**Developing a Backend Admin for Learner’s Academy**

**Code**

Main code

package com.manage.school;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class SchoolApplication {

public static void main(String[] args) {

SpringApplication.run(SchoolApplication.class, args);

}

}

Controaler

ParentsCon.jave

**package** com.manage.school.controaler;

**import** org.springframework.stereotype.Controller;

@Controller

**public** **class** ParentsCon {

}

StudentCon.java

package com.manage.school.controaler;

import com.manage.school.models.Parents;

import com.manage.school.models.Student;

import com.manage.school.repository.StudentRepo;

import com.manage.school.services.ParentsSer;

import com.manage.school.services.StudentSer;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Controller;

import org.springframework.ui.Model;

import org.springframework.web.bind.annotation.GetMapping;

import org.springframework.web.bind.annotation.ModelAttribute;

import org.springframework.web.bind.annotation.PathVariable;

import org.springframework.web.bind.annotation.PostMapping;

import javax.servlet.http.HttpSession;

import java.util.List;

@Controller

public class StudentsCon {

@Autowired

private StudentSer studentSer;

@Autowired

private ParentsSer parentsSer;

@Autowired

private StudentRepo studentRepo;

@PostMapping("addStudent")

public String addStudent(@ModelAttribute Student student, @ModelAttribute Parents parent, Model model, HttpSession session){

// System.out.println("type added");

// StudentSer.addStudent(Student);

Parents temp = parentsSer.addParents(parent);

student.setParents(temp);

studentSer.addStudent(student);

model.addAttribute("newParent", new Parents());

model.addAttribute("newStudent", new Student());

session.setAttribute("msg","Student Added Sucessfully...");

return "StudentAdd";

}

@PostMapping("AssignSubjectConform")

public String AssignSubjectConform(@ModelAttribute Student student, Model model){

// System.out.println("type added");

// StudentSer.addStudent(Student);

Student student1=studentRepo.findById(student.getID()).get();

student1.setSubjects(student.getSubjects());

studentSer.addStudent(student1);

List<Student> student2 =studentSer.getStudent();

model.addAttribute("student", student2);

return "Studentshow";

}

@GetMapping("Student")

public String Student(Model model){

model.addAttribute("newParent", new Parents());

model.addAttribute("newStudent", new Student());

return "StudentAdd";

}

@GetMapping("/")

public String Home(Model model){

return "index";

}

@GetMapping("Studentshow")

public String STHome(Model model){

List<Student> student =studentSer.getStudent();

model.addAttribute("student", student);

return "Studentshow";

}

@GetMapping("/Studentshow/edit/{ID}")

public String edit(@PathVariable("ID") long ID, Model m){

Student student = studentSer.getStdByID(ID);

m.addAttribute("student", student);

return "StudentEdit";

}

@PostMapping("Studentshow/edit/UpdateStudent")

public String UpdateStudent(@ModelAttribute Student student, Model model, HttpSession session){

studentSer.addStudent(student);

model.addAttribute("newParent", new Parents());

model.addAttribute("newStudent", new Student());

session.setAttribute("msg","Student Added Sucessfully...");

return "StudentAdd";

}

@GetMapping("/Studentshow/delete/{ID}")

public String deleteStudent(@PathVariable("ID") Long ID, HttpSession session) {

studentSer.deleteByStudentId(ID);

session.setAttribute("msg", "The User ID " + ID + " Deleted Succesfully");

return "redirect:/Studentshow";

}

// @GetMapping("/Studentshow/delete/{ID}")

// public String DeleteStd(@PathVariable("ID") long ID){

//

// }

}

SubjectsCon

package com.manage.school.controaler;

import com.manage.school.models.Student;

import com.manage.school.models.Subjects;

import com.manage.school.services.StudentSer;

import com.manage.school.services.SubjectsSer;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Controller;

import org.springframework.ui.Model;

import org.springframework.web.bind.annotation.GetMapping;

import org.springframework.web.bind.annotation.ModelAttribute;

import org.springframework.web.bind.annotation.PostMapping;

@Controller

public class SubjectsCon {

@Autowired

private SubjectsSer subjectsSer;

@Autowired

private StudentSer studentSer;

@PostMapping("addSubject")

public String addVTypes(@ModelAttribute Subjects subjects, Model model){

// System.out.println("type added");

subjectsSer.addSubjects(subjects);

model.addAttribute("newSubjects", new Subjects());

return "SubjectAdd";

}

@GetMapping("Subjects")

public String Teacher(Model model){

model.addAttribute("newSubjects", new Subjects());

return "SubjectAdd";

}

@GetMapping("AssignSub")

public String AssignSub(Model model) {

model.addAttribute("Studentpre", new Student());

model.addAttribute("AllStudents", studentSer.getStudent());

model.addAttribute("AllSubjects", subjectsSer.getAllSubjects());

return "AssignSub";

