

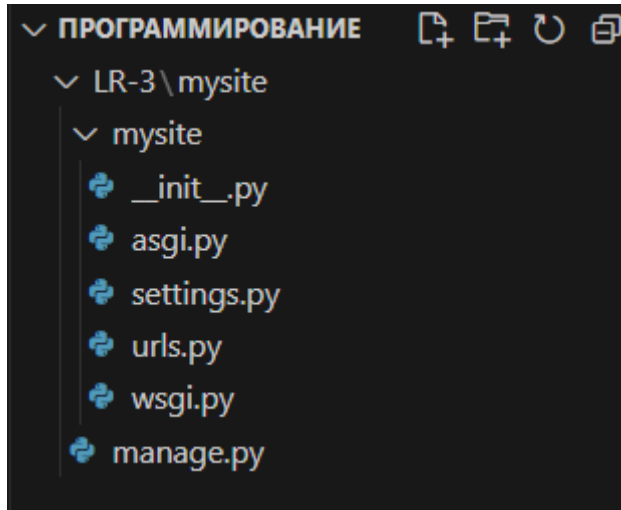
Лабораторная работа 3

Часть 1: Создание проекта

Создаем проект Django помощью команды `django-admin startproject mysite`

```
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3> django-admin startproject mysite
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3> █
```

Структура проекта:



Часть 2: Запуск сервера разработки

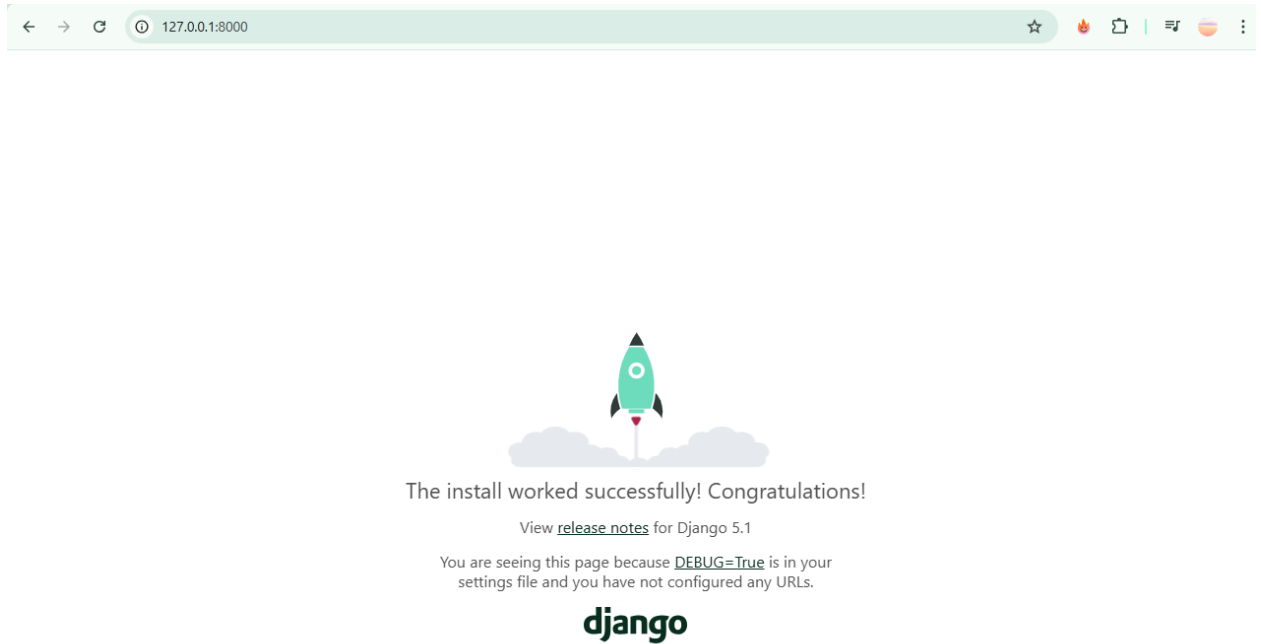
Перейдем в папку проекта и запустим сервер разработки:

```
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3> cd mysite
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3\mysite> python manage.py runserver
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.
January 06, 2025 - 16:21:29
Django version 5.1.1, using settings 'mysite.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

В браузере перейдем по адресу `http://127.0.0.1:8000/`

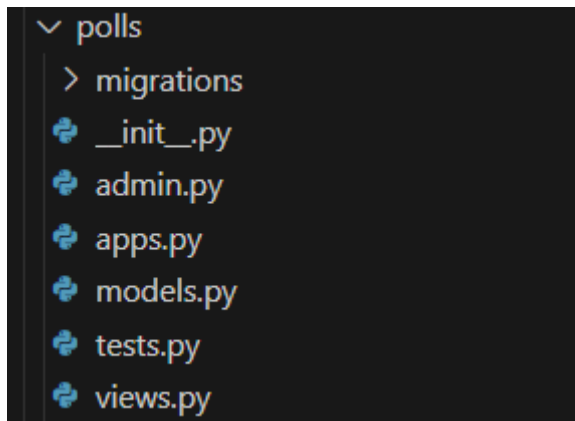


Часть 3: Создание приложения

Создадим приложение polls:

```
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3\mysite> python manage.py startapp polls
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3\mysite> 
```

Получаем такую структуру:



В файле `mysite/settings.py` добавим `polls` в `INSTALLED_APPS`:

```
31 # Application definition
32
33 INSTALLED_APPS = [
34     'django.contrib.admin',
35     'django.contrib.auth',
36     'django.contrib.contenttypes',
37     'django.contrib.sessions',
38     'django.contrib.messages',
39     'django.contrib.staticfiles',
40     'polls'
41 ]
```

Часть 4: Создание первой view

В файл polls/views.py добавим:

```
1  from django.shortcuts import render
2
3  from django.http import HttpResponse
4
5  def index(request):
6      return HttpResponse("Hello, world. You're at the polls index.")
7
8
```

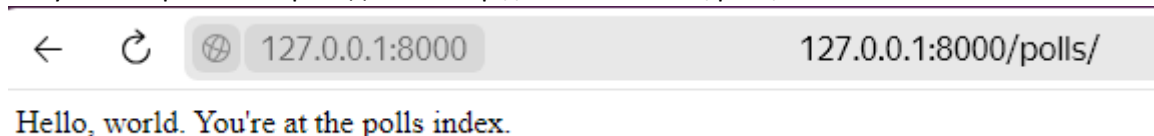
Создадим URL для приложения polls в файле polls/urls.py (если этого файла нет, то создаем его):

```
LR-3 > mysite > polls > ✚ urls.py > ...
1  from django.urls import path
2  from . import views
3
4  urlpatterns = [
5      path('', views.index, name='index'),
6  ]
7
```

Подключаем URL-ы приложения polls в mysite/urls.py:

```
17  from django.contrib import admin
18  from django.urls import include, path
19
20  urlpatterns = [
21      path('admin/', admin.site.urls),
22      path('polls/', include('polls.urls')),
23  ]
24
```

Запускаем проект и переходим по <http://127.0.0.1:8000/polls/>



Часть 5: Подключение базы данных

По умолчанию используется SQLite:

```
# Database
# https://docs.djangoproject.com/en/5.1/ref/settings/#databases

DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.sqlite3',
        'NAME': BASE_DIR / 'db.sqlite3',
    }
}
```

Применим миграции:

```
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3\mysite> python manage.py migrate
Operations to perform:
  Apply all migrations: admin, auth, contenttypes, 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 sessions.0001_initial... OK
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3\mysite>
```

Часть 6: Создание моделей:

В polls/models.py добавим:

```
1  from django.db import models
2
3  class Question(models.Model):
4      question_text = models.CharField(max_length=200)
5      pub_date = models.DateTimeField('date published')
6
7  class Choice(models.Model):
8      question = models.ForeignKey(Question, on_delete=models.CASCADE)
9      choice_text = models.CharField(max_length=200)
10     votes = models.IntegerField(default=0)
```

Применим изменений:

```
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3\mysite> python manage.py makemigrations
Migrations for 'polls':
  polls\migrations\0001_initial.py
    + Create model Question
    + Create model Choice
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3\mysite> python manage.py migrate
Operations to perform:
  Apply all migrations: admin, auth, contenttypes, polls, sessions
Running migrations:
  Applying polls.0001_initial... OK
```

Часть 7: Работа с админкой

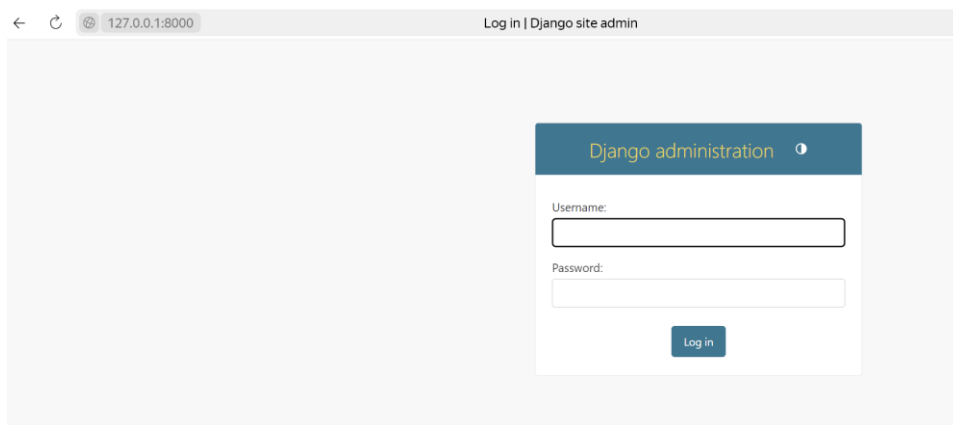
Включаем модели в админку в polls/admin.py

```
LR-3 > mysite > polls > admin.py
1  from django.contrib import admin
2  from .models import Question
3
4  admin.site.register(Question)
5
```

Переходим на наш сайт:

```
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3\mysite> python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

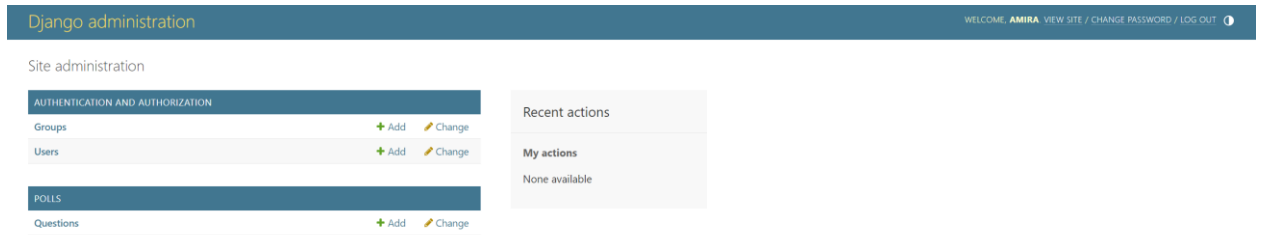
System check identified no issues (0 silenced).
January 06, 2025 - 17:40:50
Django version 5.1.1, using settings 'mysite.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```



Создадим суперюзера:

```
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3\mysite> python manage.py createsuperuser
Username (leave blank to use 'zouhi'): Amira
Email address: zuhiramira@gmail.com
Password:
Password (again):
This password is too short. It must contain at least 8 characters.
Bypass password validation and create user anyway? [y/N]: y
Superuser created successfully.
PS C:\Users\zouhi\Documents\Herzen-4\Программирование\LR-3\mysite>
```

После ввода логина и пароля на сайте отображается экран:



Часть 8: Создание функционала голосования:

Добавим новую view-функцию в polls/views.py :

```
5
6 def detail(request, question_id):
7     return HttpResponse(f"You're looking at question {question_id}.")
8
9 def results(request, question_id):
10    return HttpResponse(f"You're looking at the results of question {question_id}.")
11
12 def vote(request, question_id):
13    return HttpResponse(f"You're voting on question {question_id}.")
14
```

Обновим urls.py :

```
3
4 urlpatterns = [
5     path('', views.index, name='index'),
6     path('<int:question_id>/', views.detail, name='detail'),
7     path('<int:question_id>/results/', views.results, name='results'),
8     path('<int:question_id>/vote/', views.vote, name='vote'),
9 ]
10
```

Теперь у нас есть базовый проект Django с приложением polls.