**[ 4 ] 학사관리 프로그램**

* 웹 애플리케이션 설계
* 프로젝트 설정 변경(settings.py)
* 데이터베이스 만들기(models.py)
* 관리자 페이지 접속
* Django 인트로(시작) 페이지 접속
* 학생 등록 및 리스트 페이지 만들기

1. 웹 애플리케이션 설계

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | URL | URL name | view | template | redirection |
| 목록 | /students/listAll | listAll | listAll() | studentListAll.html |  |
| 등록 | /students/register | register | registerStudent() | registerStudent.html |  |
|  | /students/registerCon | registerCon | registerConStudent() |  | /students/listAll |
| 상세 | /students/<str:s\_name>/detail | detail | detailStudent() | detailStudent.html |  |
| 수정 | /students/<str:s\_name>/modify | modify | modifyStudent() | modifyStudent.html |  |
|  | /students/modifyCon | modifyCon | modifyConStudent() |  | /students/listAll |
| 삭제 | /students/<str:s\_name>/delete | delete | deleteStudent() | deleteStudent.html |  |

1. 프로젝트 생성 및 애플리케이션 생성, 프로젝트 설정 변경

INSTALLED\_APPS = [  
 **'django.contrib.admin'**,  
 **'django.contrib.auth'**,  
 **'django.contrib.contenttypes'**,  
 **'django.contrib.sessions'**,  
 **'django.contrib.messages'**,  
 **'django.contrib.staticfiles'**,  
 **'students.apps.StudentsConfig'**]

*# TIME\_ZONE = 'UTC'*TIME\_ZONE = **'Asia/Seoul'** *# 타임존 변경*

1. 데이터베이스 만들기 (models.py)

***# Students/models.py***

**from** django.db **import** models  
**class** Student(models.Model):  
 s\_name = models.CharField(max\_length=1000)  
 s\_major = models.CharField(max\_length=100)  
 s\_age = models.IntegerField(default=0)  
 s\_grade = models.IntegerField(default=0)  
 s\_gender = models.CharField(max\_length=30)  
  
 **def** \_\_str\_\_(self):  
 return **"{}({},{}살{}학년 {})"**.format(self.s\_name, self.s\_major, self.s\_age, self.s\_grade,self.s\_gender)

***# Students/admin.py***

**from** django.contrib **import** admin  
**from** students.models **import** Student  
admin.site.register(Student) *# Admin에 table 적용*

데이터 베이스에 반영

python manage.py makemigrations ; migration할 것이 있는지 확인

python manage.py migrate

1. 관리자 계정을 생성 및 웹 서버 실행하여 확인

python manage.py createsuperuser

python manage.py runserver

1. 모든 페이지 구현 순서
   1. URLconf
      1. ch03/urls.py
      2. students/urls.py
   2. Views
      1. Students/views.py
   3. Template
      1. Students/templates/students/registerStudent.html
2. 학생 등록, 목록, 학생 정보 보기 페이지, 학생 정보 수정, 학생 삭제까지 추가한 소스
   1. URLconf
      1. ch03/urls.py

**from** django.contrib **import** admin  
**from** django.urls **import** path, include  
**from** students **import** views  
urlpatterns = [  
 path(**'admin/'**, admin.site.urls),  
 path(**''**,views.listAll, name=**'home'**),  
 path(**'students/'**, include(**'students.urls'**)),  
]

* + 1. students/urls.py

**from** django.urls **import** path, include  
**from** . **import** views  
app\_name = **'students'**urlpatterns = [  
 path(**'register/'**,views.registerStudent, name=**'register'**), *# urlpatters의 이름이 reg* path(**'registerCon/'**, views.registerConStudent, name=**'registerCon'**),  
 path(**'listAll/'**, views.listAll, name=**'listAll'**),  
 path(**'detail/<str:name>/'**, views.detailStudent, name=**'detail'**),  
 path(**'modify/<str:name>/'**, views.modifyStudent, name=**'modify'**),  
 path(**'modifyCon/'**, views.modifyConStudent, name=**'modifyCon'**),  
 path(**'delete/<str:name>/'**, views.deleteStudent, name=**'delete'**),  
]

