Московский Государственный Технический Университет им. Н.Э. Баумана

Разработка интернет-приложений

Отчёт по лабораторной работе №6

«Работа с СУБД»

Выполнил:

студент группы ИУ5-54

Черната Н.С.

1. Цель работы

Подключить СУБД к приложению Djando

2. Листинг

Файл settings.py — настройка баз данных

```
DATABASES = {
   'default': {
      'ENGINE': 'django.db.backends.mysql',
      'OPTIONS': {
         'db': 'grow_db',
         'read_default_file': '~/.my.cnf'
      }
   }
}
```

Модуль grow/connection.py

```
import MySQLdb
class Connection:
   def __init__(self, host, db_name, read_default_file="~/.my.cnf"):
      self.host = host
      self.db_name = db_name
      self.read_default_file = read_default_file
      self._connection = None
   @property
   def connection(self):
      return self._connection
   def __enter__(self):
      return self.connect()
   def __exit__(self, exc_type, exc_val, exc_tb):
      self.disconnect()
   def connect(self):
      if not self._connection:
         self._connection = MySQLdb.connect(
            host=self.host,
            db=self.db_name,
            read_default_file=self.read_default_file
         )
         return self.connection
   def disconnect(self):
      if self._connection:
         self._connection.close()
```

Модуль connect.py – проверка подключения к БД

```
import MySQLdb
from MySQLdb.constants import FIELD_TYPE

db = MySQLdb.connect(host="localhost", db="grow_db", read_default_file="~/.my.cnf")
cursor=db.cursor()
cursor.execute("select article_id, author_id, pubdate, likes from articles")
result = cursor.fetchall()
for x in result:
   print(x)
```

Модуль db_models.py – модели с возможностью сохранения в базу

```
import connection
class Author:
  def __init__(self, first_name, last_name, about, email,
phone_number):
    self.connection = connection.Connection(host="localhost",
db_name="grow_db")
    self.first_name = first_name
    self.last_name = last_name
    self.about = about
    self.email = email
    self.phone_number = phone_number
  def save(self):
    with self.connection as c:
      cursor = c.cursor()
      cursor.execute("""insert into grow_author (firstName, lastName,
about, email, phone_number)
            values (%s, %s, %s, %s, %s)""", (self.first_name,
                         self.last_name,
                         self.about,
                         self.email,
                         self.phone_number) )
      c.commit()
author = Author("Alex", "Klein", "Photographer, traveller",
"alex@klein.com", "467214")
```

```
author.save()
```

Модуль lab5/urls.py

```
from django.conf.urls import include, url
from django.contrib import admin

urlpatterns = [
    url(r'^articles/', include('grow.urls')),
    url(r'^admin/', admin.site.urls)
]
```

Модуль grow/urls.py

```
from django.conf.urls import url

from . import views

urlpatterns = [
    url(r'^$', views.index, name='index'),
    url(r'^(?P<id>(\d+))$', views.article, name='article')
]
```

Модуль grow/views.py

```
from django.shortcuts import render
from django.shortcuts import render_to_response
from django.template.loader import render_to_string
from django.http import HttpResponse
from django.template import RequestContext, loader
from .models import Article

# Create your views here..


def index(request):
    articles = Article.objects.all()
    content = {
        'articles': articles
    }
    return render(request, 'articles.html', content)


def article(request, id):
    art = Article.objects.get(id=int(id))
    content = {
        'article' : art
    }
    return render(request, 'single.html', content)
```

Модуль grow/models.py

```
from django.db import models


# Create your models here.


class Article(models.Model):
    title = models.CharField(max_length=100)
    author = models.ForeignKey("Author")
    content = models.TextField()
    snippet = models.CharField(max_length=500)
    pubdate = models.DateTimeField()
    likes = models.PositiveIntegerField()

    def __unicode__(self):
        return self.title


class Author(models.Model):
    firstName = models.CharField(max_length=50)
    lastName = models.CharField(max_length=50)
    about = models.TextField()
    email = models.EmailField()
    phone_number = models.CharField(max_length=12)
    pass
```

