Django

first steps

План
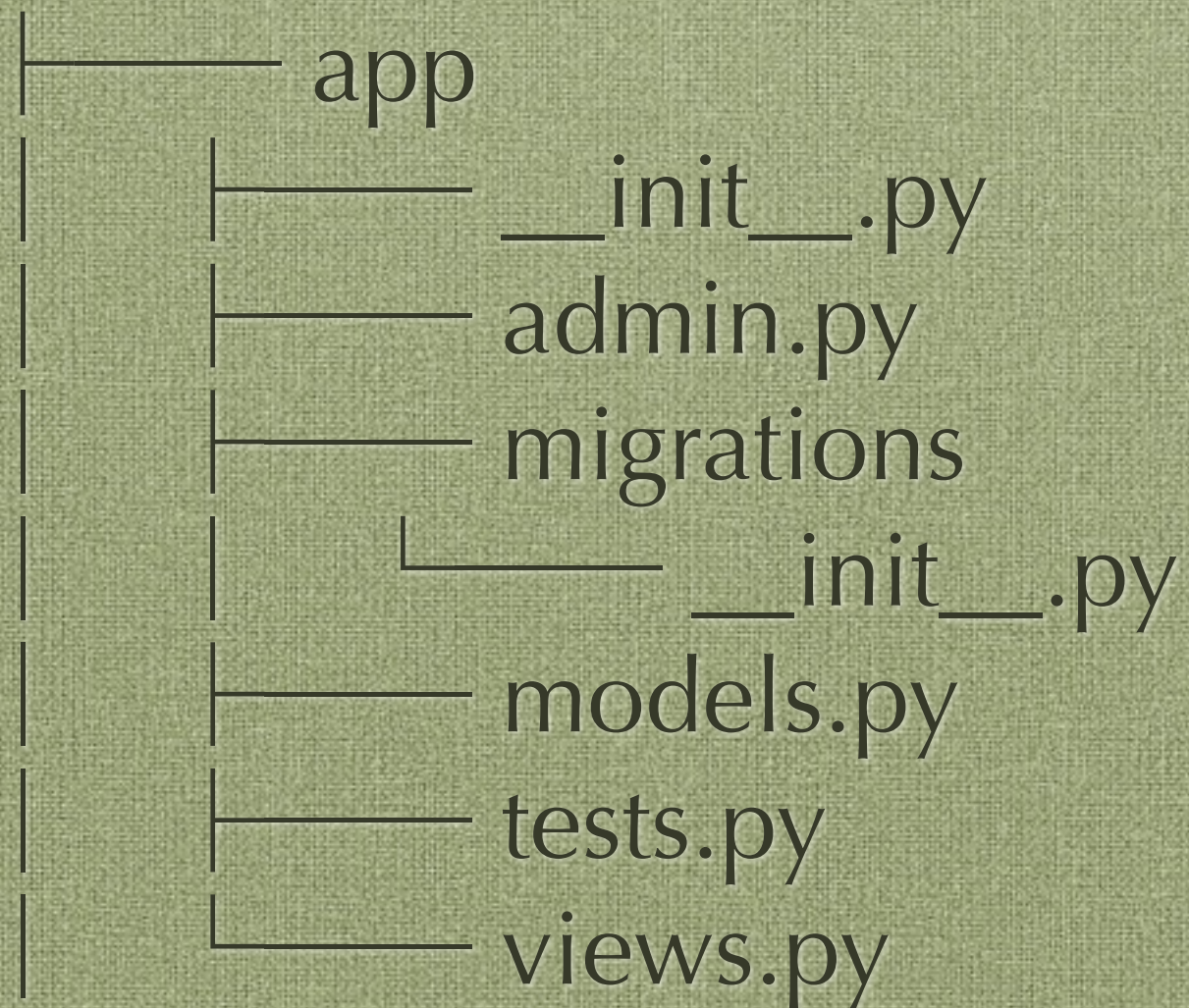
- apps и первая модель
- MVC (MTV)
- django.contrib
- авторизация
- админка
- статика

- Views

- URLS, передача параметров
- объект реквест
- объект респонс

APPS

- **модульная структура** django-**проекта**
- manage.py startapp

```
├──────── app
│   ├──────── __init__.py
│   ├──────── admin.py
│   ├──────── migrations
│   │   └──────── __init__.py
│   ├──────── models.py
│   ├──────── tests.py
│   └──────── views.py
```

Первая моделька и миграции

```python
from django.db import models

class Course(models.Model):
    name = models.CharField(max_length=255)
    start_date = models.DateTimeField()
```

```
manage.py makemigrations
manage.py migrate
```

MVC (MTV)

MVC - model view controller
MTV - model template view

django.contrib

```python
INSTALLED_APPS = (
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
)
```

Авторизация

- django.contrib.auth
- manage.py createsuperuser
- from django.contrib.auth.models import User
- from django.contrib.auth.decorators import login_required

Админка

- `django.contrib.admin`

- регистрация моделей
```
admin.site.register(MyModel)

@admin.register(MyModel)
class MyModelAdmin(admin.ModelAdmin):
    pass
```

Статика

- django.contrib.staticfiles

- STATICFILES_DIRS
- STATIC_URL

```
{% load static %}
{% static "relativ/path/to.file" %}
```

Больше contrib модулей
https://docs.djangoproject.com/en/1.7/ref/contrib/

comments, flatpages, messages, sessions

Views

```python
from django.http import HttpResponse
from django.shortcuts import render

def home(request):
    return render(request, 'index.html')
```

URLS

```
patterns, include, url

urlpatterns = patterns('',
    url(r'^$', home),
    url(r'^courses/$',
'courses.views.courses_list'),
    url(r'^blog/', include('blog.urls')),
    url(r'^admin/', include(admin.site.urls)),
)
```

URLS параметры

```
url(r'^courses/$', courses_list),
url(r'^course/(?P<course_id>\d+)/$',
course_view),
url(r'^course/(?P<course_slug>[\w-]+)/
$', course_view),
```

Регулярки

https://docs.python.org/2/howto/regex.html

http://regexone.com/

Параметры во views

```python
def courses_list(request):
    pass

def course_view(request, course_id):
    pass

def course_view(request, course_slug):
    pass
```

GET параметры во views

```
http://127.0.0.1:8000/courses/?
order=new

def courses_list(request):
    print request.GET
    ...
```

request object

Атрибуты:
- path
- method
- GET
- POST
- META
- user
- session
...

response object

Параметры объекта:
- content_type
- status

Атрибуты:
- content
- status_code
...

Редактировать заголовки:
```
response['header_key'] = "header_value"
```

JsonResponse
HttpResponseRedirect

Запрос -ответ

https://docs.djangoproject.com/en/1.7/ref/request-response/