**Source Code**

**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;

}

}

**Question.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;

}

}

**Statictics.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:8081/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();

}

}

**OnlineQuizPortalRestApplication.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);

}

}