

**Отчет по лабораторной работе №7 по курсу
Разработка интернет приложений**

ИСПОЛНИТЕЛЬ:

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Оглавление

1. Описание задания лабораторной работы.	3
2. Модули.	3
3. Результаты работы.	13

1. Описание задания лабораторной работы.

Основная цель данной лабораторной работы – научиться обрабатывать веб-формы на стороне приложения, освоить инструменты, которые предоставляет Django, по работе с формами. Также в этой лабораторной работе вы освоите инструменты Django по работе с авторизацией и реализуете простейшую авторизацию. Напоследок, вы познакомитесь с инструментом администрирования Django – как в несколько строчек кода сделать панель администратора сайта.

1. Создайте view, которая возвращает форму для регистрации.

Поля формы:

- Логин
- Пароль
- Повторный ввод пароля
- Email
- Фамилия
- Имя

2. Создайте view, которая возвращает форму для авторизации.

Поля формы:

- Логин
- Пароль

3. При отправке формы регистрации во view проверять каждый параметр по правилам валидации, если валидация всех полей пройдена, то создавать пользователя и делать перенаправление на страницу логина, а ошибки, если они есть, выводить над формой.

Правила валидации:

- Логин не меньше 5 символов
- Пароль не меньше 8 символов
- Пароли должны совпадать
- Все поля должны быть заполнены
- Логин – уникален для каждого пользователя

4. При возникновении ошибок в момент отправки формы, введенные значения в полях ввода, кроме пароля, не должны исчезать.

5. Переписать view регистрации с использованием Django Form, правила валидации удалить из view, использовать встроенный механизм валидации полей.

6. Во view авторизации реализовать логин при POST запросе. При успешной авторизации должен происходить переход на страницу успешной авторизации.

7. Страница успешной авторизации должна проверять, что пользователь авторизован. Иначе делать перенаправление на страницу авторизации.

8. Реализовать view для выхода из аккаунта.

9. Заменить проверку на авторизацию на декоратор login_required

10. Добавить superuser'a через команду manage.py

11. Подключить django.contrib.admin и войти в панель администрирования.

12. Зарегистрировать все свои модели в django.contrib.admin

13. Для выбранной модели настроить страницу администрирования:

- Настроить вывод необходимых полей в списке
- Добавить фильтры
- Добавить поиск
- Добавить дополнительное поле в список

2. Модули.

shop/views.py

```
from django.shortcuts import render, redirect
from shop.models import Category, Item
```

```

from django.views import View
from django import forms
from django.contrib.auth.models import User
from django.contrib.auth import authenticate, logout
from django.contrib.auth.hashers import make_password
from django.contrib import auth
from django.contrib.auth.decorators import login_required

@login_required(redirect_field_name='', login_url='/login')
def index(request):
    return render(request, 'index.html', {'var_name': request.user.username})

@login_required(redirect_field_name='', login_url='/login')
def shopping(request):
    data = Category.objects.all()
    return render(request, 'product.html', context={'menu': data, 'var_name':
request.user.username})

class NewView(View):
    def get(self, request):
        data_search_n = Item.objects.filter(category_id=1).all()
        if len(data_search_n) == 0:
            return render(request, 'search-empty.html', {'var_name':
request.user.username})
        else:
            return render(request, 'search.html', context={'search': data_search_n,
'var_name': request.user.username})

class BasicView(View):
    def get(self, request):
        data_search_b = Item.objects.filter(category_id=2).all()
        if len(data_search_b) == 0:
            return render(request, 'search-empty.html')
        else:
            return render(request, 'search.html', context={'search':
data_search_b, 'var_name': request.user.username})

class SaleView(View):
    def get(self, request):
        data_search_n = Item.objects.filter(category_id=3).all()
        if len(data_search_n) == 0:
            return render(request, 'search-empty.html')
        else:
            return render(request, 'search.html', context={'search': data_search_n,
'var_name': request.user.username})

class RegistrationForm(forms.Form):
    username = forms.CharField(widget=forms.TextInput(attrs={'class': 'form-
control', 'id': 'username', 'placeholder': 'Enter login', })), \
        min_length=5, label='Login:')
    name = forms.CharField(
        widget=forms.TextInput(attrs={'class': 'form-control', 'id': 'name',
'placeholder': 'Enter name', })), \
        max_length=30, label='Name:')
    surname = forms.CharField(
        widget=forms.TextInput(attrs={'class': 'form-control', 'id': 'surname',
'placeholder': 'Enter surname', })), \
        max_length=30, label='Surname:')
    email = forms.EmailField(
        widget=forms.EmailInput(attrs={'class': 'form-control', 'id': 'email',
'placeholder': 'Enter email', }))