* 1. Views
     1. students/views.py

**from** django.shortcuts **import** render  
**from** students.models **import** Student  
**from** django.http **import** HttpResponseRedirect  
**from** django.urls **import** reverse  
*# 학생 등록 페이지***def** registerStudent(request):  
 **return** render(request, **'students/registerStudent.html'**)  
*# 학생 등록 수행***def** registerConStudent(request):  
 name = request.POST[**'name'**]  
 major = request.POST[**'major'**]  
 age = request.POST[**'age'**]  
 grade = request.POST[**'grade'**]  
 gender = request.POST[**'gender'**]  
 qs = Student(s\_name=name, s\_major=major, s\_age=age, s\_grade=grade, s\_gender=gender)  
 qs.save()  
 **return** HttpResponseRedirect(reverse(**'students:listAll'**))  
*# 학생 목록***def** listAll(request):  
 qs = Student.objects.all()  
 context = {**'student\_list'**:qs}  
 **return** render(request, **'students/studentListAll.html'**, context)  
*# 학생 상세정보***def** detailStudent(request, name):  
 qs = **''  
 try**:  
 qs = Student.objects.get(s\_name=name)  
 **except**:  
 qs = Student.objects.filter(s\_name\_\_contains=name)  
 context = {**'student'**:qs}  
 **return** render(request, **'students/detailStudent.html'**, context)  
*#학생 정보 수정 페이지***def** modifyStudent(request, name):  
 qs = **''  
 try**:  
 qs = Student.objects.get(s\_name=name)  
 **except**:  
 qs = Student.objects.filter(s\_name\_\_contains=name)  
 context = {**'student'**:qs}  
 **return** render(request, **'students/modifyStudent.html'**, context)  
*#학생 정보 수정 수행***def** modifyConStudent(request):  
 name = request.POST[**'name'**]  
 major = request.POST[**'major'**]  
 age = request.POST[**'age'**]  
 grade = request.POST[**'grade'**]  
 gender = request.POST[**'gender'**]  
 qs = Student.objects.get(s\_name=name)  
 qs.s\_major = major  
 qs.s\_age = age  
 qs.s\_grade = grade  
 qs.s\_gender = gender  
 qs.save()  
 **return** HttpResponseRedirect(reverse(**'students:detail'**, args=[name]))  
*# 학생 삭제***def** deleteStudent(request, name):  
 qs = Student.objects.get(s\_name=name)  
 qs.delete()  
 **return** HttpResponseRedirect(reverse(**'students:listAll'**))

* 1. Templates
     1. students/templates/students/registerStudent.html

<!DOCTYPE **html**>  
<**html lang="en"**>  
<**head**>  
 <**meta charset="UTF-8" http-equiv="content-type" content="text/html"**>  
 <**title**>회원가입</**title**>  
</**head**>  
<**body**>  
 <**H2**>Register Student</**H2**>  
 <**form action="**{% **url 'students:registerCon'** %}**" method="post"**>  
 {% **csrf\_token** %}  
 <**p**>name : <**input type="text" name="name"**></**p**>  
 <**p**>major : <**input type="text" name="major"**></**p**>  
 <**p**> age : <**input type="number" name="age"**></**p**>  
 <**p**>grade : <**input type="number" name="grade"**></**p**>  
 <**p**>gender : <**input type="text" name="gender"**></**p**>  
 <**p**>  
 <**input type="submit" value="학생등록"**>  
 <**input type="button" value="학생목록"  
 onclick="*location***.**href**=**'**{% **url 'students:listAll'** %}**'"** >  
 </**p**>  
 </**form**>  
</**body**>  
</**html**>

* + 1. students/templates/students/studentListAll.html

<!DOCTYPE **html**>  
<**html lang="en"**>  
<**head**>  
 <**meta charset="UTF-8"**>  
 <**title**>학생들 리스트</**title**>  
 <**style**>**td**, **th** {**padding**:5**px**;}</**style**>  
</**head**>  
<**body**>  
 <**h2**>Studetnts List</**h2**>  
 <**table**>  
 <**tr**><**th**>이름</**th**><**th**>전공</**th**></**tr**>  
 {% **if student\_list** %}  
 {% **for s in student\_list** %}  
 <**tr**>  
 <**td**><**a href="**{% **url 'students:detail' s**.**s\_name**%}**"**>{{**s**.**s\_name**}}</**a**></**td**>  
 <**td**>{{ **s**.**s\_major** }}</**td**>  
 <**td**><**button onclick="*location***=**'**{% **url 'students:modify' s**.**s\_name** %}**'"**>수정</**button**></**td**>  
 <**td**><**button onclick="*location***=**''"**>삭제</**button**></**td**>  
 </**tr**>  
 {% **endfor** %}  
 {% **else** %}  
 <**tr**><**th colspan="7"**>Student : 0명</**th**></**tr**>  
 {% **endif** %}  
 </**table**>  
 <**br**>  
 <**a href="**{% **url 'students:register'** %}**"**>신규 학생 등록</**a**>  
</**body**>  
</**html**>