Шаблон base.html

```
<!DOCTYPE html>
<html lang="en">

<head>
    <title>Articles on personal growth, entrepreneurship and
psychology</title>

    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1,
shrink-to-fit=no">

    <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-
beta/css/bootstrap.min.css" integrity="sha384-
/Y6pD6FV/Vv2HJnA6t+vslU6fwYXjCFtcEpHbNJ0lyAFsXTsjBbfaDjzALeQsN6M"
        crossorigin="anonymous">
    {% load static %}
    <link rel="stylesheet" type="text/css" href="{% static 'css/style.css'
%}">
</head>

<body>
    <div class="container-fluid menu">
        <div class="row">
            <h1 class="col-md-2"> GROW </h1>
            <div class="col-md-5"></div>
            <div class="col-md-2 menu-button">
                <a href="/articles/"><p>ARTICLES</p></a>
            </div>
            <div class="col-md-2 menu-button">
                <a href="#"><p>AUTHORS</p></a>
            </div>
            </div>
    </div>

    <div class="content">
```

```
        {% block content %} {% endblock %}
    </div>


    <script src="https://code.jquery.com/jquery-3.2.1.slim.min.js"
integrity="sha384-
KJ3o2DKtIkvYIK3UENzmM7KCkRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5KkN"
        crossorigin="anonymous"></script>
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.11.0/umd/popper.min.j
s" integrity="sha384-
b/U6ypiBEHpOf/4+1nzFpr53nxSS+GLCkfwBdFNTxtclqqenISfwAzpKaMNFNmj4"
        crossorigin="anonymous"></script>
    <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-
beta/js/bootstrap.min.js" integrity="sha384-
h0AbiXch4ZDo7tp9hKZ4TsHbi047NrKGLO3SEJAg45jXxnGIfYzk4Si90RDIqNm1"
        crossorigin="anonymous"></script>
</body>

</html>
```

Шаблон articles.html

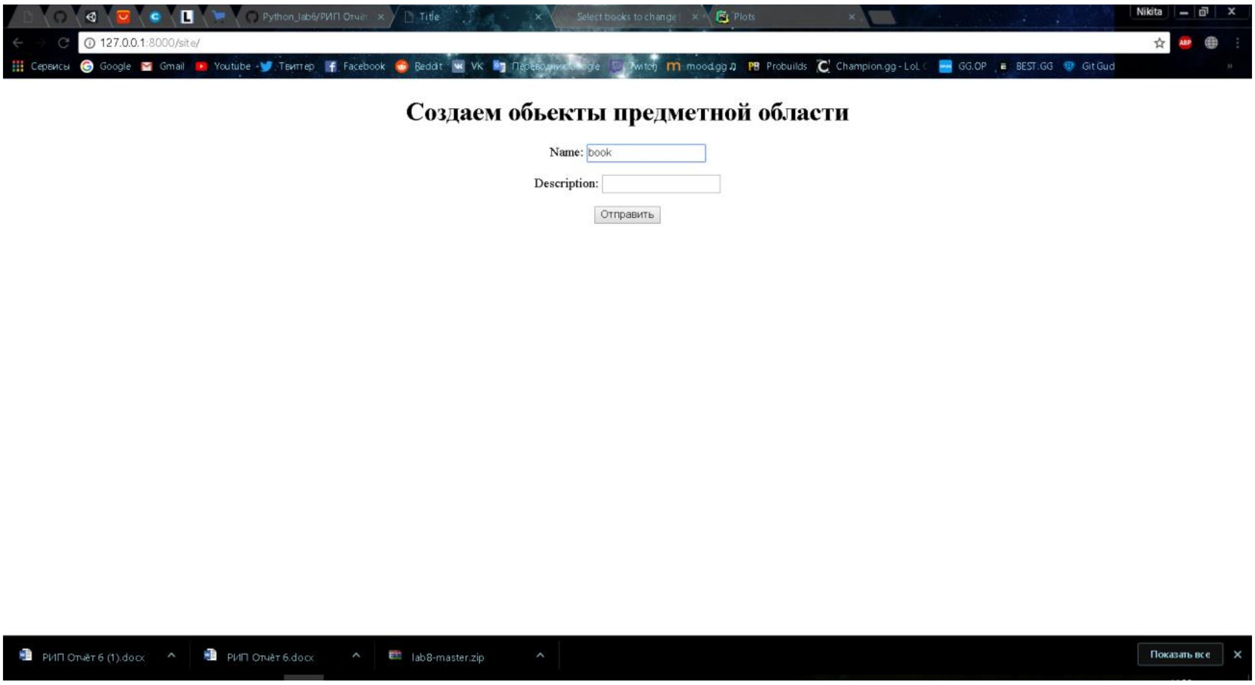
```
{% extends 'base.html' %}

{% block content %}

    {% for article in articles %}
        <div class="article-body">
                <h2><a href="/articles/{{article.id}}"
target="_blank">{{article.title}}</a></h2>
                <p>{{article.snippet}}</p>
        </div>
    {% endfor %}
{% endblock %}
```

