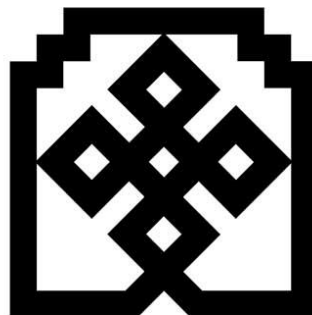


"به نام خدا"

دانشگاه حکیم سبزواری  
Hakim Sabzevari  
University



دانشکده مهندسی برق و کامپیوتر  
کارشناسی مهندسی کامپیوتر

موضوع پروژه : داکرایز کردن پروژه Django

دانشجو: بیتا صالح آبادی

سال تحصیلی 1403-1404

## داکرایز کردن پروژه جنگو

1. نصب داکر و داکر کامپوز روی سیستم

2. یک پروژه جنگو آماده که می‌خواهیم داکرایز کنیم

### مرحله 1: تنظیم دایرکتوری پروژه جنگو

اول پروژه جنگو را از مخزن گیت کلون میکنیم:

```
Cat ssh <repository-url>
```

```
cd <project-directory>
```

### مرحله 2: ایجاد فایل Dockerfile

فایل Dockerfile تصویر مربوط به برنامه جنگو را تعریف می‌کند. این فایل را در مسیر اصلی پروژه ایجاد میکنیم.

### مرحله 3: ایجاد فایل docker-compose.yml

فایل docker-compose.yml سرویس‌ها، شبکه‌ها و ولوم‌ها را تعریف می‌کند. این فایل در مسیر اصلی پروژه ایجاد میشود.

## **مرحله 4: تنظیم جنگو برای استفاده از PostgreSQL**

فایل settings.py جنگو را به روزرسانی میکنیم تا از PostgreSQL به عنوان دیتابیس استفاده کند.

## **مرحله 5: ایجاد فایل requirements.txt**

بررسی میکنیم که وابستگی های پروژه در فایل requirements.txt لیست شده باشند.

## **مرحله 6: ساخت و اجرای کانتینرهای داکر**

Image های داکر را میسازیم و کانتینرها را اجرا میکنیم.

## **مرحله 7: اعمال مایگریشن ها و ایجاد سوپریوایزر**

وقتی کانتینرها اجرا شدند، وارد کانتینر web میشویم.

## **مرحله 8: دسترسی به برنامه**

وارد مرورگر شده و به ادرس 127.0.0.1:8000 میرویم.

## مرحله 9: متوقف کردن کانتینرها

برای متوقف کردن کانتینرهای در حال اجرا:

```
docker-compose down
```

**متغیرهای محیطی:** از فایل `env` برای ذخیره اطلاعات حساس مانند اطلاعات دیتابیس استفاده میکنیم و آن‌ها را در `docker-compose.yml` بارگذاری میکنیم.

## بازسازی کانتینرها :

```
docker-compose up --build
```

## مشاهده لاگ‌ها :

```
docker-compose logs
```

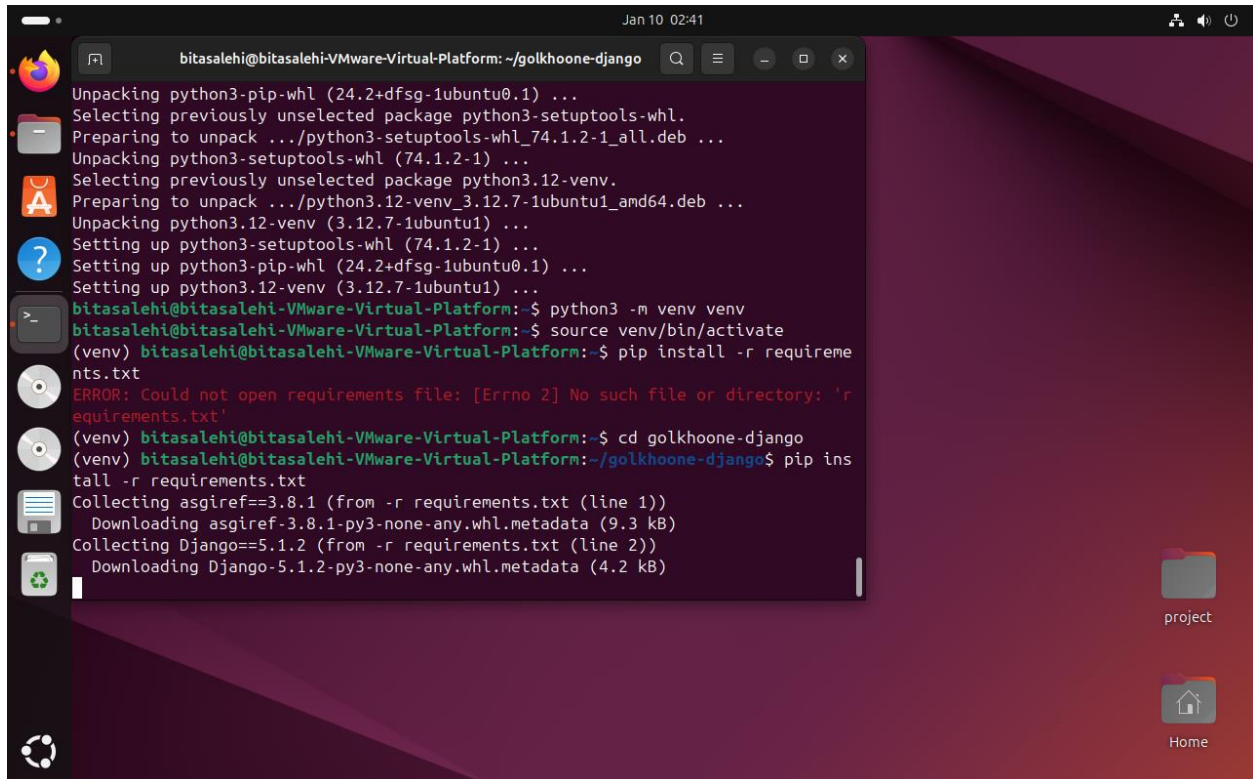
## عکس‌های کد و ران شدن پروژه :

در دو عکس زیر پروژه رو از گیت هابم کلون کردم و به مسیر پروژه رفتم و لیست گرفتم:

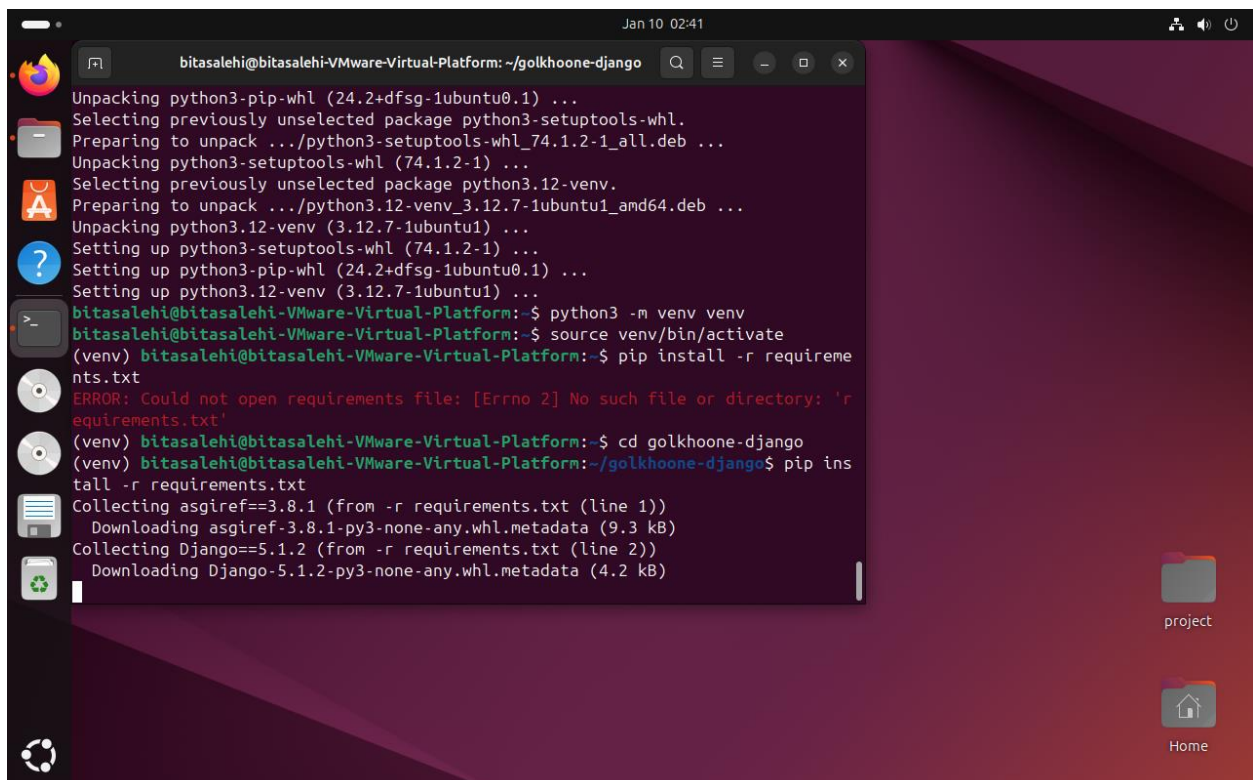
```
bitasalehi@bitasalehi-VMware-Virtual-Platform: ~  
+-----[SHA256]-----+  
|.ooE*|. |  
|.o.oo+|. |  
|. .o|. |  
|. .o|. |  
+-----[SHA256]-----+  
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ cat ~/.ssh/id_ed25519.pub  
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIPwLat/cY/CLLvlsGJCWmt0uQkU0mTodp3Ii6GEJc4m  
bitasalehi819@gmail.com  
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ git clone git@github.com:bitaSL  
H819/golkhoone-django.git  
Cloning into 'golkhoone-django'...  
The authenticity of host 'github.com (140.82.121.4)' can't be established.  
ED25519 key fingerprint is SHA256:+DiY3wvvV6TuJJhbpZisF/zLDA0zPMSvHdkr4UvC0qU.  
This key is not known by any other names.  
Are you sure you want to continue connecting (yes/no/[fingerprint])? y  
Please type 'yes', 'no' or the fingerprint: yes  
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.  
remote: Enumerating objects: 53, done.  
remote: Counting objects: 100% (53/53), done.  
remote: Compressing objects: 100% (43/43), done.  
remote: Total 53 (delta 6), reused 53 (delta 6), pack-reused 0 (from 0)  
Receiving objects: 100% (53/53), 276.41 KiB | 982.00 KiB/s, done.  
Resolving deltas: 100% (6/6), done.  
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$
```

```
bitasalehi@bitasalehi-VMware-Virtual-Platform: ~/golkhoone-django  
+-----[SHA256]-----+  
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ cat ~/.ssh/id_ed25519.pub  
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIPwLat/cY/CLLvlsGJCWmt0uQkU0mTodp3Ii6GEJc4m  
bitasalehi819@gmail.com  
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ git clone git@github.com:bitaSL  
H819/golkhoone-django.git  
Cloning into 'golkhoone-django'...  
The authenticity of host 'github.com (140.82.121.4)' can't be established.  
ED25519 key fingerprint is SHA256:+DiY3wvvV6TuJJhbpZisF/zLDA0zPMSvHdkr4UvC0qU.  
This key is not known by any other names.  
Are you sure you want to continue connecting (yes/no/[fingerprint])? y  
Please type 'yes', 'no' or the fingerprint: yes  
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.  
remote: Enumerating objects: 53, done.  
remote: Counting objects: 100% (53/53), done.  
remote: Compressing objects: 100% (43/43), done.  
remote: Total 53 (delta 6), reused 53 (delta 6), pack-reused 0 (from 0)  
Receiving objects: 100% (53/53), 276.41 KiB | 982.00 KiB/s, done.  
Resolving deltas: 100% (6/6), done.  
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ cd golkhoone-django  
bitasalehi@bitasalehi-VMware-Virtual-Platform:~/golkhoone-django$ ls  
base  docker  LICENSE  README.md  staticfiles  
crud  docker-compose.yml  manage.py  requirements.txt  templates  
bitasalehi@bitasalehi-VMware-Virtual-Platform:~/golkhoone-django$
```