}

}

TeacherCon

package com.manage.school.controaler;

import com.manage.school.models.Parents;

import com.manage.school.models.Student;

import com.manage.school.models.Subjects;

import com.manage.school.models.Teachers;

import com.manage.school.services.SubjectsSer;

import com.manage.school.services.TeachersSer;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Controller;

import org.springframework.ui.Model;

import org.springframework.web.bind.annotation.GetMapping;

import org.springframework.web.bind.annotation.ModelAttribute;

import org.springframework.web.bind.annotation.PathVariable;

import org.springframework.web.bind.annotation.PostMapping;

import javax.servlet.http.HttpSession;

import java.util.List;

@Controller

public class TeachersCon {

@Autowired

private TeachersSer teachersSer;

@Autowired

private SubjectsSer subjectsSer;

@PostMapping("addTeacher")

public String addVTypes(@ModelAttribute Teachers teachers,@ModelAttribute Subjects subjects, Model model){

//

teachers.setSubjects(subjects);

teachersSer.addTeacher(teachers);

model.addAttribute("Subjects", subjectsSer.getAllSubjects());

model.addAttribute("newTeacher", new Teachers());

model.addAttribute("newSubject", new Subjects());

return "TeachersAdd";

}

@GetMapping("Teachers")

public String Teacher(Model model){

model.addAttribute("Subjects", subjectsSer.getAllSubjects());

model.addAttribute("newTeacher", new Teachers());

model.addAttribute("newSubject", new Subjects());

return "TeachersAdd";

}

@GetMapping("Teachersshow")

public String Teachersshow(Model model){

List<Teachers> Teacher =teachersSer.getTeachers();

model.addAttribute("Teacher", Teacher);

return "Teachersshow";

}

@GetMapping("/Teachersshow/edit/{ID}")

public String edit(@PathVariable("ID") long ID, Model m){

Teachers teacher = teachersSer.getteaByID(ID);

m.addAttribute("Teacher", teacher);

return "TeacherEdit";

}

@PostMapping("Teachersshow/edit/UpdateTeacher")

public String UpdateTeacher(@ModelAttribute Teachers teachers, Model model, HttpSession session){

teachersSer.addTeacher(teachers);

model.addAttribute("newParent", new Parents());

model.addAttribute("newStudent", new Student());

session.setAttribute("msg","Student Added Sucessfully...");

return "StudentAdd";

}

}

Moduls

Parents

package com.manage.school.models;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

@Entity

public class Parents {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Long ID;

private String MotherName;

private String FartherName;

private String Address;

private String TP;

public Parents(String motherName, String fartherName, String address, String TP) {

MotherName = motherName;

FartherName = fartherName;

Address = address;

this.TP = TP;

}

public Parents() {

}

public Long getID() {

return ID;

}

public void setID(Long ID) {

this.ID = ID;

}

public String getMotherName() {

return MotherName;

}

public void setMotherName(String motherName) {

MotherName = motherName;

}

public String getFartherName() {

return FartherName;

}

public void setFartherName(String fartherName) {

FartherName = fartherName;

}

public String getAddress() {

return Address;

}

public void setAddress(String address) {

Address = address;

}public String getTP() {

return TP;

}

public void setTP(String TP) {

this.TP = TP; }}

Student.Java

package com.manage.school.models;

import javax.persistence.\*;

import java.util.HashSet;

import java.util.Set;

@Entity

public class Student {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Long ID;

private String Name;

private int Age;

private String Grade;

private String Clz;

private String Address;

private String TP;

private String email;

public Parents getParents() {

return parents;

}

public void setParents(Parents parents) {

this.parents = parents;

}

@OneToOne

@JoinColumn(name = "parent\_id",referencedColumnName = "ID")

private Parents parents;

public Set<Subjects> getSubjects() {

return subjects;

}

public void setSubjects(Set<Subjects> subjects) {

this.subjects = subjects;

}

@ManyToMany

@JoinTable(

name = "Student\_Subject",

joinColumns = @JoinColumn(name = "Student\_ID"),

inverseJoinColumns = @JoinColumn(name = "Subject\_ID")

)

private Set<Subjects> subjects = new HashSet<>();

public Student() {

}

public Student(String Name, int Age,String Grade,String Clz,String Address,String TP,String email,Parents parents) {

this.Name = Name;

this.Age = Age;

this.Grade= Grade;

this.Clz =Clz;

this.Address =Address;

this.TP =TP;

this.email= email;

this.parents = parents;

}

public Long getID() {

return ID;

}

public void setID(Long ID) {

this.ID = ID;

}

public String getName() {

return Name;

}

public void setName(String name) {

Name = name;

}

public int getAge() {

return Age;

}

public void setAge(int age) {

Age = age;

}

public String getGrade() {

return Grade;

}

public void setGrade(String grade) {

Grade = grade;

}

public String getClz() {

return Clz;

}

public void setClz(String clz) {

Clz = clz;

}

public String getAddress() {

return Address;

}

public void setAddress(String address) {

Address = address;

}

public String getTP() {

return TP;

}

public void setTP(String TP) {

this.TP = TP;

}

public String getEmail() {

return email;

}

public void setEmail(String email) {

this.email = email;

}

}

Student.Java

package com.manage.school.models;

import java.util.HashSet;

import java.util.Set;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

import javax.persistence.OneToMany;

@Entity

public class Subjects {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Long ID;

private String SubName;

private String Chapters;