Шаблон single.html

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

{% block content %}

        <div class="article-body">
                <h2>{{article.title}}</h2>
                <p>{{article.content}}</p>
        </div>

{% endblock %}
```

3. Результат

Страница с добавлением объектов предметной области:



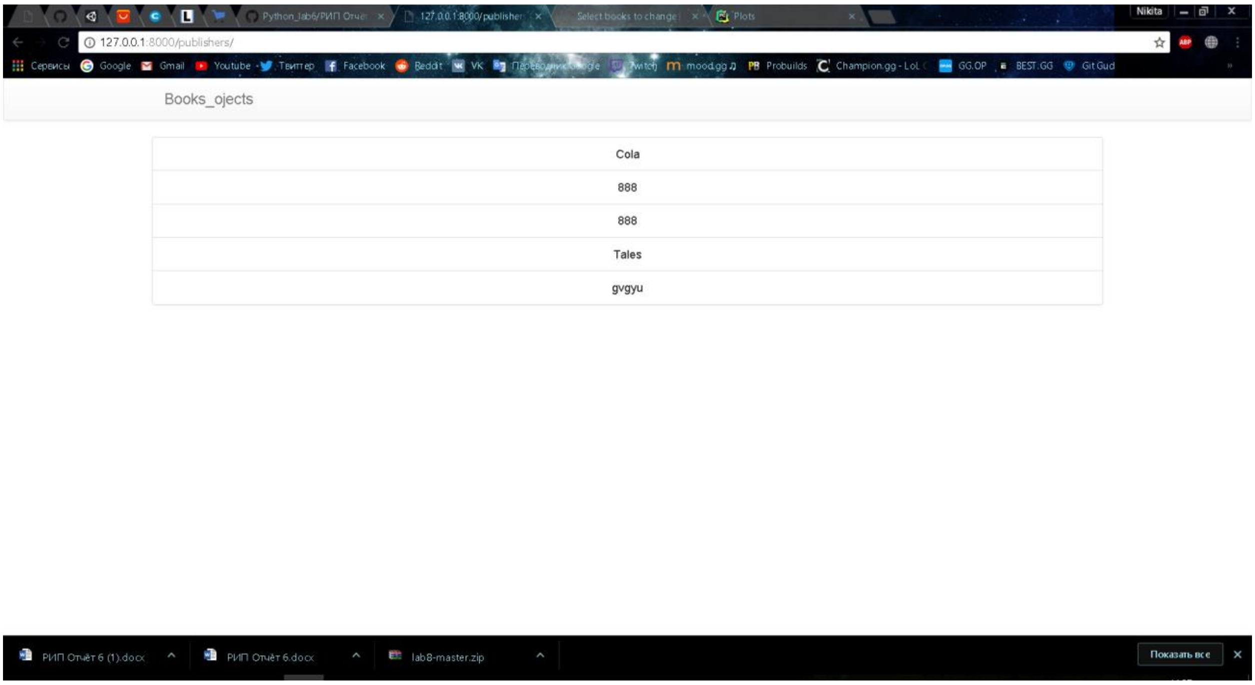
127.0.0.1:8000/site/

Создаем обьекты предметной области

Name: book

Description:

Страница со статьями из базы данных:



127.0.0.1:8000/publishers/

Books_ojects

Cola

888

888

Tales

gvgyu