Московский государственный университет им. Н. Э. Баумана

Факультет «Информатика и системы управления»

Кафедра «Системы обработки информации и управления»

Лабораторные работы по курсу:

«Разработка Интернет Приложений»

Шаблонизация

Исполнитель:
Студент группы ИУ5-52

Миядин А.А.

Преподаватель:

Гапанюк Ю.Е,

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Москва 2017г.

Задание и порядок выполнения

В этой ЛР вы создадите Django-проект, покажете пользователю статичную страницу, познакомитесь с конструкциями шаблонизаторов: переменные, теги, наследование шаблонов.

- Создать проект
- Реализовать view, в которых генерируются html-страницы
- В шаблонах должны быть использованы рассмотренные конструкции: переменные, вложенные значения, циклы, условия
- Все шаблоны должны расширять базовый шаблон
- Для элементов списка использовать тег include
- По нажатии на элемент списка должна открываться страница информации об элементе
- Для верстки необходимо использовать Bootstrap

Листинг

lab5/

lab5/

__init__.py

settings.py

```
"""
Django settings for lab5 project.

Generated by 'django-admin startproject' using Django 1.11.6.

For more information on this file, see
https://docs.djangoproject.com/en/1.11/topics/settings/

For the full list of settings and their values, see
https://docs.djangoproject.com/en/1.11/ref/settings/
"""

import os

# Build paths inside the project like this: os.path.join(BASE_DIR, ...)
BASE_DIR = os.path.dirname(os.path.dirname(os.path.abspath(__file__)))


# Quick-start development settings - unsuitable for production
# See https://docs.djangoproject.com/en/1.11/howto/deployment/checklist/

# SECURITY WARNING: keep the secret key used in production secret!
SECRET_KEY = 'rs^ygw3gh0&qfo$9x)yeo*(1do@0eo6)d8-ht^aff1s9^(_p$1'

# SECURITY WARNING: don't run with debug turned on in production!
DEBUG = True

ALLOWED_HOSTS = []


# Application definition

INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
    'myApp.apps.MyappConfig',
]

MIDDLEWARE = [
    'django.middleware.security.SecurityMiddleware',
    'django.contrib.sessions.middleware.SessionMiddleware',
    'django.middleware.common.CommonMiddleware',
    'django.middleware.csrf.CsrfViewMiddleware',
    'django.contrib.auth.middleware.AuthenticationMiddleware',
    'django.contrib.messages.middleware.MessageMiddleware',
    'django.middleware.clickjacking.XFrameOptionsMiddleware',
]

ROOT_URLCONF = 'lab5.urls'

TEMPLATES = [
    {
        'BACKEND': 'django.template.backends.django.DjangoTemplates',
        'DIRS': [os.path.join(BASE_DIR, 'templates')]
        ,
        'APP_DIRS': True,
        'OPTIONS': {
            'context_processors': [
                'django.template.context_processors.debug',
                'django.template.context_processors.request',
                'django.contrib.auth.context_processors.auth',
                'django.contrib.messages.context_processors.messages',
            ],
        },
    },
]

WSGI_APPLICATION = 'lab5.wsgi.application'


# Database
# https://docs.djangoproject.com/en/1.11/ref/settings/#databases

DATABASES = {
    'default' : {
        'ENGINE': 'django.db.backends.postgresql_psycopg2',
        'NAME': 'django_db',
        'USER' : 'test_user',
        'PASSWORD' : 'qwerty',
        'HOST' : '127.0.0.1',
        'PORT' : '5432',
    }
}


# Password validation
# https://docs.djangoproject.com/en/1.11/ref/settings/#auth-password-validators

AUTH_PASSWORD_VALIDATORS = [
    {
        'NAME': 'django.contrib.auth.password_validation.UserAttributeSimilarityValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.MinimumLengthValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.CommonPasswordValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.NumericPasswordValidator',
    },
]


# Internationalization
# https://docs.djangoproject.com/en/1.11/topics/i18n/

LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'UTC'

USE_I18N = True

USE_L10N = True

USE_TZ = True


# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/1.11/howto/static-files/

STATIC_URL = '/static/'
```

urls.py

```
"""lab5 URL Configuration

The `urlpatterns` list routes URLs to views. For more information please see:
    https://docs.djangoproject.com/en/1.11/topics/http/urls/
Examples:
Function views
    1. Add an import:  from my_app import views
    2. Add a URL to urlpatterns:  url(r'^$', views.home, name='home')
Class-based views
    1. Add an import:  from other_app.views import Home
    2. Add a URL to urlpatterns:  url(r'^$', Home.as_view(), name='home')
Including another URLconf
    1. Import the include() function: from django.conf.urls import url, include
    2. Add a URL to urlpatterns:  url(r'^blog/', include('blog.urls'))
"""
from django.conf.urls import url
from django.contrib import admin

from myApp.views import *

urlpatterns = (
    url(r'^admin/', admin.site.urls),
    url(r'^$', IndexBaseClass.as_view(), name="index"),
    url(r'^goods/', get_goods, name="goods"),
    url(r'^product/(?P<product_id>[0-9]+)$', product, name='product_url'),
    url(r'^goods/add/', set_product, name="set_goods"),
)
```

wsgi.py

```
"""
WSGI config for lab5 project.

It exposes the WSGI callable as a module-level variable named ``application``.

For more information on this file, see
```

```
https://docs.djangoproject.com/en/1.11/howto/deployment/wsgi/
"""

import os

from django.core.wsgi import get_wsgi_application

os.environ.setdefault("DJANGO_SETTINGS_MODULE", "lab5.settings")

application = get_wsgi_application()
```

