:00:00
Collecting sqlparse>=0.2.2
  Downloading sqlparse-0.4.2-py3-none-any.whl (42 kB)
    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 42.3/42.3 KB 4.3 MB/s eta 0:00:00
Collecting asgiref<4,>=3.5.2
  Downloading asgiref-3.5.2-py3-none-any.whl (22 kB)
Installing collected packages: sqlparse, asgiref, django
Successfully installed asgiref-3.5.2 django-4.1.1 sqlparse-0.4.2
(venv) root@ip-172-31-27-48:/opt/www/mysites#
```

Create a project using Django and create a web architecture.

```
(venv) root@ip-172-31-27-48:/opt/wwc/mysites# django-admin startproject lab
(venv) root@ip-172-31-27-48:/opt/wwc/mysites# python3 manage.py startapp polls
python3: can't open file '/opt/wwc/mysites/manage.py': [Errno 2] No such file or directory
(venv) root@ip-172-31-27-48:/opt/wwc/mysites# ls
lab venv
(venv) root@ip-172-31-27-48:/opt/wwc/mysites# cd lab
(venv) root@ip-172-31-27-48:/opt/wwc/mysites/lab# python3 manage.py startapp polls
(venv) root@ip-172-31-27-48:/opt/wwc/mysites/lab# ls
lab manage.py polls
(venv) root@ip-172-31-27-48:/opt/wwc/mysites/lab# cd polls
(venv) root@ip-172-31-27-48:/opt/wwc/mysites/lab/polls# ls
__init__.py admin.py apps.py migrations models.py tests.py views.py
(venv) root@ip-172-31-27-48:/opt/wwc/mysites/lab/polls#
```

[Step 2] Install and configure nginx (under polls)

Install the nginx.

```
ubuntu@ip-172-31-2-49:~$ pwd
/home/ubuntu
ubuntu@ip-172-31-2-49:~$ cd /etc/nginx/sites-enabled
ubuntu@ip-172-31-2-49:/etc/nginx/sites-enabled$ ls
default
```

```
server_name _;

location / {
    # First attempt to serve request as file, then
    # as directory, then fall back to displaying a 404.
    proxy_set_header X-Forwarded-Host $host;
    proxy_set_header X-Real-IP $remote_addr;

