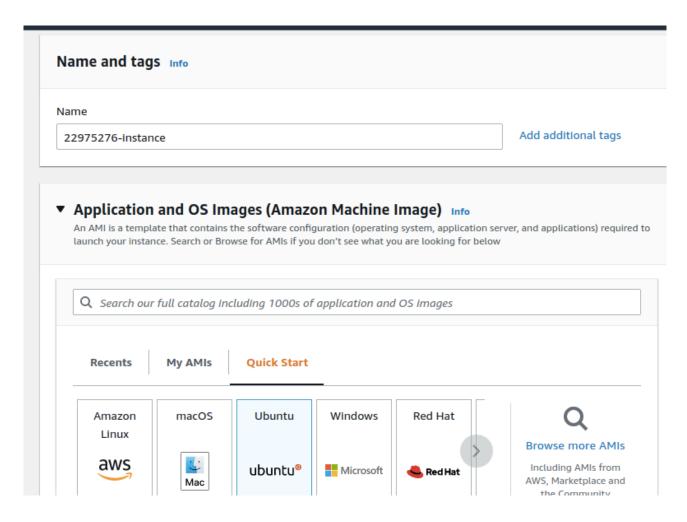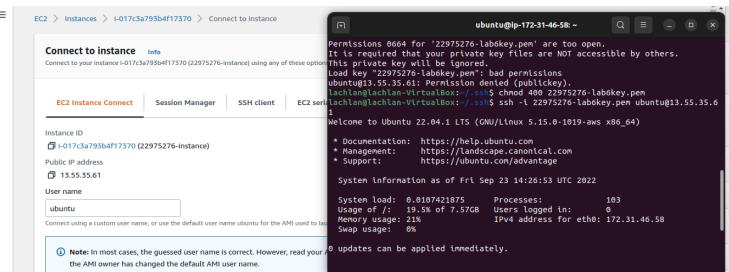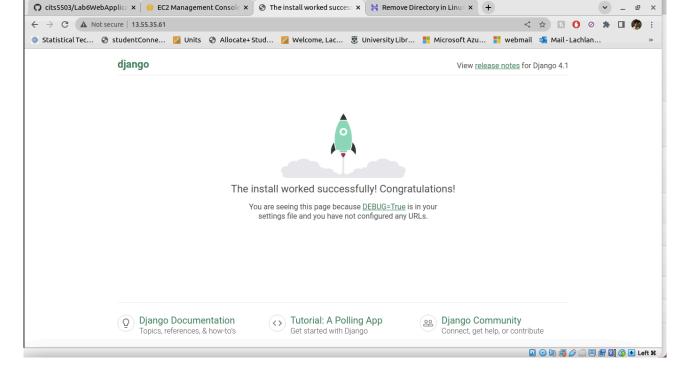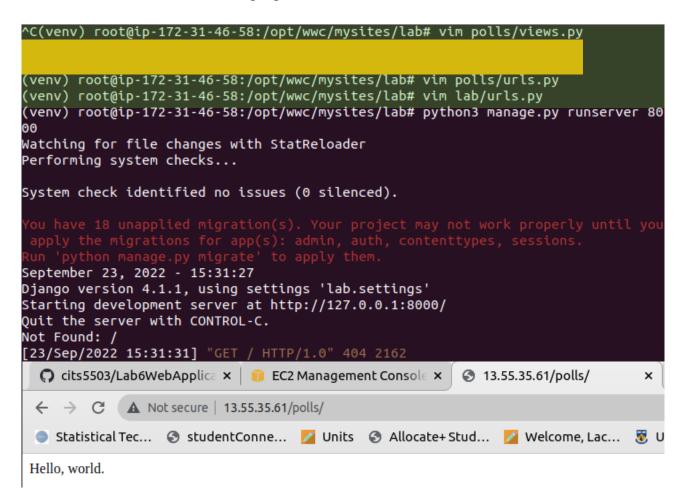# 1. Creating and connecting to instance in ssh

```
ubuntu@ip-172-31-46-58:~$ sudo apt-get update
Hit:1 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates InReleas
e [114 kB]
Get:3 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-backports InRele
ase [99.8 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Fetched 324 kB in 1s (268 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-46-58:~$ sudo apt-get upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
The following packages have been kept back:
  grub-efi-amd64-bin grub-efi-amd64-signed gzip libnss-systemd libpam-systemd
  libsystemd0 libudev1 linux-aws linux-headers-aws linux-image-aws systemd
  systemd-sysv udev
0 upgraded, 0 newly installed, 0 to remove and 13 not upgraded.
ubuntu@ip-172-31-46-58:~$ sudo apt-get install python3-venc
Reading package lists... Done
Building dependency tree... Done
```

```
ubuntu@ip-172-31-46-58:~$ sudo bash
```