```

```

    )
    password = forms.CharField(min_length=8, label='Password:',
widget=forms.PasswordInput(
    attrs={'class': 'form-control', 'id': 'password', 'placeholder': 'Enter
password', }))
    password2 = forms.CharField(min_length=8, label='Confirm password:',
widget=forms.PasswordInput(
    attrs={'class': 'form-control', 'id': 'password2', 'placeholder': 'Confirm
password', }))

def clean_password2(self):
    p1 = self.cleaned_data.get('password')
    p2 = self.cleaned_data.get('password2')
    if p1 != p2:
        raise forms.ValidationError ('Passwords does not match')

def save(self):
    u = User()
    u.username = self.cleaned_data.get('username')
    u.password = make_password(self.cleaned_data.get('password'))
    u.first_name = self.cleaned_data.get('name')
    u.last_name = self.cleaned_data.get('surname')
    u.email = self.cleaned_data.get('email')
    u.is_staff = False
    u.is_active = True
    u.is_superuser = False
    u.save()

def clean_username(self):
    username=self.cleaned_data.get('username')
    try:
        u=User.objects.get(username=username)
        raise forms.ValidationError('This login already uses')
    except User.DoesNotExist:
        return username

def registration(request):
    if request.method == 'POST':
        form = RegistrationForm(request.POST)
        if form.is_valid():
            form.save()
            return redirect('/login')
        return render(request, 'registration.html', {'form': form})
    else:
        form = RegistrationForm()
    return render(request, 'registration.html', {'form': form})

def log(request):
    errors = []
    if request.method == 'POST':
        username = request.POST.get('username')
        password = request.POST.get('password')
        if not username:
            errors.append('Input login')
        elif not password:
            errors.append('Input password')
        else:
            user = authenticate(username=username, password=password)
            if user:
                auth.login(request, user)
                if not request.POST.get('remember'):
                    request.session.set_expiry(0)
                return redirect('/')
            else:
                errors.append('Wrong login or password')

```

```
    return render(request, 'login.html', {'errors': errors})
```

```
def logout_view(request):  
    logout(request)  
    return render(request, 'logout.html')
```

shop/urls.py

```
from django.conf.urls import url  
from . import views  
from shop.views import NewView, BasicView, SaleView  
from django.contrib.auth import views as auth_views  
from django.contrib.auth.decorators import login_required  
  
urlpatterns = [  
    url(r'^$', views.index, name='index'),  
    url(r'^shop/', views.shopping, name='shopping'),  
    url(r'^search-new/', login_required(redirect_field_name='',  
login_url='/login')(NewView.as_view())),  
    url(r'^search-basic/', login_required(redirect_field_name='',  
login_url='/login')(BasicView.as_view())),  
    url(r'^search-sale/', login_required(redirect_field_name='',  
login_url='/login')(SaleView.as_view())),  
    url(r'^reg/', views.registration, name='registration'),  
    url(r'^login/', views.log, name='login'),  
    url(r'^logout/', views.logout_view, name='logout'),  
    url(r'^login/$', auth_views.login),  
]
```

urls.py

```
from django.conf.urls import include, url  
from django.conf.urls.static import static  
from django.conf import settings  
from django.contrib import admin  
  
urlpatterns = [  
    url(r'^admin/', admin.site.urls),  
    url(r'', include('shop.urls')),  
    url(r'^shop/', include('shop.urls')),  
    url(r'^search-new/', include('shop.urls')),  
    url(r'^search-basic/', include('shop.urls')),  
    url(r'^search-sale/', include('shop.urls')),  
    url(r'^reg/', include('shop.urls')),  
    url(r'^login/', include('shop.urls')),  
    url(r'^logout/', include('shop.urls')),  
] + static(settings.STATIC_URL, document_root=settings.STATIC_ROOT)
```

