**Московский Государственный Технический Университет им. Н.Э. Баумана**

**Разработка интернет-приложений**

Отчёт по лабораторной работе №6

«Работа с СУБД»

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1. Цель работы

Подключить СУБД к приложению Djando

2. Листинг

Файл settings.py — настройка баз данных



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 \* from department"**)

result = cursor.fetchall()

**for** x **in** result:

**print**(x)

Модуль db\_models.py – модели с возможностью сохранения в базу

import connection

class Department:

def \_\_init\_\_(self, name, about):

self.connection = connection.Connection(host="localhost", db\_name="ask\_db", user="'yury'", password="89096547567")

self.name = name

self.about = about

def create(self):

with self.connection as c:

cursor = c.cursor()

cursor.execute("""create table

grow\_department (

id INT(11) NOT NULL AUTO\_INCREMENT,

name CHAR(30) NOT NULL,

about TEXT,

PRIMARY KEY(id)

)""")

c.commit()

def save(self):

with self.connection as con:

cursor = con.cursor()

cursor.execute("""insert into grow\_department (name, about)

values (%s, %s)""", (self.name,

self.about) )

con.commit()

department = Department("Rapid reaction group", "Group of fast reaction to kill or rescue anyone")

department.save()

Модуль lab5/urls.py

**from** django.conf.urls **import** include, url  
**from** django.contrib **import** admin  
  
urlpatterns = [  
 url(**r'^departments/'**, 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.department, name=**'department'**)  
]

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 Department

from .models import Employee

# Create your views here..

def index(request):

department = Department.objects.all()

content = {

'departments': department

}

return render(request, 'departments.html', content)

def department(request, id):

department = Department.objects.get(id=int(id))

employers = Employee.objects.filter(department\_id=int(id))

content = {

'department' : department,

'employers': employers

}

return render(request, 'single.html', content)

Модуль grow/models.py

from django.db import models

# Create your models here.

class Department(models.Model):

name = models.CharField(max\_length=30)

about = models.TextField()

def \_\_unicode\_\_(self):

return self.name

class Employee(models.Model):

firstName = models.CharField(max\_length=30)

lastName = models.CharField(max\_length=30)

about = models.TextField()

email = models.EmailField()

phone\_number = models.CharField(max\_length=50)

department = models.ForeignKey("Department")

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"> MANAGE YOURS DEPARTMENTS </h1>

<div class="col-md-5"></div>

<div class="col-md-2 menu-button">

<a href="/departments/"><p>DEPARTMENTS</p></a>

</div>

<div class="col-md-2 menu-button">

<a href="#"><p>EMPLOYEE</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.js" 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 departments.html

{% extends 'base.html' %}

{% block content %}

{% for department in departments %}

<div class="article-body">

<h2><a href="/departments/{{department.id}}" target="\_blank">{{department.name}}</a></h2>

<p>{{department.about}}</p>

</div>

{% endfor %}

{% endblock %}

Шаблон single.html

{% extends 'base.html' %}

{% block content %}

<div class="article-body">

<h2>{{department.name}}</h2>

<p>{{department.about}}</p>

</div>

<div class="article-body">

<h2 style="text-align: center">Employers in this department</h2>

</div>

{% for employee in employers %}

<div class="article-body">

<h2>{{employee.firstName}} {{employee.lastName}}</h2>

<p>{{employee.about}}</p>

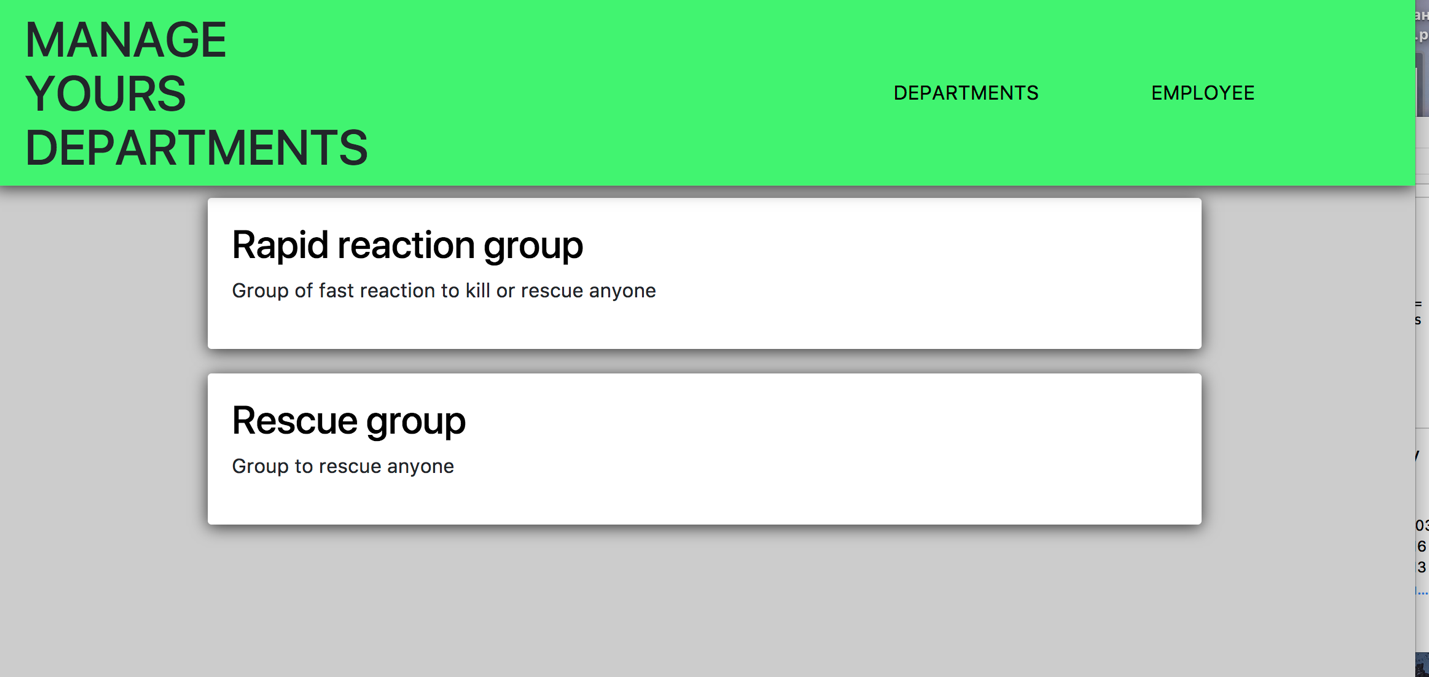
</div>

{% endfor %}

{% endblock %}

3. Результат

Страница с отделами из базы данных:



Отдел, открытый по клику на название:

