Online Quiz Portal

Bean

Admin.java

```
package com.bean;
import javax.persistence.Entity;
import javax.persistence.Id;
import javax.persistence.Table;
import org.springframework.stereotype.Component;

@Component
@Entity
@Table(name="admin")
public class Admin {

	@Id
	private int id;
	private String username;
	private String password;
	@Override
	public String toString() {
		return "Admin [id=" + id + ", username=" + username + ", password=" + password + "]";
	}
	public int getId() {
		return id;
	}
	public void setId(int id) {
		this.id = id;
```

```
	}
	public String getUsername() {
		return username;
	}
	public void setUsername(String username) {
		this.username = username;
	}
	public String getPassword() {
		return password;
	}
	public void setPassword(String password) {
		this.password = password;
	}
}
```

Questions.java

```
package com.bean;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.GenerationType;
import javax.persistence.Id;
import javax.persistence.Table;
import org.springframework.stereotype.Component;
@Component
@Entity
@Table(name="question")
```

```
public class Question  {
	@Id
	@GeneratedValue(strategy = GenerationType.IDENTITY)
	private int qid;
	private String quest;
	private String opt1;
	private String opt2;
	private String opt3;
	private String opt4;
	private int ans;

	public int getQid() {
		return qid;
	}

	public void setQid(int qid) {
		this.qid = qid;
	}

	public String getQuest() {
		return quest;
	}

	public void setQuest(String quest) {
		this.quest = quest;
	}
```

```
public String getOpt1() {
	return opt1;
}

public void setOpt1(String opt1) {
	this.opt1 = opt1;
}

public String getOpt2() {
	return opt2;
}

public void setOpt2(String opt2) {
	this.opt2 = opt2;
}

public String getOpt3() {
	return opt3;
}

public void setOpt3(String opt3) {
	this.opt3 = opt3;
}

public String getOpt4() {
	return opt4;
}
```

```
	public void setOpt4(String opt4) {
		this.opt4 = opt4;
	}

	public int getAns() {
		return ans;
	}

	public void setAns(int ans) {
		this.ans = ans;
	}

	@Override
	public String toString() {
		return "Question [qid=" + qid + ", quest=" + quest + ", opt1=" +
opt1 + ", opt2=" + opt2 + ", opt3=" + opt3
				+ ", opt4=" + opt4 + ", ans=" + ans + "]";
	}
}
```

Quiz.java

```
package com.bean;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.GenerationType;
import javax.persistence.Id;
import javax.persistence.JoinColumn;
```

```
import javax.persistence.ManyToOne;
import javax.persistence.Table;
import org.springframework.stereotype.Component;
@Component
@Entity
@Table(name="quiz")
public class Quiz {

	@Id
	@GeneratedValue(strategy = GenerationType.IDENTITY)
	private int quid;
	private String title;
	private int quizno;
	private String subject;
	@ManyToOne
	@JoinColumn(referencedColumnName = "qid")
	private Question qid;
	public int getQuizno() {
		return quizno;
	}
	public void setQuizno(int quizno) {
		this.quizno = quizno;
	}
	public int getQuid() {
		return quid;
	}
	public void setQuid(int quid) {
```

```
		this.quid = quid;
	}
	public String getTitle() {
		return title;
	}
	public void setTitle(String title) {
		this.title = title;
	}
	public String getSubject() {
		return subject;
	}
	public void setSubject(String subject) {
		this.subject = subject;
	}
	public Question getQid() {
		return qid;
	}
	public void setQid(Question qid) {
		this.qid = qid;
	}
	@Override
	public String toString() {
		return "Quiz [quid=" + quid + ", title=" + title + ", quizno=" +
quizno + ", subject=" + subject + ", qid="
				+ qid + "]";
	}
}
```

Result.java

```
package com.bean;
public class Result implements Comparable<Result>{

	//private int resid;
	private String email;
	private Integer marks;
	public Result()
	{

	}
	public Result(String email2, int mark) {
		// TODO Auto-generated constructor stub]
		this.email=email2;this.marks=mark;
	}
//	public int getResid() {
//		return resid;
//	}
//	public void setResid(int resid) {
//		this.resid = resid;
//	}
	public String getEmail() {
		return email;
	}
	public void setEmail(String email) {
		this.email = email;
```

```
	}
	public Integer getMarks() {
		return marks;
	}
	public void setMarks(Integer marks) {
		this.marks = marks;
	}
	@Override
	public String toString() {
		return "Result [email=" + email + ", marks=" + marks + "]";
	}
	@Override
	public int compareTo(Result r) {
		// TODO Auto-generated method stub
		int comparemarks= r.getMarks();
		return comparemarks-this.marks;
	}
}
```

Statistics.java

```
package com.bean;
import java.util.List;
import org.springframework.stereotype.Component;
@Component
public class Statistics {
```

```
	private int users;
	private List<Object> quiz;
	private int questions;
	@Override
	public String toString() {
		return "Statistics [users=" + users + ", quiz=" + quiz + ",
questions=" + questions + "]";
	}
	public int getUsers() {
		return users;
	}
	public void setUsers(int users) {
		this.users = users;
	}
	public List<Object> getQuiz() {
		return quiz;
	}
	public void setQuiz(List<Object> quiz) {
		this.quiz = quiz;
	}
	public int getQuestions() {
		return questions;
	}
	public void setQuestions(int questions) {
		this.questions = questions;
	}

}
```

Test.java

```
package com.bean;
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;
import javax.persistence.Table;
import org.springframework.stereotype.Component;
@Component
@Entity
@Table(name="test")
public class Test {
	@Id
	@GeneratedValue(strategy = GenerationType.IDENTITY)
	private int tid;
	@ManyToOne
	@JoinColumn(referencedColumnName = "uid")
	private User userid;
	@ManyToOne
	@JoinColumn(referencedColumnName = "quid")
	private Quiz quizid;
	@ManyToOne
	@JoinColumn(referencedColumnName = "qid")
	private Question questionid;
```

```
private int testans;

	public int getTid() {
		return tid;
	}

	public void setTid(int tid) {
		this.tid = tid;
	}

	public User getUserid() {
		return userid;
	}

	public void setUserid(User userid) {
		this.userid = userid;
	}

	public Quiz getQuizid() {
		return quizid;
	}

	public void setQuizid(Quiz quizid) {
		this.quizid = quizid;
	}

	public Question getQuestionid() {
```

```
		return questionid;
	}

	public void setQuestionid(Question questionid) {
		this.questionid = questionid;
	}

	public int getTestans() {
		return testans;
	}

	public void setTestans(int testans) {
		this.testans = testans;
	}

	@Override
	public String toString() {
		return "Test [tid=" + tid + ", userid=" + userid + ", quid=" + quizid
+ ", questionid=" + questionid
				+ ", testans=" + testans + "]";
	}
}
```

User.java

```
package com.bean;

import java.io.Externalizable;

import java.io.IOException;

import java.io.ObjectInput;
```

```
import java.io.ObjectOutput;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.GenerationType;
import javax.persistence.Id;
import javax.persistence.Table;
import javax.persistence.UniqueConstraint;
import org.springframework.stereotype.Component;
@Component
@Entity
@Table(name="user")
public class User implements Externalizable {
	@Id
	@GeneratedValue(strategy = GenerationType.IDENTITY)
	private int uid;
	private String emailid;
	private String password;
	private long phno;
	public int getUid() {
		return uid;
	}
	public void setUid(int uid) {
		this.uid = uid;
	}
	public String getEmailid() {
		return emailid;
	}
```

```
	public void setEmailid(String emailid) {
		this.emailid = emailid;
	}
	public String getPassword() {
		return password;
	}
	public void setPassword(String password) {
		this.password = password;
	}
	public long getPhno() {
		return phno;
	}
	public void setPhno(long phno) {
		this.phno = phno;
	}
	@Override
	public void writeExternal(ObjectOutput out) throws IOException {
		// TODO Auto-generated method stub

	}
	@Override
	public void readExternal(ObjectInput in) throws IOException,
ClassNotFoundException {
		// TODO Auto-generated method stub

	}

}
```

