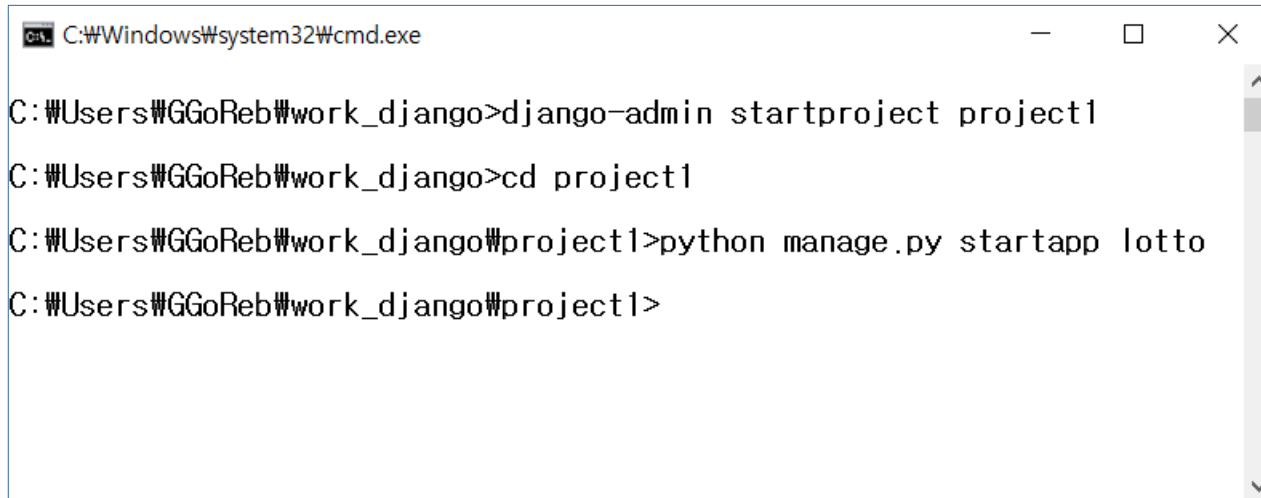


■ 로또 번호 생성 앱

● 프로젝트 / 앱 생성

- django-admin startproject project1
- python manage.py startapp lotto



```
C:\Windows\system32\cmd.exe

C:\Users\GGoReb\work_django>django-admin startproject project1

C:\Users\GGoReb\work_django>cd project1

C:\Users\GGoReb\work_django\project1>python manage.py startapp lotto

C:\Users\GGoReb\work_django\project1>
```

■ 로또 번호 생성 앱

● 템플릿 작성

– lotto/templates/lotto/index.html

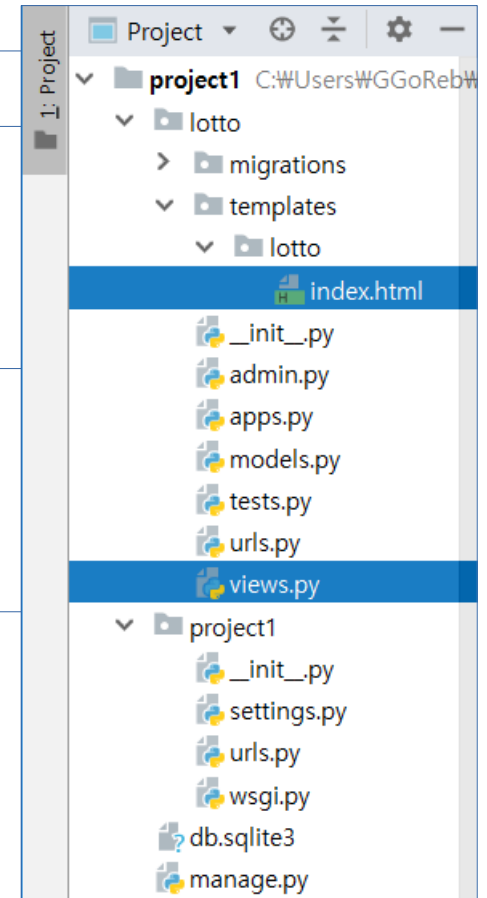
```
<h1>Lotto</h1>
```

● 뷰 작성

– lotto/views.py

```
from django.shortcuts import render

def index(request):
    return render(request, 'lotto/index.html', {})
```