models.py

```
from django.db import models  
  
class Category(models.Model):  
    name = models.CharField(max_length=255, unique=True)  
    description = models.TextField(max_length=500)  
  
    def __str__(self):  
        return self.name  
  
class Item(models.Model):  
    code = models.IntegerField(unique=True)  
    name = models.CharField(max_length=255)  
    category = models.ForeignKey(Category)
```

```
description = models.TextField(max_length=500)
image = models.URLField(max_length=100, default="https:\\")
```

```
def __str__(self):
    return self.name
```

admin.py

```
from django.contrib import admin
from django.contrib import admin
from .models import Category, Item
```

```
class CategoryAdmin(admin.ModelAdmin):
    def number_of_items(self, request):
        data = Item.objects.filter(category_id=request.id).all()
        i = len(data)
        return i
    list_display = ('name', 'number_of_items')
    ordering = ('name',)
```

```
admin.site.register(Category, CategoryAdmin)
```

```
class ItemAdmin(admin.ModelAdmin):
    list_display = ('name', 'code', 'category')
    list_filter = ['category']
    search_fields = ['code', 'name']
```

```
admin.site.register(Item, ItemAdmin)
```

Шаблоны

base.html

```
{% load staticfiles %}
{% csrf_token %}
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>{% block title %}{% endblock %}</title>
    <link rel="stylesheet" type="text/css" href="/static/css/bootstrap.css">
    <link href="/static/css/jumbotron-narrow.css" rel="stylesheet">
    <link href="https://fonts.googleapis.com/css?family=Lobster" rel="stylesheet">
    <link href="/static/css/style.css" rel="stylesheet">
</head>
<body>
    <div class="container-fluid">
        <div class="text-center">
            <h3><a href="/" class="link1"> Fashion is our profession </a></h3>
        </div>
        <div class="col-md-offset-9">
            <p class="user">You are signed in as {{ var_name }}</p>
            <a href="/logout" class="btn btn-primary role="button">Logout</a>
            <br>
            <br>
        </div>
    </div>
    </div>
{% block content %}{% endblock %}

</body>
</html>
```

base_l.html

```
{% load staticfiles %}
{% csrf_token %}
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>{% block title %}{% endblock %}</title>
  <link rel="stylesheet" type="text/css" href="/static/css/bootstrap.css">
  <link href="/static/css/jumbotron-narrow.css" rel="stylesheet">
  <link href="https://fonts.googleapis.com/css?family=Lobster" rel="stylesheet">
  <link href="/static/css/style.css" rel="stylesheet">
</head>
<body>
  <div class="container-fluid">
    <div class="text-center">
      <h3><a href="/" class="link1"> Fashion is our profession </a></h3>
    </div>
  </div>
  {% block content %}{% endblock %}
</body>
</html>
```

index.html

```
{% extends 'base.html' %}
{% csrf_token %}
{% block title %}Welcome to our shop!{% endblock %}
{% block content %}
  <div class="jumbotron">
    <p class="lead">Dear {{ var_name }}! We are glad to see you in our store. Have
a good shopping! Click on the link below to begin. </p>
    <a href="/shop" class="btn btn-primary" role="button">Go shopping</a>
  </div>
{% endblock %}
```

login.html

```
{% extends 'base_1.html' %}
{% csrf_token %}
{% block title %}Sign in{% endblock %}
{% block content %}
<form action="/login/" method="post">
  {% csrf_token %}
  <div class="form-group" style="margin: 100px 375px 0px;">
    {% if errors %}
      <div class="alert alert-warning">
        <a href="/login" class="close" data-dismiss="alert">x</a>
        {% for e in errors %}
          <p>{{ e }}</p>
        {% endfor %}
      </div>
    {% endif %}
  </div>
</div>
<form class="form-inline">
  <div class="form-inline" style="margin: 0px 0px 0px 375px;">
    <div class="form-group">
      <label class="sr-only">Login</label>
      <input type="text" class="form-control" placeholder="Login" id="username"
name="username" autocomplete="on">
    </div>
    <div class="form-group">
      <label class="sr-only" for="inputPassword">Password</label>
      <input type="password" class="form-control" id="password"
placeholder="password" name="password">
    </div>
    <div class="checkbox">
```



```

        <label><input name="remember" id="remember" type="checkbox">Remember
me</label>
    </div>
    <button type="submit" class="btn btn-default">Sign in</button>
</div>
</form>
<div class="form-group" style="margin: 10px 0px 0px 375px;">
    <label>Not a member?</label>
    <a href="/reg">
        <span style="color: #111;">
            Sign up here!
        </span>
    </a>
</div>

</form>
{% endblock %}