MyApp/
  migrations/
    __init__.py

```
o.db import migrations, models


class Migration(migrations.Migration):

    initial = True

    dependencies = [
    ]

    operations = [
        migrations.CreateModel(
            name='products',
            fields=[
                  ('id', models.AutoField(auto_created=True, primary_key=True, serialize=False,
verbose_name='ID')),
                ('name', models.CharField(max_length=100)),
                ('specifications', django.contrib.postgres.fields.jsonb.JSONField()),
                ('price', django.contrib.postgres.fields.ranges.FloatRangeField()),
            ],
        ),
    ]
```

MyApp/
  static/
    __init__.py
    views.py

```
import json

from django.shortcuts import render
from django.views import View
from .models import *

# Create your views here.
with   open("/home/catmen/Документы/lab2_repo/lab5/myApp/static/json/goods.json")   as
data_file:
    goods_list = json.load(data_file)


class IndexBaseClass(View):
    @staticmethod
    def get(request):
        context = {
            "page_name": 'Магазин электроники'
        }
        return render(request, "index.html",context=context)
```

```
def product(request, product_id):
    return render(request, "product.html", context={"product" : Products.objects.get(id=product_id)})


def get_goods(request):
    return render(request, "goods.html", context={"goods" : Products.objects.all()})

def set_product(request):
    pass
```

Templates/

base.html

```
<!DOCTYPE html manifest="{{ STATIC_URL }}/manifest">
     <html lang="ru">
       <head>
         <meta charset="UTF-8"/>
         <meta http-equiv="X-UA-Compatible" content="IE=edge">
         <meta name="viewport" content="width=device-width, initial-scale=1">
         <meta name="description" content="">
         <meta name="author" content="">
         <title>{% block title %}Title{% endblock %}</title>
         <!-- Latest compiled and minified CSS -->
         <link rel="stylesheet" href="//netdna.bootstrapcdn.com/bootstrap/3.3.2/css/bootstrap.min.css">
         <!-- Optional theme -->
         <link rel="stylesheet" href="//netdna.bootstrapcdn.com/bootstrap/3.3.2/css/bootstrap-theme.min.css">
       </head>
       <body>
       <div class="navbar navbar-inverse navbar-fixed-top" role="navigation">
        <div class="container">
         <div class="navbar-header">
             <button type="button" class="navbar-toggle" data-toggle="collapse" data-target=".navbar-collapse">
           <span class="sr-only">Toggle navigation</span>
           <span class="icon-bar"></span>
           <span class="icon-bar"></span>
          </button>
          <a class="navbar-brand" href="/">Eshop</a>
         </div>
         <div class="collapse navbar-collapse">
          <ul class="nav navbar-nav">
           <li class="/active"><a href="/">Главная</a></li>
           <li><a href="/goods">Товары</a></li>
          </ul>
         </div><!--/.nav-collapse -->
        </div>
       </div>
       <div class="jumbotron">
         <div class="container">
           {% block body %}Нет данных{% endblock %}
         </div><!-- /.container -->
       </div>
       <!-- jQuery first, then Tether, then Bootstrap JS. -->
       <script src="//ajax.googleapis.com/ajax/libs/jquery/3.2.1/jquery.min.js"></script>
       <!-- Latest compiled and minified JavaScript -->
       <script src="//netdna.bootstrapcdn.com/bootstrap/3.3.2/js/bootstrap.min.js"></script>
       </body>
     </html>
```

goods.html

```
{% extends 'base.html' %}
     {% block title %} Товары {% endblock %}
     {% block body %}
       <div class="row">
         {% for product in goods %}
           {% include 'product_privew.html' %}
         {% empty %}
           В данный момент в магазине товары отсутсвуют.
         {% endfor %}
       </div>
     {% endblock %}
```

index.html

```
{% extends 'base.html' %}
     {% block title %} {{ page_name }} {% endblock %}
     {% block body %}
        <div class="starter-template">
         <h1>Магазин электронных товаров</h1>
         <p class="lead">В данном магазине очень много товаров!!!</p>
        </div>
     {% endblock %}
```