در دو عکس زیر یک محیط مجازی ایجاد کردم و فایل requirement.txt رو نصب کردم :



```
bitasalehi@bitasalehi-VMware-Virtual-Platform: ~/golkhoone-django
Unpacking python3-pip-whl (24.2+dfsg-1ubuntu0.1) ...
Selecting previously unselected package python3-setuptools-whl.
Preparing to unpack .../python3-setuptools-whl_74.1.2-1_all.deb ...
Unpacking python3-setuptools-whl (74.1.2-1) ...
Selecting previously unselected package python3.12-venv.
Preparing to unpack .../python3.12-venv_3.12.7-1ubuntu1_amd64.deb ...
Unpacking python3.12-venv (3.12.7-1ubuntu1) ...
Setting up python3-setuptools-whl (74.1.2-1) ...
Setting up python3-pip-whl (24.2+dfsg-1ubuntu0.1) ...
Setting up python3.12-venv (3.12.7-1ubuntu1) ...
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ python3 -m venv venv
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ source venv/bin/activate
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ pip install -r requirements.txt
ERROR: Could not open requirements file: [Errno 2] No such file or directory: 'requirements.txt'
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ cd golkhoone-django
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~/golkhoone-django$ pip install -r requirements.txt
Collecting asgiref==3.8.1 (from -r requirements.txt (line 1))
  Downloading asgiref-3.8.1-py3-none-any.whl.metadata (9.3 kB)
Collecting Django==5.1.2 (from -r requirements.txt (line 2))
  Downloading Django-5.1.2-py3-none-any.whl.metadata (4.2 kB)
```



```
bitasalehi@bitasalehi-VMware-Virtual-Platform: ~/golkhoone-django
Unpacking python3-pip-whl (24.2+dfsg-1ubuntu0.1) ...
Selecting previously unselected package python3-setuptools-whl.
Preparing to unpack .../python3-setuptools-whl_74.1.2-1_all.deb ...
Unpacking python3-setuptools-whl (74.1.2-1) ...
Selecting previously unselected package python3.12-venv.
Preparing to unpack .../python3.12-venv_3.12.7-1ubuntu1_amd64.deb ...
Unpacking python3.12-venv (3.12.7-1ubuntu1) ...
Setting up python3-setuptools-whl (74.1.2-1) ...
Setting up python3-pip-whl (24.2+dfsg-1ubuntu0.1) ...
Setting up python3.12-venv (3.12.7-1ubuntu1) ...
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ python3 -m venv venv
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ source venv/bin/activate
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ pip install -r requirements.txt
ERROR: Could not open requirements file: [Errno 2] No such file or directory: 'requirements.txt'
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ cd golkhoone-django
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~/golkhoone-django$ pip install -r requirements.txt
Collecting asgiref==3.8.1 (from -r requirements.txt (line 1))
  Downloading asgiref-3.8.1-py3-none-any.whl.metadata (9.3 kB)
Collecting Django==5.1.2 (from -r requirements.txt (line 2))
  Downloading Django-5.1.2-py3-none-any.whl.metadata (4.2 kB)
```