@OneToMany(mappedBy = "subjects")

private Set<Teachers>teachers = new HashSet<>();

public String getChapters() {

return Chapters;

}

public void setChapters(String chapters) {

Chapters = chapters;

}

public Subjects(String subName) {

SubName = subName;

}

public Subjects() {

}

public Long getID() {

return ID;

}

public void setID(Long ID) {

this.ID = ID;

}

public String getSubName() {

return SubName;

}

public void setSubName(String subName) {

SubName = subName;

}

}

Teacher.java

**package** com.manage.school.models;

**import** javax.persistence.CascadeType;

**import** javax.persistence.Entity;

**import** javax.persistence.GeneratedValue;

**import** javax.persistence.GenerationType;

**import** javax.persistence.Id;

**import** javax.persistence.JoinColumn;

**import** javax.persistence.ManyToOne;

@Entity

**public** **class** Teachers {

**public** Subjects getSubjects() {

**return** subjects;

}

**public** **void** setSubjects(Subjects subjects) {

**this**.subjects = subjects;

}

@Id

@GeneratedValue(strategy = GenerationType.***IDENTITY***)

**private** Long ID;

**private** String Name;

**private** **int** Age;

**private** String Address;

**private** String TP;

**private** String email;

@ManyToOne(cascade = CascadeType.***ALL***)

@JoinColumn(name="subject\_id", referencedColumnName = "id")

**private** Subjects subjects;

**public** Teachers(String name, **int** age, String address, String TP, String email) {

Name = name;

Age = age;

Address = address;

**this**.TP = TP;

**this**.email = email;

}

**public** Teachers() {

}

**public** Long getID() {

**return** ID;

}

**public** **void** setID(Long ID) {

**this**.ID = ID;

}

**public** String getName() {

**return** Name;

}

**public** **void** setName(String name) {

Name = name;

}

**public** **int** getAge() {

**return** Age;

}

**public** **void** setAge(**int** age) {

Age = age;

}

**public** String getAddress() {

**return** Address;

}

**public** **void** setAddress(String address) {

Address = address;

}

**public** String getTP() {

**return** TP;

}

**public** **void** setTP(String TP) {

**this**.TP = TP;

}

**public** String getEmail() {

**return** email;

}

**public** **void** setEmail(String email) {

**this**.email = email;

}

}

Repository

Parents

package com.manage.school.repository;

import com.manage.school.models.Parents;

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.stereotype.Repository;

@Repository

public interface ParentsRepo extends JpaRepository<Parents,Long> {

}

Student

package com.manage.school.repository;

import com.manage.school.models.Student;

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.stereotype.Repository;

@Repository

public interface StudentRepo extends JpaRepository<Student,Long> } }

SubjectRepo.java

package com.manage.school.repository;

import com.manage.school.models.Subjects;

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.stereotype.Repository;

@Repository

public interface SubjectsRepo extends JpaRepository<Subjects,Long> {

}

Teacher.Repo

package com.manage.school.repository;

import com.manage.school.models.Teachers;

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.stereotype.Repository;

@Repository

public interface TeachersRepo extends JpaRepository<Teachers,Long> {

}

Services

Parents

package com.manage.school.services;

import com.manage.school.models.Parents;

import com.manage.school.repository.ParentsRepo;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

@Service

public class ParentsSer {

@Autowired

private ParentsRepo parentsRepo;

public Parents addParents(Parents parents){

return parentsRepo.save(parents);

}

}

StudentSer

package com.manage.school.services;

import java.util.List;

import java.util.Optional;

import com.manage.school.models.Student;

import com.manage.school.repository.StudentRepo;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

@Service

public class StudentSer {

@Autowired

private StudentRepo studentRepo;

public Student addStudent(Student student){

return studentRepo.save(student);

}

public List<Student> getStudent(){

return studentRepo.findAll();

}

public Student getStdByID(long ID){

Optional<Student> model=studentRepo.findById(ID);

if (model.isPresent())

{

return model.get();

}

return null;

}

public void deleteByStudentId(Long ID) { studentRepo.deleteById(ID); }

}

SubjectSer.java

package com.manage.school.services;

import com.manage.school.models.Subjects;

import com.manage.school.repository.SubjectsRepo;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

import java.util.List;

@Service

public class SubjectsSer {

@Autowired

private SubjectsRepo subjectsRepo;

public Subjects addSubjects(Subjects subjects) {return subjectsRepo.save(subjects);

}

public List<Subjects> getAllSubjects(){

return subjectsRepo.findAll();

}

}

Teachers

package com.manage.school.services;

import com.manage.school.models.Teachers;

import com.manage.school.repository.TeachersRepo;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

import java.util.List;

import java.util.Optional;

@Service

public class TeachersSer {

@Autowired

private TeachersRepo teacherRepo;

public Teachers addTeacher(Teachers teachers){

return teacherRepo.save(teachers);

}

public List<Teachers> getTeachers(){

return teacherRepo.findAll();

}

public Teachers getteaByID(long ID) {

Optional<Teachers> model=teacherRepo.findById(ID);

if (model.isPresent())

{

return model.get();

}

return null;

}

}