■ 로또 번호 생성 앱

● 접속 주소(url) 생성

– lotto/urls.py

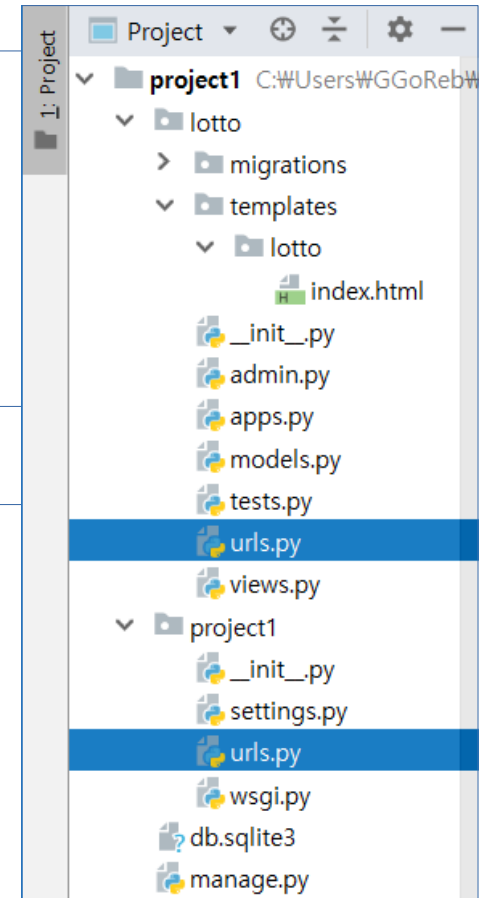
```
from django.urls import path
from . import views

urlpatterns = [
    path('', views.index),
]
```

– project1/urls.py

```
from django.contrib import admin
from django.urls import path, include

urlpatterns = [
    path('admin/', admin.site.urls),
    path('lotto/', include('lotto.urls')),
]
```

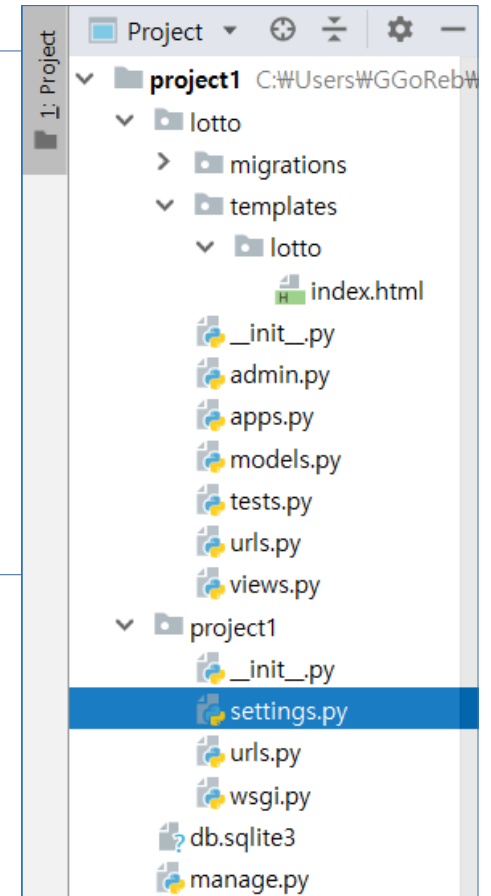


■ 로또 번호 생성 앱

● 앱 등록

– project1/settings.py

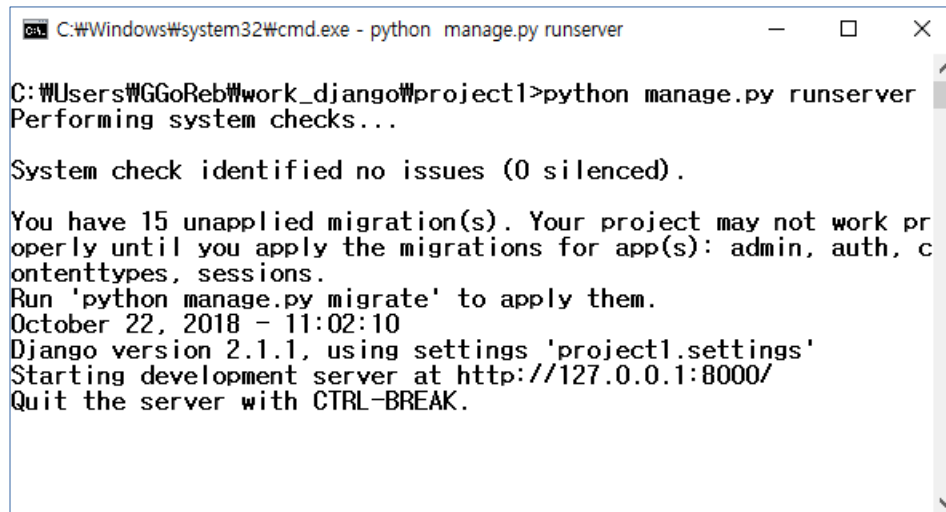
```
INSTALLED_APPS = [  
    'lotto',  
    'django.contrib.admin',  
    'django.contrib.auth',  
    'django.contrib.contenttypes',  
    'django.contrib.sessions',  
    'django.contrib.messages',  
    'django.contrib.staticfiles',  
]
```



■ 로또 번호 생성 앱

● 서버 구동

– python manage.py runserver



```
C:\Windows\system32\cmd.exe - python manage.py runserver

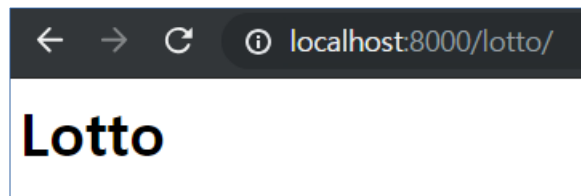
C:\Users\WGoReb\work_django\project1>python manage.py runserver
Performing system checks...

System check identified no issues (0 silenced).

You have 15 unapplied migration(s). Your project may not work pr
operly until you apply the migrations for app(s): admin, auth, c
ontenttypes, sessions.
Run 'python manage.py migrate' to apply them.
October 22, 2018 - 11:02:10
Django version 2.1.1, using settings 'project1.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

● 프로젝트 구동 확인

– <http://localhost:8000/polls> (<http://127.0.0.1:8000/polls>)



■ 로또 번호 생성 앱

● 모델 작성

– lotto/models.py

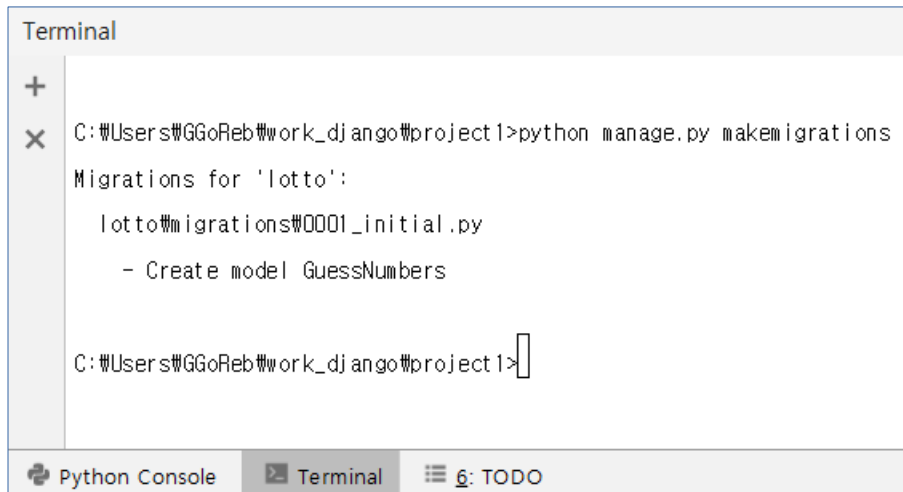
```
from django.db import models
from django.utils import timezone
import random

class GuessNumbers(models.Model):
    name = models.CharField(max_length=24)
    lottos = models.CharField(max_length=255, default='[1,2,3,4,5,6]')
    text = models.CharField(max_length=255)
    num_lotto = models.IntegerField(default=5)
    update_date = models.DateTimeField()
```

■ 로또 번호 생성 앱

● 모델의 변경사항(추가/수정/삭제) 파일 생성

– python manage.py makemigrations



```
Terminal
+
x C:\Users\GGGoReb\work_django\project1>python manage.py makemigrations
Migrations for 'lotto':
  lotto\migrations\0001_initial.py
    - Create model GuessNumbers

C:\Users\GGGoReb\work_django\project1>
```

Python Console Terminal 6: TODO

■ 로또 번호 생성 앱

● 모델의 변경사항(추가/수정/삭제) 데이터베이스 적용

– python manage.py migrate

```
Terminal
+ C:\Users\GGoreb\work_django\project1>python manage.py migrate
X Operations to perform:
  Apply all migrations: admin, auth, contenttypes, lotto, sessions
Running migrations:
  Applying contenttypes.0001_initial... OK
  Applying auth.0001_initial... OK
  Applying admin.0001_initial... OK
  Applying admin.0002_logentry_remove_auto_add... OK
```

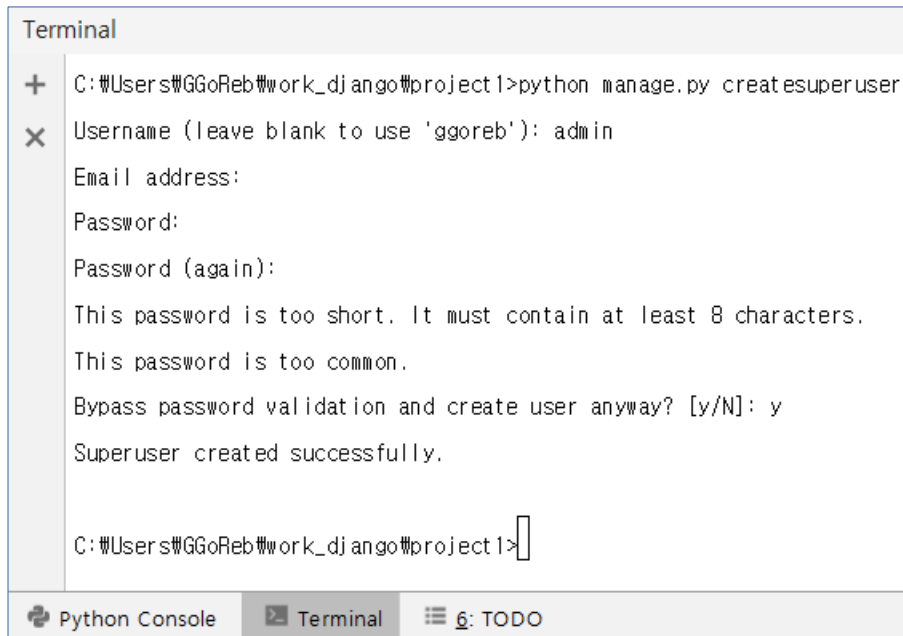
Python Console Terminal 6: TODO

▼	테이블 (12)
>	auth_group
>	auth_group_permissions
>	auth_permission
>	auth_user
>	auth_user_groups
>	auth_user_user_permissions
>	django_admin_log
>	django_content_type
>	django_migrations
>	django_session
>	lotto_guessnumbers
>	sqlite_sequence

■ 로또 번호 생성 앱

● 관리자 생성

– `python manage.py createsuperuser`



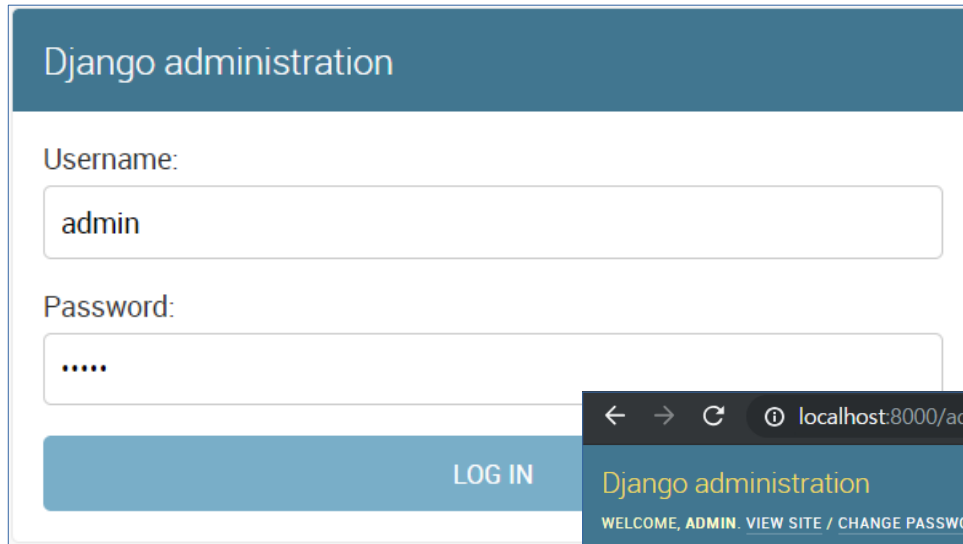
```
Terminal
+ C:\Users\GGoreb\work_django\project1>python manage.py createsuperuser
X Username (leave blank to use 'ggoreb'): admin
Email address:
Password:
Password (again):
This password is too short. It must contain at least 8 characters.
This password is too common.
Bypass password validation and create user anyway? [y/N]: y
Superuser created successfully.