    proxy_pass http://127.0.0.1:8000;
}
```

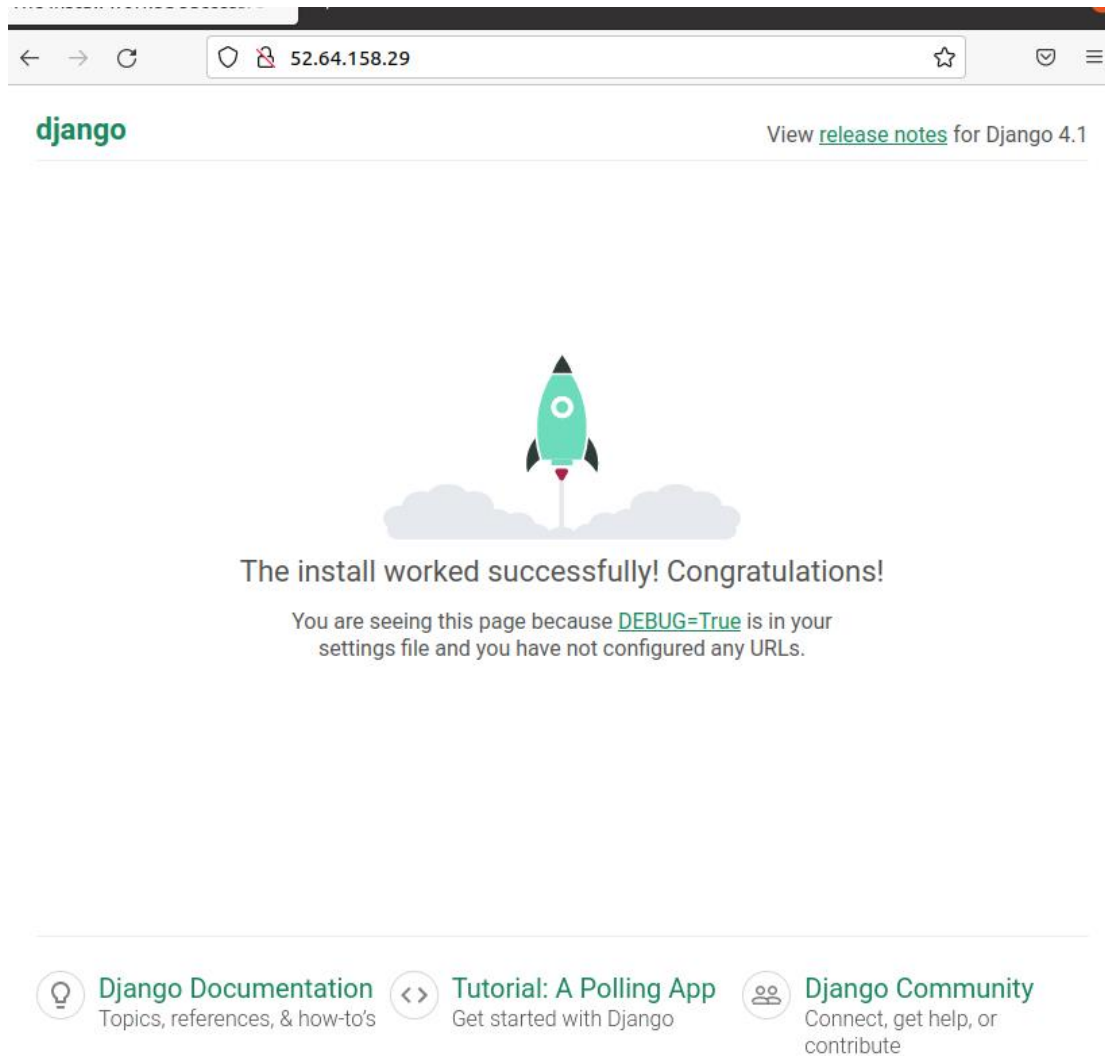
Restart the service.

```
(venv) root@ip-172-31-27-48:/etc/nginx/sites-enabled# service nginx restart
(venv) root@ip-172-31-27-48:/etc/nginx/sites-enabled# cd /opt/wwc/mysites/lab
(venv) root@ip-172-31-27-48:/opt/wwc/mysites/lab# python3 manage.py runserver 8000
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the
migrations for app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
September 20, 2022 - 04:33:02
Django version 4.1.1, using settings 'lab.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CONTROL-C.
[20/Sep/2022 04:34:08] "GET / HTTP/1.0" 200 10681
[20/Sep/2022 04:34:09] "GET /static/admin/css/fonts.css HTTP/1.0" 200 423
Not Found: /favicon.ico
[20/Sep/2022 04:34:10] "GET /favicon.ico HTTP/1.0" 404 2107
[20/Sep/2022 04:34:10] "GET /static/admin/fonts/Roboto-Bold-webfont.woff HTTP/1.0" 200 8618
4
[20/Sep/2022 04:34:10] "GET /static/admin/fonts/Roboto-Regular-webfont.woff HTTP/1.0" 200 8
5876
[20/Sep/2022 04:34:10] "GET /static/admin/fonts/Roboto-Light-webfont.woff HTTP/1.0" 200 856
92
```

Open the browser.



[Step 3] Changing the code

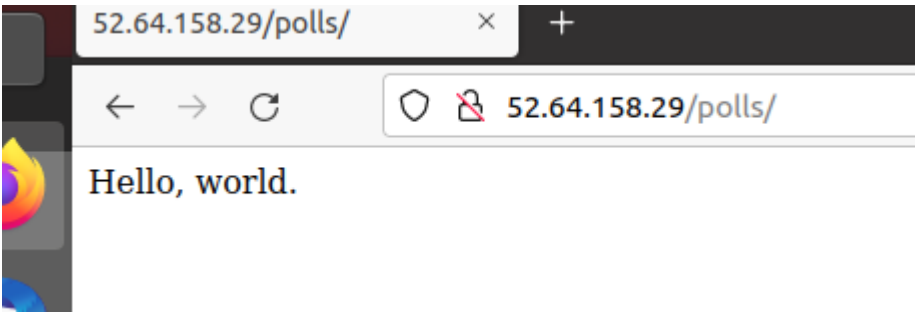
Edit the file and run the sever.