در اینجا داره فایل requirement.txt نصب میشه :

```
bitasalehi@bitasalehi-VMware-Virtual-Platform: ~/golkhoone-django
Unpacking python3.12-venv (3.12.7-1ubuntu1) ...
Setting up python3-setuptools-whl (74.1.2-1) ...
Setting up python3-pip-whl (24.2+dfsg-1ubuntu0.1) ...
Setting up python3.12-venv (3.12.7-1ubuntu1) ...
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ python3 -m venv venv
bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ source venv/bin/activate
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ pip install -r requireme
nts.txt
ERROR: Could not open requirements file: [Errno 2] No such file or directory: 'r
equirements.txt'
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ cd golkhoone-django
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~/golkhoone-django$ pip ins
tall -r requirements.txt
Collecting asgiref==3.8.1 (from -r requirements.txt (line 1))
  Downloading asgiref-3.8.1-py3-none-any.whl.metadata (9.3 kB)
Collecting Django==5.1.2 (from -r requirements.txt (line 2))
  Downloading Django-5.1.2-py3-none-any.whl.metadata (4.2 kB)
Collecting sqlparse==0.5.1 (from -r requirements.txt (line 3))
  Downloading sqlparse-0.5.1-py3-none-any.whl.metadata (3.9 kB)
Collecting typing_extensions==4.12.2 (from -r requirements.txt (line 4))
  Downloading typing_extensions-4.12.2-py3-none-any.whl.metadata (3.0 kB)
Downloading asgiref-3.8.1-py3-none-any.whl (23 kB)
Downloading Django-5.1.2-py3-none-any.whl (8.3 MB)
1.0/8.3 MB 268.1 kB/s eta 0:00:27
```

```
bitasalehi@bitasalehi-VMware-Virtual-Platform: ~/golkhoone-django
nts.txt
ERROR: Could not open requirements file: [Errno 2] No such file or directory: 'r
equirements.txt'
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~$ cd golkhoone-django
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~/golkhoone-django$ pip ins
tall -r requirements.txt
Collecting asgiref==3.8.1 (from -r requirements.txt (line 1))
  Downloading asgiref-3.8.1-py3-none-any.whl.metadata (9.3 kB)
Collecting Django==5.1.2 (from -r requirements.txt (line 2))
  Downloading Django-5.1.2-py3-none-any.whl.metadata (4.2 kB)
Collecting sqlparse==0.5.1 (from -r requirements.txt (line 3))
  Downloading sqlparse-0.5.1-py3-none-any.whl.metadata (3.9 kB)
Collecting typing_extensions==4.12.2 (from -r requirements.txt (line 4))
  Downloading typing_extensions-4.12.2-py3-none-any.whl.metadata (3.0 kB)
Downloading asgiref-3.8.1-py3-none-any.whl (23 kB)
Downloading Django-5.1.2-py3-none-any.whl (8.3 MB)
8.3/8.3 MB 245.8 kB/s eta 0:00:00
Downloading sqlparse-0.5.1-py3-none-any.whl (44 kB)
Downloading typing_extensions-4.12.2-py3-none-any.whl (37 kB)
Installing collected packages: typing_extensions, sqlparse, asgiref, Django
Successfully installed Django-5.1.2 asgiref-3.8.1 sqlparse-0.5.1 typing_extensio
ns-4.12.2
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform:~/golkhoone-django$ python
manage.py migrate
```