MainController.java

```
package com.controller;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.MediaType;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;
import com.bean.Admin;
import com.bean.Question;
import com.bean.Quiz;
import com.bean.Result;
import com.bean.Statistics;
import com.bean.Test;
import com.bean.User;
import com.service.AdminSer;
import com.service.UserSer;

@RestController
@RequestMapping("mcq")
public class MainController {
	@Autowired
	UserSer us;
	@Autowired
	AdminSer as;
```

```
	//http://localhost:8080/mcq/userLogin
	@PostMapping(value="userLogin", consumes =
MediaType.APPLICATION_JSON_VALUE)
	public String userLogin(@RequestBody User u)
	{
			return us.userLogin(u.getEmailid(), u.getPassword());
	}

	//http://localhost:8080/mcq/userRegister
	@PostMapping(value="userRegister", consumes =
MediaType.APPLICATION_JSON_VALUE)
	public String userRegiter(@RequestBody User u)
	{
		return us.userRegister(u);
	}

	//http://localhost:8080/mcq/adminLogin
	@PostMapping(value="adminLogin", consumes =
MediaType.APPLICATION_JSON_VALUE)
	public String adminLogin(@RequestBody Admin u)
	{
			return as.adminLogin(u);
	}

	//http://localhost:8080/mcq/adminupdate
		@PostMapping(value="adminupdate", consumes =
MediaType.APPLICATION_JSON_VALUE)
		public String adminUpdate(@RequestBody Admin u)
```

```
		{
			return as.adminupdate(u);
		}




	//http://localhost:8080/mcq/addQuestions
	@PostMapping(value="addQuestions", consumes = MediaType.APPLICATION_JSON_VALUE)
	public String addQuestion(@RequestBody Question q)
	{
		return as.addQuestion(q);
	}

	//http://localhost:8080/mcq/addQuiz
	@PostMapping(value="addQuiz", consumes = MediaType.APPLICATION_JSON_VALUE)
	public String addQuiz(@RequestBody Quiz q)
	{
		return as.addQuiz(q);
	}

	//http://localhost:8080/mcq/viewAllQuiz
		@GetMapping(value="viewAllQuiz", produces= MediaType.APPLICATION_JSON_VALUE)
		public List<Quiz> viewAllQuiz()
		{
```

```
                return as.viewAllQuiz();
        }

        //http://localhost:8080/mcq/quizinfo
        @GetMapping(value="quizinfo", produces=
MediaType.APPLICATION_JSON_VALUE)
        public Statistics quizinfo()
        {
                return as.quizInfo();
        }

        //http://localhost:8080/mcq/viewQuiz
                @GetMapping(value="viewQuiz", produces=
MediaType.APPLICATION_JSON_VALUE)
                public List<Object> viewQuiz()
                {
                        return us.viewAllQuiz();
                }

                //http://localhost:8080/mcq/takeTest
                @PostMapping(value="takeTest", consumes =
MediaType.APPLICATION_JSON_VALUE)
                public String takeTest(@RequestBody Test t)
                {
                        return us.takeTest(t);
                }
```

```
		//http://localhost:8080/mcq/getAllTest
		@GetMapping(value="getAllTest", produces=
MediaType.APPLICATION_JSON_VALUE)
		public List<Test> getAllTest()
		{
			return us.getTestList();
		}

		//http://localhost:8080/mcq/getresult
		@GetMapping(value="getresult", produces=
MediaType.APPLICATION_JSON_VALUE)
		public List<Result> getresult()
		{
			return us.result();
		}

		//http://localhost:8080/mcq/getAdminResult
		@GetMapping(value="getAdminResult", produces=
MediaType.APPLICATION_JSON_VALUE)
		public List<Result> getAdminResult()
		{
			return us.result();
		}

}
```

OnineQuizportalRestApplication.java

```
package com.demo;
import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
import org.springframework.boot.autoconfigure.domain.EntityScan;
import org.springframework.data.jpa.repository.config.EnableJpaRepositories;
@SpringBootApplication(scanBasePackages = "com")
@EntityScan("com.bean")
@EnableJpaRepositories("com.repository")
public class OnlineQuizPortalRestApplication {

	public static void main(String[] args) {
		SpringApplication.run(OnlineQuizPortalRestApplication.class,
args);
	}

}
```

Repository

AdminRepo.java

```
package com.repository;

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

import com.bean.Admin;

public interface AdminRepo extends JpaRepository<Admin, Integer> {
```

```
}
```

QuestionRepo.java

```
package com.repository;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;
import com.bean.Question;
@Repository
public interface Questionrepo extends JpaRepository<Question, Integer> {

}
```

QuizRepo.java

```
package com.repository;
import java.util.List;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.data.jpa.repository.Query;
import org.springframework.stereotype.Repository;
import com.bean.Quiz;
@Repository
public interface Quizrepo extends JpaRepository<Quiz, Integer>{

	@Query("select q.title,count(distinct q.quizno) from Quiz as q group by q.quizno")
	public List<Object> listOfQuiz();
```

```
//	@Query("select q.title,count(distinct q.quiz from Quiz as q group by q.quizno")
//	public List<Object> viewAllQuiz();
}
```

Testrepo.java

```
package com.repository;
import java.util.List;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.data.jpa.repository.Query;
import com.bean.Test;
public interface Testrepo extends JpaRepository<Test, Integer>{

	@Query("Select t from Test as t group by t.userid")
	List<Test> getIndividual();

}
```

Userrepo.java

```
package com.repository;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;
import com.bean.User;
@Repository
public interface Userrepo extends JpaRepository<User, Integer>{

	 public User findByEmailid(String emailid);
```

}

Service

AdminService.java

```
package com.service;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
import com.bean.Admin;
import com.bean.Question;
import com.bean.Quiz;
import com.bean.Result;
import com.bean.Statistics;
import com.bean.User;
import com.repository.AdminRepo;
import com.repository.Questionrepo;
import com.repository.Quizrepo;
import com.repository.Userrepo;
@Service
public class AdminSer {
	@Autowired
	Questionrepo qr;
	@Autowired
	Quizrepo qur;
	@Autowired
	Userrepo ur;
```

```
	@Autowired
	Statistics stat;
	@Autowired
	AdminRepo adr;
	public String adminLogin(Admin u)
	{
		Admin ad= adr.findById(1).get();

	if(u.getUsername().equals(ad.getUsername())&&u.getPassword().equals(
ad.getPassword()))
		{
			return "Welcome admin";
		}
		else
		{
			return "invalid Credentials";
		}
	}
	public String adminupdate(Admin a)
	{
		Admin ad= adr.findById(1).get();
		ad.setUsername(a.getUsername());
		ad.setPassword(a.getUsername());
		adr.saveAndFlush(ad);
			return "Updated";
	}

	public String addQuestion(Question q)
```

```
{
        if(q!=null)
        {
                qr.save(q);
                return "question added";
        }
        else
        {
                return "failed to add";
        }

}

public String addQuiz(Quiz q)
{

        if(q!=null)
        {
                qur.save(q);
                return "quiz added";
        }
        else
        {
                return "failed to add";
        }
}
```

```
	public List<Quiz> viewAllQuiz()
	{
		return qur.findAll();
	}

	public Statistics quizInfo()
	{
		stat.setUsers(ur.findAll().size());
		stat.setQuestions(qr.findAll().size());
		stat.setQuiz(qur.listOfQuiz());

		return stat;

	}



}
```