```

logout.html

```

{% extends 'base_1.html' %}

{% block title %}Goodbye!{% endblock %}
{% block content %}
    <div class="jumbotron">
        <p class="user">We are waiting for you again!</p>
    </div>
{% endblock %}

```

product.html

```

{% extends 'base.html' %}

{% block title %}Our products{% endblock %}
{% block content %}
    <div class="row marketing">
        {% for category in menu %}
            <div class="col-lg-4" >
                <div class="panel panel-default">
                    <div class="panel-body bg-info">
                        {% if category.name == 'Sales' %}
                            <h4><p class="s1">{{ category.name }}</p></h4>
                            <div class="caption">
                                <p>{{ category.description }}</p>
                                <div class="s2">
                                    <a href="/search-sale" class="btn btn-primary"
role="button">{% include 'search_f.html' with field=category.name %}</a>
                                </div>
                            </div>
                        {% elif category.name != 'Sales' %}
                            <h4> <p class="s2">{{ category.name }}</p></h4>
                            <div class="caption">
                                <p>{{ category.description }}</p>
                                <div class="s2">
                                    {% if category.name == 'New Collection' %}
                                        <a href="/search-new" class="btn btn-primary"
role="button">{% include 'search_f.html' with field=category.name %}</a>
                                    {% elif category.name != 'New Collection' %}
                                        <a href="/search-basic" class="btn btn-primary"
role="button">{% include 'search_f.html' with field=category.name %}</a>
                                    {% endif %}
                                </div>
                            </div>
                        {% endif %}
                    </div>
                </div>
            </div>
        {% endfor %}
    </div>

```

```

        </div>
    </div>
{% endfor %}
</div>
{% endblock %}

```

search.html

```

{% extends 'base.html' %}
{% block title %}Search{% endblock %}
{% block content %}
    <div class="container-fluid">
        <div class="blog-header">
            <h1 class="blog-title col-lg-offset-3"><b>Search results</b></h1>
        </div>
        <div class="row">
            <div class="col-lg-8 blog-main">
                {% for item in search %}
                    <section class="panel panel-search">
                        <div class="panel-heading bg-info">
                            <div class="panel-title">
                                <h4> {{ item.name }}<small> item no:{{ item.code }}</small>
                            </div>
                        </div>
                        <div class="panel-body ">
                            <div class="row">
                                <div class="col-lg-4">
                                    
                                </div>
                                <div class="col-lg-4">
                                    {{ item.description }}
                                </div>
                            </div>
                        </div>
                    </section>
                {% endfor %}
            </div>
            <div class="col-lg-3 blog-sidebar">
                <section class="panel panel-search">
                    <div class="panel-heading bg-info">
                        <div class="panel-title">
                            <h3>Search</h3>
                        </div>
                    </div>
                    <h4><div class="col-lg-offset-1">Filters</div></h4>
                    <ol class="list-unstyled text-center">
                        <li><a href="#">Price low to high</a></li>
                        <li><a href="#">Price high to low</a></li>
                        <li><a href="#">Popularity</a></li>
                    </ol>
                    <div class="panel-body bg-info">
                        <div class="input-group">
                            <form data-key="2af70d95e12e1e4e9344fa7468f8213d00434d93"
                                action="search" method="get" style="margin-bottom:10px;">
                                <span class="input-group-btn">
                                    <input type="text" class="form-control"
                                        name="query" placeholder="Enter here" value="" />
                                    <button type="submit" class="btn btn-
                                        default">Find</button>
                                </span>
                            </form>
                        </div>
                    </div>
                </section>
            </div>
        </div>
    </div>