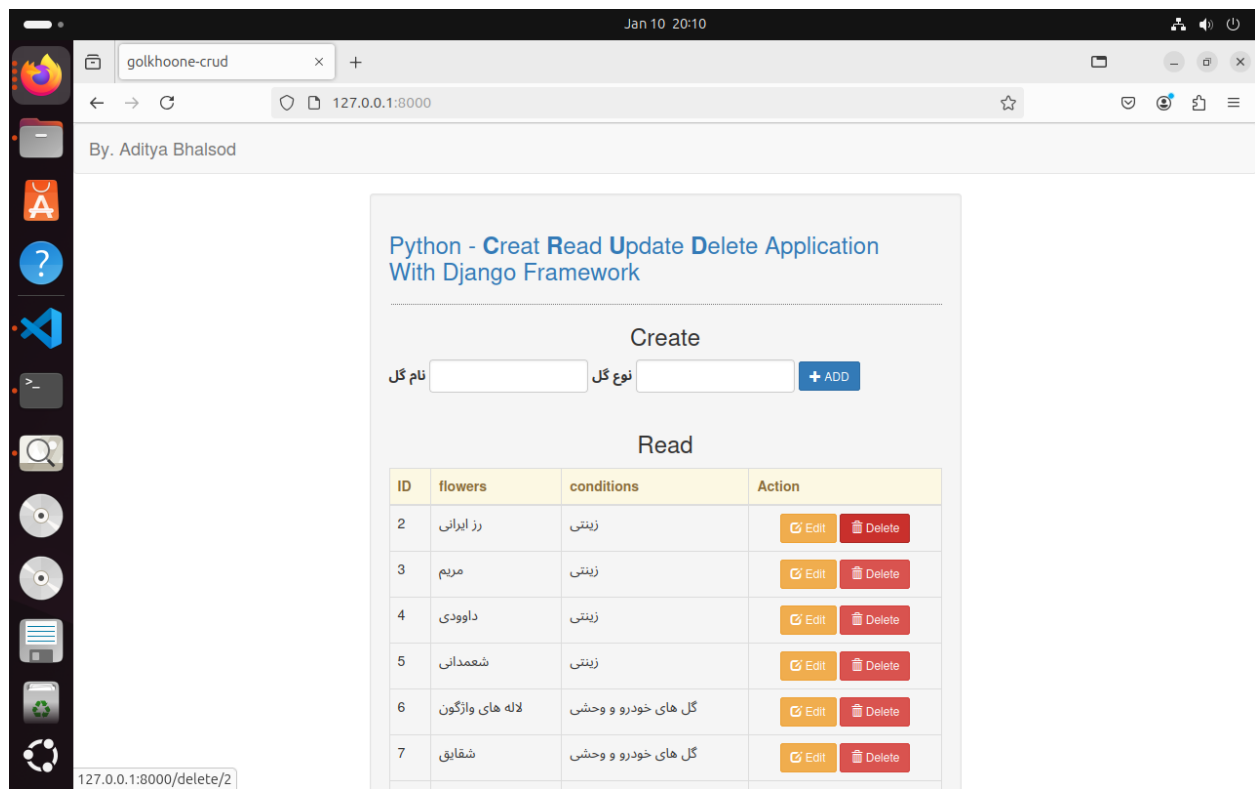
اینجا دستور migration رو برای مهاجرت داده ها انجام دادم و سپس docker-compose up build رو برای ساخت کانٹینر ها و اجرای اون ها زدم که در اخر یک ادرس لوکال برای اجرای پروژه به من داد:

```
Jan 10 02:43
bitasalehi@bitasalehi-VMware-Virtual-Platform: ~/golkhoone-django
manage.py migrate
Operations to perform:
  Apply all migrations: admin, auth, contenttypes, crud, sessions
Running migrations:
  Applying contenttypes.0001_initial... OK
  Applying auth.0001_initial... OK
  Applying admin.0001_initial... OK
  Applying admin.0002_logentry_remove_auto_add... OK
  Applying admin.0003_logentry_add_action_flag_choices... OK
  Applying contenttypes.0002_remove_content_type_name... OK
  Applying auth.0002_alter_permission_name_max_length... OK
  Applying auth.0003_alter_user_email_max_length... OK
  Applying auth.0004_alter_user_username_opts... OK
  Applying auth.0005_alter_user_last_login_null... OK
  Applying auth.0006_require_contenttypes_0002... OK
  Applying auth.0007_alter_validators_add_error_messages... OK
  Applying auth.0008_alter_user_username_max_length... OK
  Applying auth.0009_alter_user_last_name_max_length... OK
  Applying auth.0010_alter_group_name_max_length... OK
  Applying auth.0011_update_proxy_permissions... OK
  Applying auth.0012_alter_user_first_name_max_length... OK
  Applying crud.0001_initial... OK
  Applying sessions.0001_initial... OK
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform: ~/golkhoone-django$
```

```
Jan 10 02:45
bitasalehi@bitasalehi-VMware-Virtual-Platform: ~/golkhoone-django
Applying sessions.0001_initial... OK
(venv) bitasalehi@bitasalehi-VMware-Virtual-Platform: ~/golkhoone-django$ docker-
compose up --build
Creating network "golkhoone-django_default" with the default driver
Creating volume "golkhoone-django_static_volume" with default driver
Creating volume "golkhoone-django_postgres_data" with default driver
Building django
[+] Building 63.4s (4/12)
=> [internal] load build definition from dockerfile 0.2s
=> => transferring dockerfile: 648B 0.0s
=> [internal] load metadata for docker.io/library/python:3 7.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [1/8] FROM docker.io/library/python:3@sha256:cea505b81701dd9e46b8dde9 56.2s
=> => resolve docker.io/library/python:3@sha256:cea505b81701dd9e46b8dde9 0.0s
=> => sha256:e126f262949ae23c48205532f7459901a0f593b7af6 2.32kB / 2.32kB 0.0s
=> => sha256:7f17499b3a00d0b82c06c5e2e1e7e8f781cc08e7368 5.92kB / 5.92kB 0.0s
=> => sha256:54c7be425079efba0003054ee884bf72f1ffebca7 3.15MB / 23.87MB 56.2s
=> => sha256:7aa8176e6d893aff4b57b2c22574ec2afadff4673 5.24MB / 64.39MB 56.2s
=> => sha256:cea505b81701dd9e46b8dde96eaa8054c4bd2035ddb 9.72kB / 9.72kB 0.0s
=> => sha256:0a96bd8280554b560ffee0f2e5f9843dc7b625f2 3.15MB / 48.50MB 56.2s
=> [internal] load build context 0.1s
=> => transferring context: 2.03MB 0.0s
```