UserService.java

```
package com.service;
import java.util.ArrayList;
import java.util.Collections;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
```

```
import com.bean.Result;
import com.bean.Test;
import com.bean.User;
import com.repository.Quizrepo;
//import com.repository.Resultrepo;
import com.repository.Testrepo;
import com.repository.Userrepo;

@Service
public class UserSer {


	List<Result> finalList=new ArrayList<>();
	@Autowired
	Userrepo ur;
	@Autowired
	Quizrepo qr;
	@Autowired
	Testrepo tr;
	@Autowired
//	Resultrepo resrepo;
//	@Autowired
	User u;
	@Autowired
	Test t;

	Result r= new Result();
```

```
public String userLogin(String email,String password)
{
	u=ur.findByEmailid(email);
	if(u!=null)
	{



if(u.getEmailid().equals(email)&&u.getPassword().equals(password))
	{
		return "login sucessfull";
	}
	else
	{
		return "invalid credentials";
	}



}
else
{
	return "User not found";
}


}
```

```
public String userRegister(User u)
{
	if(ur.findByEmailid(u.getEmailid())==null)
	{
		ur.save(u);
		return "registered";
	}
	else
	{
		return "User already exists";
	}
}

public List<Object> viewAllQuiz()
{
	return qr.listOfQuiz();
}

public String takeTest(Test t)
{
	if(t!=null)
	{
		tr.save(t);
		return "submitted";
	}
```

```
        else
        {
                return "submission failed";
        }

}

public List<Test> getTestList()
{
        return tr.findAll();
}

public List<Result> result()
{
        String email="";
        int mark=0;
        List<Test> obj=tr.findAll();
        List<User> u= ur.findAll();
        for (User user : u) {
                mark=0;
                email=user.getEmailid();
                System.out.println(user.getEmailid());

                for(Test ob :obj)
                {
                        if(user.getUid()==ob.getUserid().getUid())
                        {
```

```
        if(ob.getTestans()==ob.getQuestionid().getAns())
                                        {
                                                mark++;
                                        }
                                        System.out.println("inside"+mark);

                                }
                        }
                        System.out.println("outside"+mark);
                finalList.add(new Result(email,mark));
                        }
                System.out.println("final :"+mark);

                Collections.sort(finalList);

                return finalList;

        }
}
```

Application.proprties

```
Spring.application.name=Online_Quiz
spring.jpa.hibernate.ddl-auto=update
spring.datasource.url=jdbc:mysql://localhost:3306/MCQ
spring.datasource.username=root
spring.datasource.password=root
```

spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver

spring.jpa.show-sql: true

spring.jpa.properties.hibernate.format_sql=true

logging.level.org.hibernate.SQL=DEBUG

logging.level.org.hibernate.type=TRACE

Pom.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
	xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">
	<modelVersion>4.0.0</modelVersion>
	<parent>
		<groupId>org.springframework.boot</groupId>
		<artifactId>spring-boot-starter-parent</artifactId>
		<version>2.6.11</version>
		<relativePath/> <!-- lookup parent from repository -->
	</parent>
	<groupId>com</groupId>
	<artifactId>OnlineQuizPortal-REST</artifactId>
	<version>0.0.1-SNAPSHOT</version>
	<name>OnlineQuizPortal-REST</name>
	<description>Demo project for Spring Boot with rest</description>
	<properties>
		<java.version>11</java.version>
	</properties>
	<dependencies>
```

```
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-data-jpa</artifactId>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-web</artifactId>
        </dependency>

        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-devtools</artifactId>
            <scope>runtime</scope>
            <optional>true</optional>
        </dependency>
        <dependency>
            <groupId>mysql</groupId>
            <artifactId>mysql-connector-java</artifactId>
            <scope>runtime</scope>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-test</artifactId>
            <scope>test</scope>
        </dependency>
    </dependencies>
```

```
    <build>
        <plugins>
            <plugin>
                <groupId>org.springframework.boot</groupId>
                <artifactId>spring-boot-maven-plugin</artifactId>
            </plugin>
        </plugins>
    </build>

</project>
```