**Compile and Deployment Instructions**

**Instruction to run the application on Local Machine**

To execute the Django application locally following are the steps need to be performed:

* Following application must be installed in the machine:
  + Python 3.6 (Environment path)
* Clone code from GitHub
* (<https://github.com/romaan7/Sustainable_City_Management>) Or unzip the code folder provided.
* Make sure that python and pip install.
* Run *pip install -r requirements.txt*  This step will install all the dependencies required for the application to execute.
* Config.ini contains the authentication details that the application uses to connect the database.
* Final command *python manage.py runserver*
* This will run the server on the local machine

**Deployment instruction on EC2 Amazon instance**

* Following application must be installed in the ec2 machine:
  + Python 3.6 (Environment path)
  + Apache 2.1
  + libapache2-mod-wsgi-py3
* We need to setup apache virtual host:

Set up the mysite.conf (location /etc/apache2/sites-available/mysite.conf:) according to the wsgi given in the below document

<VirtualHost \*:80>

ServerName mysite.example.com

DocumentRoot /var/www/vhosts/mysite

WSGIScriptAlias / /var/www/vhosts/mysite/myproject/wsgi.py

# adjust the following line to match your Python path

WSGIDaemonProcess mysite.example.com processes=2 threads=15 display-name=%{GROUP} python-home=/var/www/vhosts/mysite/venv/lib/python3.5

WSGIProcessGroup mysite.example.com

<directory /var/www/vhosts/mysite>

AllowOverride all

Require all granted

Options FollowSymlinks

</directory>

Alias /static/ /var/www/vhosts/mysite/static/

<Directory /var/www/vhosts/mysite/static>

Require all granted

</Directory>

</VirtualHost>

* **We need to configure the WSGI ap per code provided below:**

"""

exposes the WSGI callable as a module-level variable named ``application``.

For more information on this file, see

https://docs.djangoproject.com/en/1.9/howto/deployment/wsgi/

"""

import os

import time

import traceback

import signal

import sys

from django.core.wsgi import get\_wsgi\_application

sys.path.append('/var/www/vhosts/mysite')

# adjust the Python version in the line below as needed

sys.path.append('/var/www/vhosts/mysite/venv/lib/python3.5/site-packages')

os.environ.setdefault("DJANGO\_SETTINGS\_MODULE", "myproject.settings")

try:

application = get\_wsgi\_application()

except Exception:

# Error loading applications

if 'mod\_wsgi' in sys.modules:

traceback.print\_exc()

os.kill(os.getpid(), signal.SIGINT)

time.sleep(2.5)

* **We will need to setup second wsgi by updating /etc/apache2/sites-available/myothersite.conf**

<VirtualHost \*:80>

ServerName myothersite.example.com

DocumentRoot /var/www/vhosts/myothersite

WSGIScriptAlias / /var/www/vhosts/myothersite/myotherproject/wsgi.py

WSGIDaemonProcess myothersite.example.com processes=2 threads=15 display-name=%{GROUP} python-home=/var/www/vhosts/myothersite/venv/bin/python3.5

WSGIProcessGroup myothersite.example.com

<directory /var/www/vhosts/myothersite>

AllowOverride all

Require all granted

Options FollowSymlinks

</directory>

Alias /static/ /var/www/vhosts/myothersite/static/

<Directory /var/www/vhosts/myothersite/static>

Require all granted

</Directory>

</VirtualHost>

* Restart the apache once all the configuration is done. The application will start working on the Apache