Syntax error

```
root@ip-172-31-46-58:/home/ubuntu# 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 13 not upgraded.
root@ip-172-31-46-58:/home/ubuntu# mkdir -p /opt/wwc/mysites
root@ip-172-31-46-58:/home/ubuntu# cd /opt/wwc
root@ip-172-31-46-58:/opt/wwc# ls
(venv) root@ip-172-31-46-58:/opt/wwc/mysites# ls
lab  venv
(venv) root@ip-172-31-46-58:/opt/wwc/mysites# rm lab
rm: cannot remove 'lab': Is a directory
(venv) root@ip-172-31-46-58:/opt/wwc/mysites# rm -r lab
(venv) root@ip-172-31-46-58:/opt/wwc/mysites# ls
venv
(venv) root@ip-172-31-46-58:/opt/wwc/mysites# pip3 install django
Requirement already satisfied: django in ./venv/lib/python3.10/site-packages (4.
1.1)
Requirement already satisfied: sqlparse>=0.2.2 in ./venv/lib/python3.10/site-pac
kages (from django) (0.4.2)
Requirement already satisfied: asgiref<4,>=3.5.2 in ./venv/lib/python3.10/site-p
ackages (from django) (3.5.2)
(venv) root@ip-172-31-46-58:/opt/wwc/mysites# django-admin startproject lab
(venv) root@ip-172-31-46-58:/opt/wwc/mysites# python3 manage.py startappp polls
python3: can't open file '/opt/wwc/mysites/manage.py': [Errno 2] No such file or
 directory
(venv) root@ip-172-31-          Algorithms Agents and Artificial Intelligence Report
lab  manage.py
(venv) root@ip-172-31-46-58:/opt/wwc/mysites# python3 manage.py startappp polls
python3: can't open file '/opt/wwc/mysites/manage.py': [Errno 2] No such file or
```

```
(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab# python3 manage.py startapp pol
ls
(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab# ls
lab  manage.py  polls
(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab# cd polls
(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab/polls# ls
__init__.py  admin.py  apps.py  migrations  models.py  tests.py  views.py
(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab/polls# apt install nginx
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
nginx is already the newest version (1.18.0-6ubuntu14.2).
0 upgraded, 0 newly installed, 0 to remove and 13 not upgraded.
(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab/polls# cd
(venv) root@ip-172-31-46-58:~# cd /etc/nginx/sites-enabled
(venv) root@ip-172-31-46-58:/etc/nginx/sites-enabled# ls
default
(venv) root@ip-172-31-46-58:/etc/nginx/sites-enabled# vim default
(venv) root@ip-172-31-46-58:/etc/nginx/sites-enabled# service nginx restart
(venv) root@ip-172-31-46-58:/etc/nginx/sites-enabled# cd
(venv) root@ip-172-31-46-58:~# cd /opt/wwc/mysites/lab
(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab# python3 manage.py runserver 80
```

root@ip-172-31-46-58: /home/ubuntu/lab

```
# available underneath a path with that package name, such as /drupal8.
#
# Please see /usr/share/doc/nginx-doc/examples/ for more detailed examples.
##

# Default server configuration
server {
  listen 80 default_server;
  listen [::]:80 default_server;

0.50.07 pm ion / {
    proxy_set_header X-Forwarded-Host $host;
    proxy_set_header X-Real-IP $remote_addr;

    proxy_pass http://127.0.0.1:8000;
  }
}


# Virtual Host configuration for example.com
#
# You can move that to a different file under sites-available/ and symlink that
# to sites-enabled/ to enable it.
:wq
```

```
(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab# python3 manage.py runserver 80
00
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 23, 2022 - 15:24:26
Django version 4.1.1, using settings 'lab.settings'
Starting development server at http://127.0.0.1:8000/
```