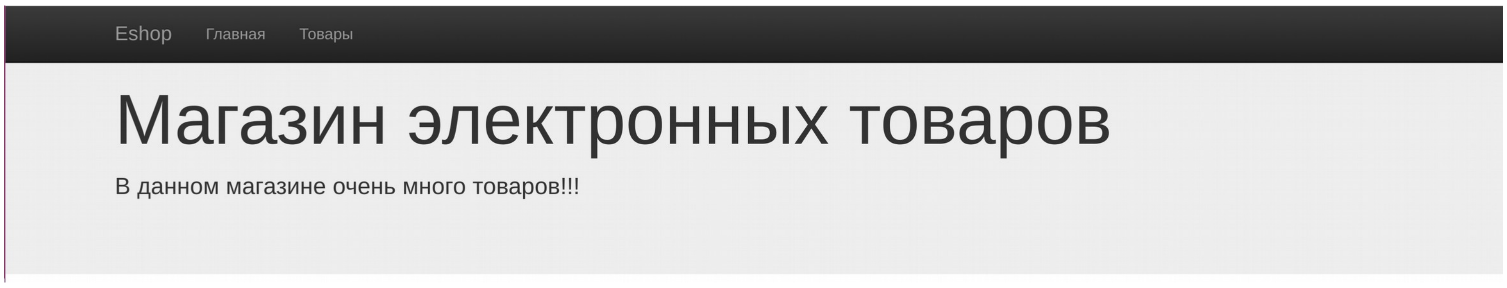
product.html

```
{% extends 'base.html' %}

     {% block title %} {{ product.name }} {% endblock %}
     {% block body %}
       <h1>{{ product.name }}</h1>
       <p class="center">
         {% for key, value in product.specifications.items %}
           {{ key }}: {{ value }}
           <br>
         {% empty %}
           нет характеристик
         {% endfor %}
         {{ product.price }}
       </p>
     {% endblock %}
```

product_privew.html

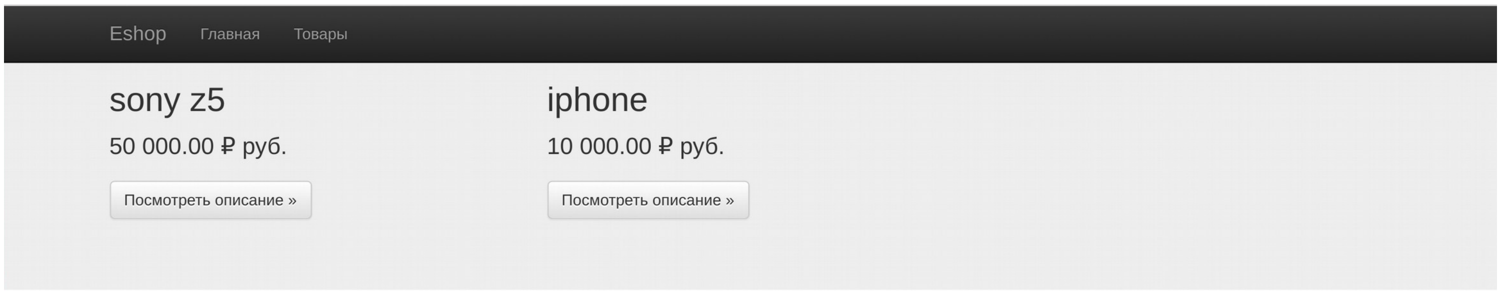
```
<div class="col-md-4">

       <h2>{{ product.name }}</h2>
       <!--<p>{{ product.specifications }}</p>-->
       <p>{{ product.price }} руб.</p>
        <p><a class="btn btn-default" href="{% url 'product_url' product.id %}"
role="button">Посмотреть описание &raquo;</a></p>
     </div>
```

Скриншоты



Магазин электронных товаров

В данном магазине очень много товаров!!!

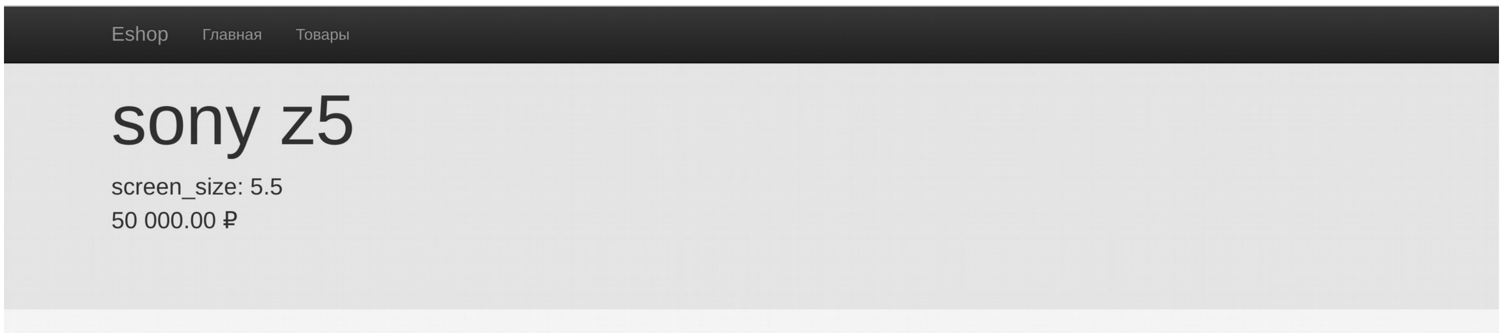


sony z5

50 000.00 ₽ руб.

iphone

10 000.00 ₽ руб.



sony z5

screen_size: 5.5
50 000.00 ₽