C:\Users\GGoreb\work_django\project1>
```

■ 로또 번호 생성 앱

● 관리자 사이트

– `http://localhost:8000/admin`

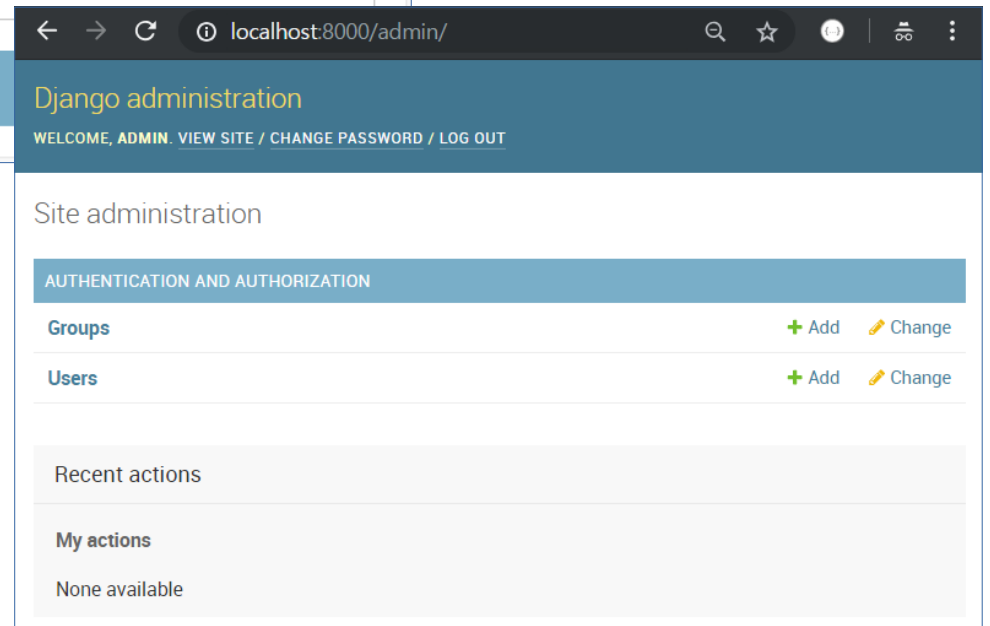


Django administration

Username:

Password:

LOG IN



← → ↻ ⓘ localhost:8000/admin/ 🔍 ☆ ⓘ ⚙ ⋮

Django administration

WELCOME, **ADMIN**. [VIEW SITE](#) / [CHANGE PASSWORD](#) / [LOG OUT](#)

Site administration

AUTHENTICATION AND AUTHORIZATION	
Groups	+ Add ✎ Change
Users	+ Add ✎ Change

Recent actions

My actions

None available

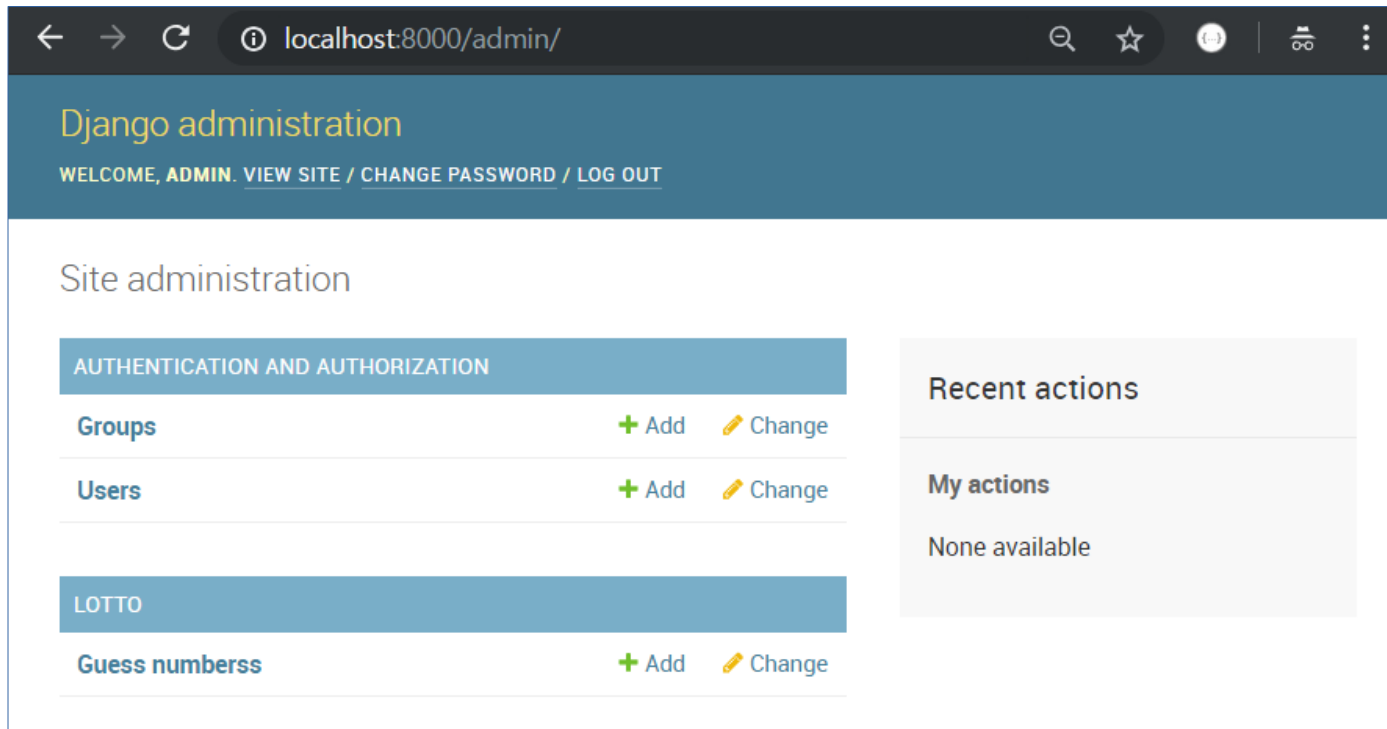
■ 로또 번호 생성 앱

● 관리자 사이트에서 데이터를 관리할 수 있도록 등록

– lotto/admin.py