Question 3 changing the code


```
^C(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab# vim polls/views.py

(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab# vim polls/urls.py
(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab# vim lab/urls.py
(venv) root@ip-172-31-46-58:/opt/wwc/mysites/lab# python3 manage.py runserver 80
00
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 23, 2022 - 15:31:27
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: /
[23/Sep/2022 15:31:31] "GET / HTTP/1.0" 404 2162
```
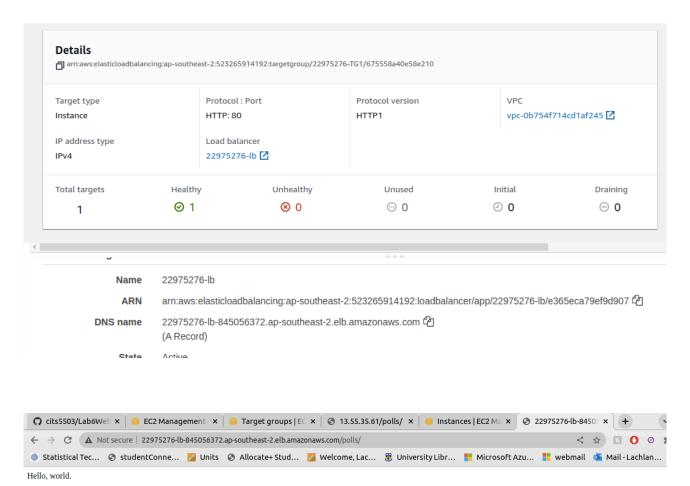
Hello, world.

Vim is me accessing the files where I copied and pasted the code into the files. The changes are seen when I run the server.

```python
from django.shortcuts import render
from django.http import HttpResponse

def index(request):
    return HttpResponse("Hello, world.")

# Create your views here.
~
~
```

```python
from django.urls import path
from . import views

urlpatterns = [
    path('', views.index, name='index'),
]
~
~
~
~
~
```

```python
"""lab URL Configuration

The `urlpatterns` list routes URLs to views. For more information please see:
    https://docs.djangoproject.com/en/4.1/topics/http/urls/
Examples:
Function views
    1. Add an import:  from my_app import views
    2. Add a URL to urlpatterns:  path('', views.home, name='home')
Class-based views
    1. Add an import:  from other_app.views import Home
    2. Add a URL to urlpatterns:  path('', Home.as_view(), name='home')
Including another URLconf
    1. Import the include() function: from django.urls import include, path
    2. Add a URL to urlpatterns:  path('blog/', include('blog.urls'))
"""
from django.urls import include, path
from django.contrib import admin

urlpatterns = [
    path('polls/', include('polls.urls')),
    path('admin/', admin.site.urls),
]
~
```

4. Creating a healthy target group with pathway /polls/ and creating a target group, opening it and viewing the webpage at domain/polls.

Details

arn:aws:elasticloadbalancing:ap-southeast-2:523265914192:targetgroup/22975276-TG1/675558a40e58e210

Target type	Protocol : Port	Protocol version	VPC
Instance	HTTP: 80	HTTP1	vpc-0b754f714cd1af245

IP address type	Load balancer
IPv4	22975276-lb

Total targets	Healthy	Unhealthy	Unused	Initial	Draining
1	⊘ 1	⊗ 0	☺ 0	⊕ 0	⊖ 0

Name	22975276-lb
ARN	arn:aws:elasticloadbalancing:ap-southeast-2:523265914192:loadbalancer/app/22975276-lb/e365eca79ef9d907
DNS name	22975276-lb-845056372.ap-southeast-2.elb.amazonaws.com (A Record)
State	Active

Not secure | 22975276-lb-845056372.ap-southeast-2.elb.amazonaws.com/polls/

Hello, world.

Terminate instance?

⚠ On an EBS-backed instance, the default action is for the root EBS volume to be deleted when the instance is terminated. Storage on any local drives will be lost.

Are you sure you want to terminate these instances?

☐ i-017c3a793b4f17370 (22975276-instance)

To confirm that you want to terminate the instances, choose the terminate button below. Terminating the instance cannot be undone.

Cancel   **Terminate**

Delete target group?

You cannot undo this action.

Deleting a target group deletes the group; the individual resources registered to the target group do not get deleted as a result of this action.

Are you sure you want to delete this target group?

- 22975276-TG1

Cancel   **Yes, delete**

Delete Load Balancer

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

- 22975276-lb

Cancel   **Yes, Delete**