```
dima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$ docker images
REPOSITORY       TAG       IMAGE ID      CREATED      SIZE
dima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$ docker ps -a
CONTAINER ID    IMAGE       COMMAND      CREATED      STATUS      PORTS       NAMES
dima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$
```

```
dima@dima-TUF-GAMING-FX504GD-FX80GD:~$ sudo ss -lptn 'sport = :5432'
[sudo] пароль для dima:
State    Recv-Q   Send-Q    Local Address:Port    Peer Address:Port   Process
LISTEN   0        244          127.0.0.1:5432         0.0.0.0:*      users:(("postgres",pid=1158,fd=3))
dima@dima-TUF-GAMING-FX504GD-FX80GD:~$ sudo ss -lptn 'sport = :5432'
State       Recv-Q       Send-Q          Local Address:Port         Peer Address:Port       Process
LISTEN      0            244                127.0.0.1:5432              0.0.0.0:*            users:(("postg
res",pid=1158,fd=3))
dima@dima-TUF-GAMING-FX504GD-FX80GD:~$ kill 1158
bash: kill: (1158) - Операция не позволена
dima@dima-TUF-GAMING-FX504GD-FX80GD:~$ sudo kill 1158
dima@dima-TUF-GAMING-FX504GD-FX80GD:~$ sudo ss -lptn 'sport = :5432'
State       Recv-Q       Send-Q          Local Address:Port         Peer Address:Port       Process
dima@dima-TUF-GAMING-FX504GD-FX80GD:~$
```

docker run --name my_project -p 5432:5432 -e POSTGRES_USER=postgres -e
POSTGRES_PASSWORD=lab_29 -e POSTGRES_DB=lab_29 -d postgres:15.1

```
dima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$ docker run --name my_project -p 5432:5432 -e POSTGRES_USER=postgres -e POSTGRES_PASSWORD=lab_29 -e POSTGRES_DB=lab_29 -d postgres:15.1
Unable to find image 'postgres:15.1' locally
15.1: Pulling from library/postgres
8740c948ffd4: Pulling fs layer
c8dbd2beab50: Pull complete
05d9dc9d0fbd: Pull complete
ddd89d5ec714: Pull complete
f98bb9f03867: Pull complete
0554611e703f: Pull complete
64e0a8694477: Pull complete
8b868a753f47: Pull complete
12ed9aefbab3: Pull complete
825b08d51ffd: Pull complete
8f272b487267: Pull complete
ba2eed7bd2cc: Pull complete
ff59f63f47d6: Pull complete
Digest: sha256:6b07fc4fbcf551ea4546093e90cecefc9dc60d7ea8c56a4ace704940b6d6b7a3
Status: Downloaded newer image for postgres:15.1
e77f3e860d2bac06722283f767617afa834491f74c865c8e900266ce5c4651be
dima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$
```

```
dima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$ docker images
REPOSITORY     TAG       IMAGE ID       CREATED        SIZE
postgres       15.1      9f3ec01f884d   13 days ago    379MB
dima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$ docker ps
CONTAINER ID    IMAGE          COMMAND            CREATED        STATUS        PORTS                                          NAMES
e77f3e860d2b    postgres:15.1  "docker-entrypoint.s…"  2 minutes ago  Up 2 minutes  0.0.0.0:5432->5432/tcp, :::5432->5432/tcp    my_project
dima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$
```
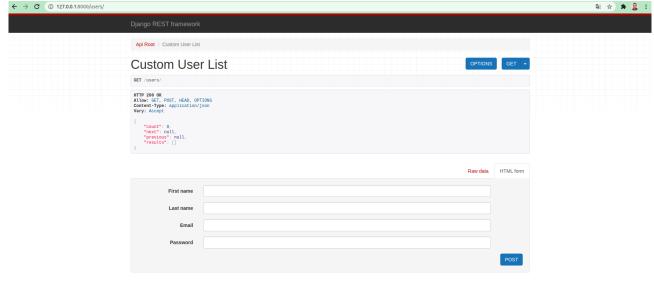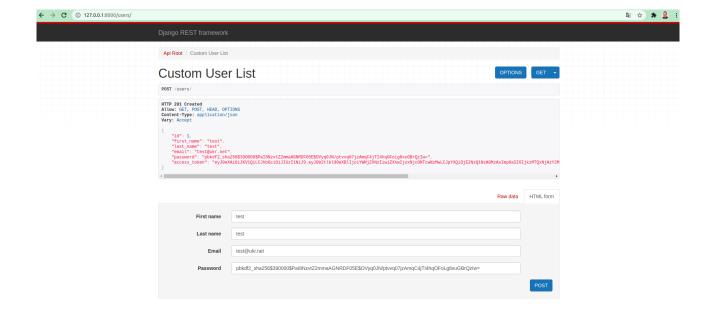
```
^Cdima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$ python3 manage.py makemigrations
Migrations for 'posts':
  posts/migrations/0001_initial.py
    - Create model CustomUser
    - Create model Posts
dima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$ python3 manage.py migrate
Operations to perform:
  Apply all migrations: admin, auth, contenttypes, posts, sessions
Running migrations:
  Applying contenttypes.0001_initial... OK
  Applying contenttypes.0002_remove_content_type_name... OK
  Applying auth.0001_initial... 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 posts.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 sessions.0001_initial... OK
dima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$ python3 manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).
January 24, 2023 - 14:25:30
Django version 4.1.5, using settings 'base.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CONTROL-C.
```