```
from django.contrib import admin
from .models import GuessNumbers

admin.site.register(GuessNumbers)
```





■ 로또 번호 생성 앱

● 관리자 사이트

– 데이터 입력

Add guess numbers

Name:	<input type="text" value="로또번호"/>	
Lottos:	<input type="text" value="[1,2,3,4,5,6]"/>	
Text:	<input type="text" value="1등 되자"/>	
Num lotto:	<input type="text" value="5"/>	
Update date:	Date: <input type="text" value="2018-10-22"/>	Today 
	Time: <input type="text" value="03:33:18"/>	Now 

Note: You are 9 hours ahead of server time.

■ 로또 번호 생성 앱

● 관리자 사이트

– 데이터 입력

Select guess numbers to change ADD GUESS NUMBERS +

Action: Go 0 of 1 selected

<input type="checkbox"/>	GUESS NUMBERS
<input type="checkbox"/>	GuessNumbers object (1)

1 guess numbers

↓

<input type="checkbox"/>	로또번호 1등 되자
--------------------------	------------

```
...  
class GuessNumbers(models.Model):  
    ...  
    def __str__(self):  
        return '%s %s' % (self.name, self.text)
```

■ 로또 번호 생성 앱

● 모델 기능 추가 및 테스트

– lotto/models.py

```
...
class GuessNumbers(models.Model):
    ...
    def generate(self):
        self.lottos = ""
        origin = list(range(1, 46))
        for _ in range(0, self.num_lotto):
            random.shuffle(origin)
            guess = origin[:6]
            guess.sort()
            self.lottos += str(guess) + '\n'
        self.update_date = timezone.now()
        self.save()
```

■ 로또 번호 생성 앱

● 모델 기능 추가 및 테스트

– lotto/tests.py

