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