```

```

    </div>
  </div>

{% endblock %}

```

search-empty.html

```

{% extends 'base.html' %}
{% block title %}Search{% endblock %}
{% block content %}
  <div class="container-fluid">
    <div class="blog-header">
      <h1 class="blog-title col-lg-offset-3"><b>Search results</b></h1>
    </div>
    <div class="row">
      <div class="col-lg-8 blog-main">
        <h1 class="blog-title col-lg-offset-4">There are no items:(</h1>
      </div>
      <div class="col-lg-3 blog-sidebar">
        <section class="panel panel-search">
          <div class="panel-heading bg-info">
            <div class="panel-title">
              <h3>Search</h3>
            </div>
          </div>
          <h4><div class="col-lg-offset-1">Filters</div></h4>
          <ol class="list-unstyled text-center">
            <li><a href="#">Price low to high</a></li>
            <li><a href="#">Price high to low</a></li>
            <li><a href="#">Popularity</a></li>
          </ol>
          <div class="panel-body bg-info">
            <div class="input-group">
              <form data-key="2af70d95e12e1e4e9344fa7468f8213d00434d93"
action="search" method="get" style="margin-bottom:10px;">
                <span class="input-group-btn">
                  <input type="text" class="form-control"
name="query" placeholder="Enter here" value="" />
                  <button type="submit" class="btn btn-
default">Find</button>
                </span>
              </form>
            </div>
          </div>
        </section>
      </div>
    </div>
  </div>
</div>

{% endblock %}

```

search-f.html

Find yours in {{ field }}!

registration.html

```

{% extends 'base_1.html' %}
{% block title %}Become a member of our club{% endblock %}
{% block content %}
  <form class="form-horizontal" action="/reg/" method="POST">
    {% csrf_token %}
    <div class="form-group">
      {% if form.errors%}
        <div class="col-md-4 col-md-offset-2">
          <div class="alert alert-warning">

```

```

<a href="/reg" class="close" data-dismiss="alert">x</a>
{% for f in form %}
    {% if f.errors %}
        <p>{{ f.label }}</p>
        {% for e in f.errors %}
            <p>{{ e }}</p>
        {% endfor %}
    {% endif %}
{% endfor %}
</div>
</div>
{% endif %}
</div>
</div>
<div class="form-group">
    <label class="col-xs-2 control-label">Login:</label>
    <div class="col-xs-4">
        <div class="input-group">
            <span class="input-group-addon"><i class="glyphicon glyphicon-
user"></i></span>
                {{ form.username }}
            </div>
        </div>
    </div>
</div>
<div class="form-group">
    <label class="col-xs-2 control-label">Name:</label>
    <div class="col-xs-4">
        <div class="input-group">
            <span class="input-group-addon"><i class="glyphicon glyphicon-
user"></i></span>
                {{ form.name }}
            </div>
        </div>
    </div>
</div>
<div class="form-group">
    <label for="enterSurname" class="col-xs-2 control-label">Surname:</label>
    <div class="col-xs-4">
        <div class="input-group">
            <span class="input-group-addon"><i class="glyphicon glyphicon-
user"></i></span>
                {{ form.surname }}
            </div>
        </div>
    </div>
</div>
<div class="form-group">
    <label for="inputEmail" class="col-xs-2 control-label">Email:</label>
    <div class="col-xs-4">
        <div class="input-group">
            <span class="input-group-addon"><i class="glyphicon glyphicon-
envelope"></i></span>
                {{ form.email }}
            </div>
        </div>
    </div>
</div>
<div class="form-group">
    <label for="inputPassword" class="col-xs-2 control-label">Password:</label>
    <div class="col-xs-4">
        <div class="input-group">
            <span class="input-group-addon"><i class="glyphicon glyphicon-
pencil"></i></span>
                {{ form.password }}
            </div>
        </div>
    </div>
</div>
<div class="form-group">
    <label for="confirmPassword" class="col-xs-2 control-label">Confirm
password:</label>

```

```

        <div class="col-xs-4">
            <div class="input-group">
                <span class="input-group-addon"><i class="glyphicon glyphicon-
pencil"></i></span>
                {{ form.password2 }}
            </div>
        </div>
    </div>

    <div class="form-group">
        <div class="col-xs-offset-2 col-xs-5">
            <button type="submit" class="btn btn-default">Registration</button>
        </div>
    </div>
</form>
{% endblock %}

```

3. Результаты.