127.0.0.1:8000/users/

Django REST framework

Api Root / Custom User List

## Custom User List

OPTIONS    GET ▾

GET /users/

```
HTTP 200 OK
Allow: GET, POST, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept

{
    "count": 0,
    "next": null,
    "previous": null,
    "results": []
}
```

Raw data    HTML form

| First name | |
| Last name | |
| Email | |
| Password | |

POST

## Browser Window

`127.0.0.1:8000/users/`

Django REST framework

# Custom User List

OPTIONS  GET ▾

**POST** /users/

```
HTTP 201 Created
Allow: GET, POST, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept

{
    "id": 1,
    "first_name": "test",
    "last_name": "test",
    "email": "test@ukr.net",
    "password": "pbkdf2_sha256$390000$PaI8NzvtZ2mmaAGNRDF05E$OVyq0JN/ptvvq07jzAmqC4jTI4hqOFoLg8xuGBrQzIw=",
    "access_token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJ0b2tlbl90eXBlIjoiYWNjZXNzIiwiZXhwIjoxNjONTcwNzMwLCJpYXQiOjE2NzQ1NzA0MzAsImp0aSI6IjkzMTQxNjAzY2M
}
```

Raw data | HTML form

| | |
|---|---|
| **First name** | test |
| **Last name** | test |
| **Email** | test@ukr.net |
| **Password** | pbkdf2_sha256$390000$PaI8NzvtZ2mmaAGNRDF05E$OVyq0JN/ptvvq07jzAmqC4jTI4hqOFoLg8xuGBrQzIw= |

POST

## Terminal 1

```
dima@dima-TUF-GAMING-FX504GD-FX80GD:~$ sudo ss -lptn 'sport = :5432'
State      Recv-Q   Send-Q     Local Address:Port      Peer Address:Port     Process
LISTEN     0        4096           0.0.0.0:5432            0.0.0.0:*           users:(("docker-proxy",pid=5471,fd=4))
LISTEN     0        4096              [::]:5432               [::]:*           users:(("docker-proxy",pid=5479,fd=4))
dima@dima-TUF-GAMING-FX504GD-FX80GD:~$
```

## Terminal 2

```
dima@dima-TUF-GAMING-FX504GD-FX80GD:~/PycharmProjects/pythonProject2/lab_29/my_project$ python3 manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).
January 24, 2023 - 14:25:30
Django version 4.1.5, using settings 'base.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CONTROL-C.
[24/Jan/2023 14:26:16] "GET / HTTP/1.1" 200 10083
[24/Jan/2023 14:26:16] "GET /static/rest_framework/css/bootstrap.min.css HTTP/1.1" 304 0
[24/Jan/2023 14:26:16] "GET /static/rest_framework/css/bootstrap-tweaks.css HTTP/1.1" 304 0
[24/Jan/2023 14:26:16] "GET /static/rest_framework/js/bootstrap.min.js HTTP/1.1" 304 0
[24/Jan/2023 14:26:16] "GET /static/rest_framework/css/prettify.css HTTP/1.1" 304 0
[24/Jan/2023 14:26:16] "GET /static/rest_framework/css/default.css HTTP/1.1" 304 0
[24/Jan/2023 14:26:16] "GET /static/rest_framework/js/csrf.js HTTP/1.1" 304 0
[24/Jan/2023 14:26:16] "GET /static/rest_framework/js/jquery-3.5.1.min.js HTTP/1.1" 304 0
[24/Jan/2023 14:26:16] "GET /static/rest_framework/js/ajax-form.js HTTP/1.1" 304 0
[24/Jan/2023 14:26:16] "GET /static/rest_framework/js/default.js HTTP/1.1" 304 0
[24/Jan/2023 14:26:16] "GET /static/rest_framework/js/prettify-min.js HTTP/1.1" 304 0
[24/Jan/2023 14:26:16] "GET /static/rest_framework/img/grid.png HTTP/1.1" 304 0
Not Found: /favicon.ico
[24/Jan/2023 14:26:16] "GET /favicon.ico HTTP/1.1" 404 4675
[24/Jan/2023 14:26:21] "GET /users/ HTTP/1.1" 200 14292
[24/Jan/2023 14:27:10] "POST /users/ HTTP/1.1" 201 14888
[24/Jan/2023 14:27:51] "GET /users/ HTTP/1.1" 200 14725
```

**POST** /users/