```
from django.test import TestCase
from .models import GuessNumbers

class GuessNumbersTestCase(TestCase):
    def test_generate(self):
        g = GuessNumbers(name='apple', text='pineapple')
        g.generate()
        print(g.update_date)
        print(g.lottos)
        self.assertTrue(len(g.lottos) > 20)
```

■ 로또 번호 생성 앱

● 모델 기능 추가 및 테스트

– python manage.py test

Terminal

+ C:\Users\GGoreb\work_django\project1>python manage.py test

× Creating test database for alias 'default'...

System check identified no issues (0 silenced).

2018-10-22 04:01:43.890535+00:00

[12, 13, 15, 29, 38, 44]

[20, 23, 24, 26, 31, 40]

[7, 8, 9, 10, 18, 45]

[1, 10, 11, 13, 14, 27]

[9, 28, 34, 36, 37, 41]

.

Ran 1 test in 0.002s

OK

Destroying test database for alias 'default'...

■ 로또 번호 생성 앱

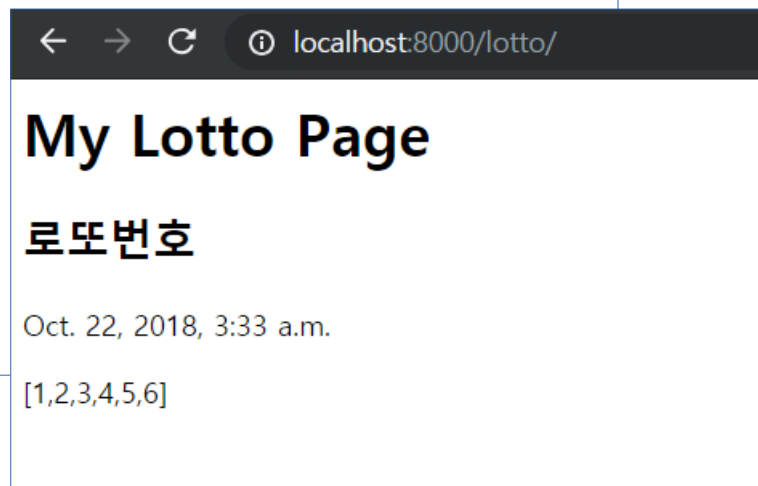
● DB 데이터를 템플릿으로 출력

– lotto/views.py

```
def index(request):  
    lottos = GuessNumbers.objects.all()  
    return render(request, 'lotto/index.html', {'lottos': lottos})
```

– lotto/templates/index.html

```
<div class="page-header">  
    <h1>My Lotto Page</h1>  
</div>  
{% for lotto in lottos %}  
<div class="container lotto">  
    <h2>{{ lotto.name }}</h2>  
    <p>{{ lotto.update_date }}</p>  
    <p>{{ lotto.lottos }}</p>  
</div>  
{% endfor %}
```



■ 로또 번호 생성 앱

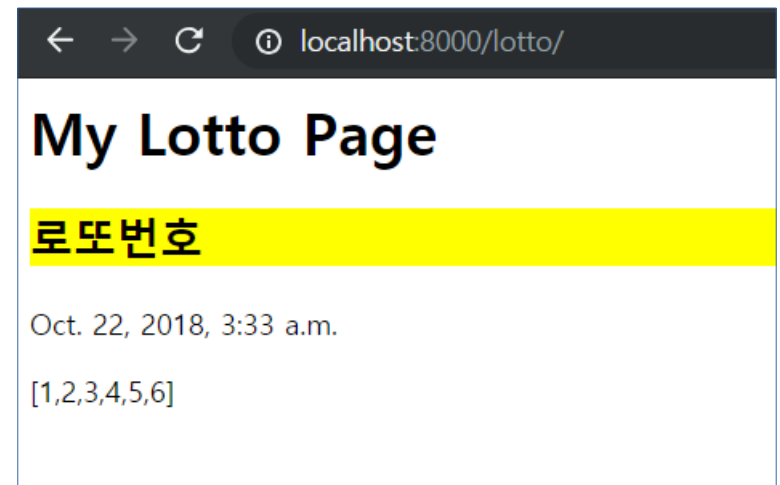
● css 적용

– lotto/static/css/style.css

```
h2 {  
    background-color: yellow;  
}
```

– lotto/templates/index.html

```
{% load static %}  
<link rel="stylesheet" href="{% static 'css/style.css' %}">
```



■ 로또 번호 생성 앱

● 로또 번호 생성 페이지 (FORM)

– lotto/forms.py

```
from django import forms
from .models import GuessNumbers

class PostForm(forms.ModelForm):

    class Meta:
        model = GuessNumbers
        fields = ('name', 'text',)
```

– lotto/views.py