* + 1. students/templates/students/detailStudent.html

<!DOCTYPE **html**>  
<**html lang="en"**>  
<**head**>  
 <**meta charset="UTF-8"**>  
 <**title**>학생 상세</**title**>  
 <**style**>**td**, **th** {**padding**:5**px**;}</**style**>  
</**head**>  
<**body**>  
 <**h2**>Detail Studetnts</**h2**>  
 <**table**>  
 {% **if student** %}  
 <**tr**><**th**>이름</**th**><**td**>{{ **student**.**s\_name** }}</**td**></**tr**>  
 <**tr**><**th**>전공</**th**><**td**>{{ **student**.**s\_major** }}</**td**></**tr**>  
 <**tr**><**th**>나이</**th**><**td**>{{ **student**.**s\_age** }}</**td**></**tr**>  
 <**tr**><**th**>학년</**th**><**td**>{{ **student**.**s\_grade** }}</**td**></**tr**>  
 <**tr**><**th**>성별</**th**><**td**>{{ **student**.**s\_gender** }}</**td**></**tr**>  
 <**tr**><**td colspan="2"**>  
 <**a href="**{% **url 'students:modify' student**.**s\_name** %}**"**>수정</**a**>  
 <**a href="**{% **url 'students:delete' student**.**s\_name** %}**"**>삭제</**a**>  
 <**a href="**{% **url 'students:listAll'** %}**"**>목록</**a**>  
 <**a href="**{% **url 'students:register'** %}**"**>등록</**a**>  
 </**td**></**tr**>  
 {% **else** %}  
 <**tr**><**td colspan="2"**>데이터가 없습니다</**td**> </**tr**>  
 {% **endif** %}  
 </**table**>  
 <**br**>  
 <**button onclick="*location***.**href**=**'**{% **url 'students:listAll'** %}**'"**>학생목록</**button**>  
</**body**>  
</**html**>

* + 1. students/templates/students/modifyStudent.html

<!DOCTYPE **html**>  
<**html lang="en"**>  
<**head**>  
 <**meta charset="UTF-8"**>  
 <**title**>학생 상세</**title**>  
 <**style**>**td**, **th** {**padding**:5**px**;}</**style**>  
</**head**>  
<**body**>  
 <**h2**>Modify Studetnts</**h2**>  
 <**form action="**{% **url 'students:modifyCon'** %}**" method="post"**>  
 <**table**>  
 {% **csrf\_token** %}  
 <**tr**><**th**>이름</**th**><**td**><**input type="text" name="name" value="**{{ **student**.**s\_name** }}**" readonly**></**td**></**tr**>  
 <**tr**><**th**>전공</**th**><**td**><**input type="text" name="major" value="**{{ **student**.**s\_major** }}**"**></**td**></**tr**>  
 <**tr**><**th**>나이</**th**><**td**><**input type="number" name="age" value="**{{ **student**.**s\_age** }}**"**></**td**></**tr**>  
 <**tr**><**th**>학년</**th**><**td**><**input type="number" name="grade" value="**{{ **student**.**s\_grade** }}**"**></**td**></**tr**>  
 <**tr**><**th**>성별</**th**><**td**><**input type="text" name="gender" value="**{{ **student**.**s\_gender** }}**"**></**td**></**tr**>  
 <**tr**><**td colspan="2"**>  
 <**input type="submit" value="수정"**>  
 <**input type="button" value="삭제" onclick="*location***=**'**{% **url 'students:delete' student**.**s\_name** %}**'"**>  
 <**input type="button" value="목록" onclick="*location***=**'**{% **url 'students:listAll'** %}**'"**>  
 <**input type="button" value="등록" onclick="*location***=**'**{% **url 'students:register'** %}**'"**>  
 </**td**></**tr**>  
 </**table**>  
 </**form**>  
</**body**>  
</**html**>