```
(venv) root@ip-172-31-27-48:/opt/www/mysites/lab# python3 manage.py runserver 8000
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the
migrations for app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
September 20, 2022 - 04:59:26
Django version 4.1.1, using settings 'lab.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CONTROL-C.
Not Found: /
[20/Sep/2022 04:59:34] "GET / HTTP/1.0" 404 2162
[20/Sep/2022 04:59:52] "GET /polls HTTP/1.0" 301 0
[20/Sep/2022 04:59:52] "GET /polls/ HTTP/1.0" 200 13
```

Open the browser.



[Step 4] Create a load balancer

Create the load balancer.

search : 22994257-lab6

Add filter

1 to 1 of 1

<div></div> <div>Name</div>	<div></div> <div>DNS name</div>	<div></div> <div>State</div>	<div></div> <div>VPC ID</div>	<div></div> <div>Availability Zones</div>	<div></div> <div>Type</div>
<div></div> <div>22994257-lab6</div>	22994257-lab6-1048063205...	Provisioning	vpc-0b754f714cd1af245	ap-southeast-2c, ap-southeast-2a	application

Load balancer:

22994257-lab6

Description	Listeners	Monitoring	Integrated services	Tags
Basic Configuration				
Name	22994257-lab6			
ARN	arn:aws:elasticloadbalancing:ap-southeast-2:523265914192:loadbalancer/app/22994257-lab6/6fdccf3040f3d6e			
DNS name	22994257-lab6-1048063205.ap-southeast-2.elb.amazonaws.com (A Record)			
State	Provisioning			

Check health.

search: 22994257 X Clear filters				
Name	ARN	Port	Protocol	
<input checked="" type="checkbox"/> 22994257-lab6	arn:aws:elasticloadbalancing...	80	HTTP	
<input type="checkbox"/> 22994257-tg	arn:aws:elasticloadbalancing...	80	HTTP	

Target group: 22994257-lab6

Target type	Protocol : Port	Protocol version
Instance	HTTP: 80	HTTP1
IP address type	Load balancer	
IPv4	22994257-lab6	

Total targets	Healthy	Unhealthy	Unused
1	1	0	0

Access the website.

Hello, world.

Delete the load balancer.

Name	DNS name	State	VPC ID
20920822-lb	20920822-lb-1597715343.ap...	Active	vpc-0b754f714cd1af245
21693709-lb	21693709-lb-650069129.ap...	Active	vpc-0b754f714cd1af245
22955548-lb-Lab6	22955548-lb-Lab6-1501785...	Active	vpc-0b754f714cd1af245
22994257-lab6	22994257-lab6-1048063205...	Active	vpc-0b754f714cd1af245
23125467-alb	23125467-alb-1680788914...	Active	vpc-0b754f714cd1af245
23139812-lb	23139812-lb-807553720.ap...	Active	vpc-0b754f714cd1af245
23483968balancer	23483968balancer-826668...	Active	vpc-0b754f714cd1af245

Delete Load Balancer

Are you sure you want to delete the following load balancer?

- 22994257-lab6

Cancel

Yes, Delete