```
def post(request):
    form = PostForm()
    return render(request, 'lotto/form.html', {'form': form})
```

■ 로또 번호 생성 앱

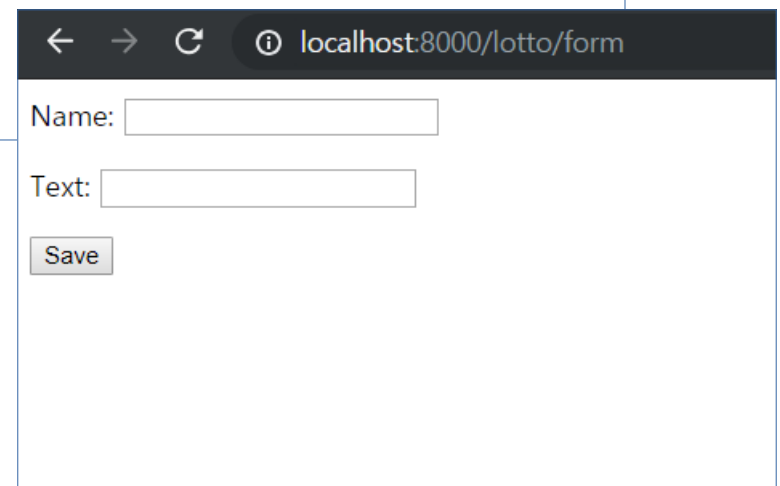
● 로또 번호 생성 페이지 (FORM)

– lotto/urls.py

```
urlpatterns = [  
    ...  
    path('form', views.post),  
]
```

– lotto/templates/lotto/form.html

```
<form method="post">  
    {%csrf_token%}  
    {{form.as_p}}  
    <button type="submit">Save</button>  
</form>
```



← → ↻ ⓘ localhost:8000/lotto/form

Name:

Text:

■ 로또 번호 생성 앱

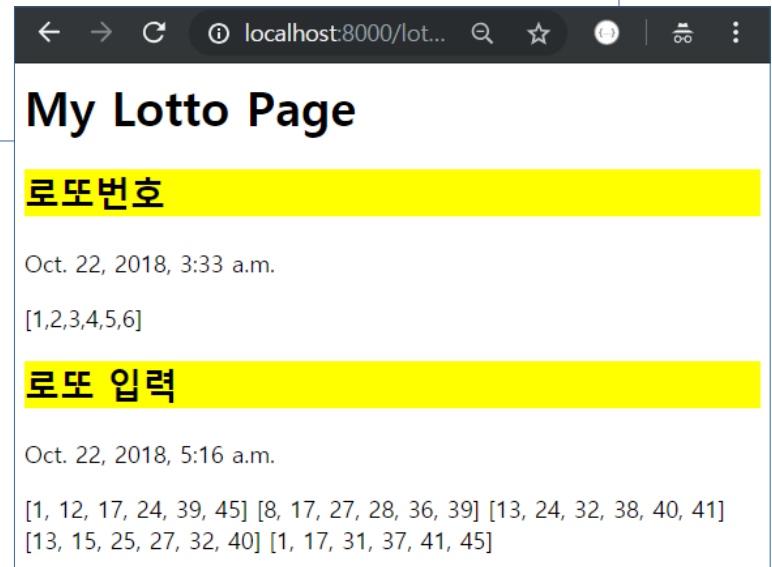
● 데이터 입력 - POST 처리

- lotto/views.py

```
def post(request):
    if request.method == 'GET':
        form = PostForm()
        return render(request, 'lotto/form.html', {'form': form})
    else:
        form = PostForm(request.POST)
        if form.is_valid():
            lotto = form.save(commit=False)
            lotto.generate()
            return redirect('/lotto')
```

```
#urls.py
urlpatterns = [
    path('', views.index, name='lotto_index'),
]
```

```
# views.py
...
return redirect('lotto_index')
```



■ 로또 번호 생성 앱

● 상세 내용 조회 페이지

– lotto/templates/lotto/detail.html

```
<div>
  <h2>{{lotto.text}}</h2>
  <p> by {{lotto.name}}</p>
  <p> {{lotto.update_date}}</p>
  <p> {{lotto.lottos|linebreaksbr}}</p>
</div>
```

– lotto/views.py

```
def detail(request, lotto_key):
    lotto = GuessNumbers.objects.get(pk=lotto_key)
    return render(request, 'lotto/detail.html', {'lotto': lotto})
```

– lotto/urls.py

```
urlpatterns = [
    ...
    path('detail/<int:lotto_key>', views.detail, name='detail'),
]
```

■ 로또 번호 생성 앱

● 상세 내용 조회 페이지

– lotto/templates/lotto/index.html

```
<h2>{{ lotto.name }}</h2>
```



```
<h2>
  <a href="{% url 'detail' lotto_key=lotto.pk %}">
    {{ lotto.name }}
  </a>
</h2>
```