ادرس لوکال هاست رو در مرورگر سرچ کردم و پروژه ران شد :



golkhoone-crud

127.0.0.1:8000

By. Aditya Bhalsod

### Python - Create Read Update Delete Application With Django Framework

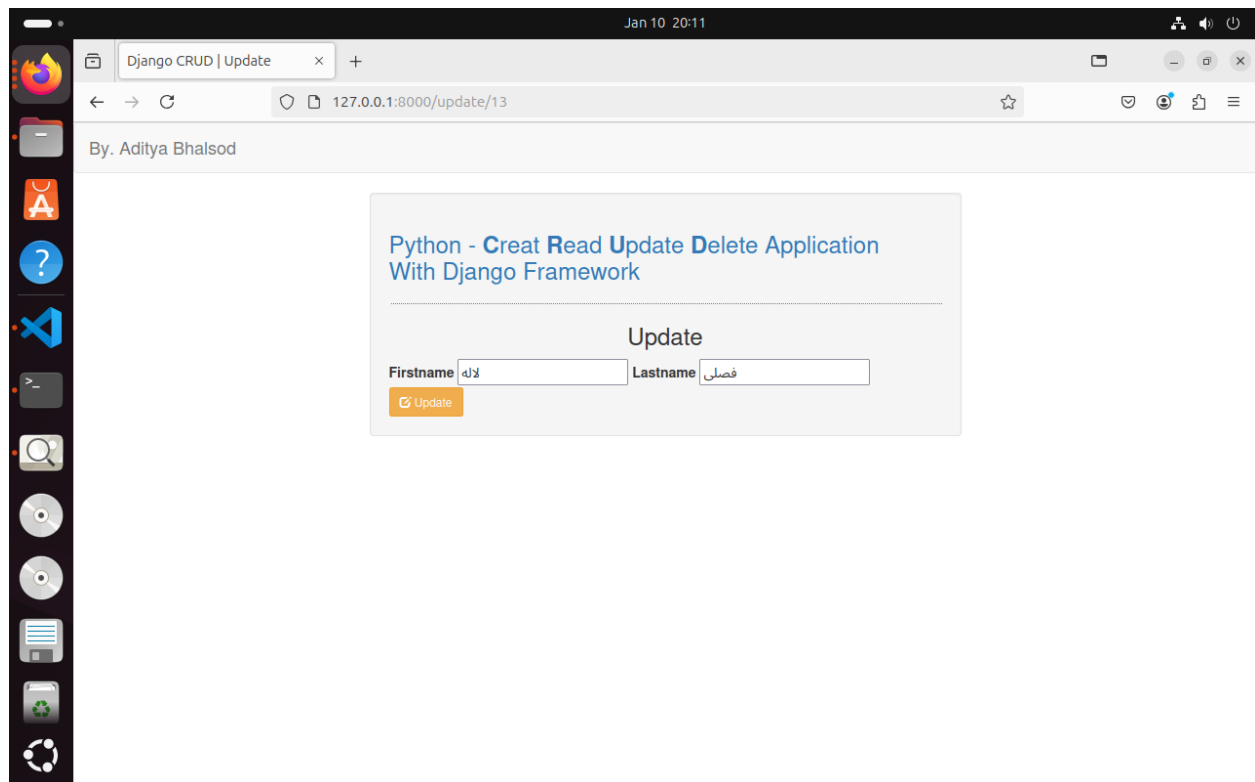
#### Create

نام گل  نوع گل

#### Read

ID	flowers	conditions	Action
2	رز ایرانی	زینتی	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
3	مریم	زینتی	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
4	داوودی	زینتی	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
5	شعمدانی	زینتی	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
6	لاله های واژگون	گل های خودرو و وحشی	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
7	شقایی	گل های خودرو و وحشی	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

127.0.0.1:8000/delete/2



Django CRUD | Update

127.0.0.1:8000/update/13

By. Aditya Bhalsod

### Python - Create Read Update Delete Application With Django Framework

#### Update

Firstname لاله  Lastname فصلی