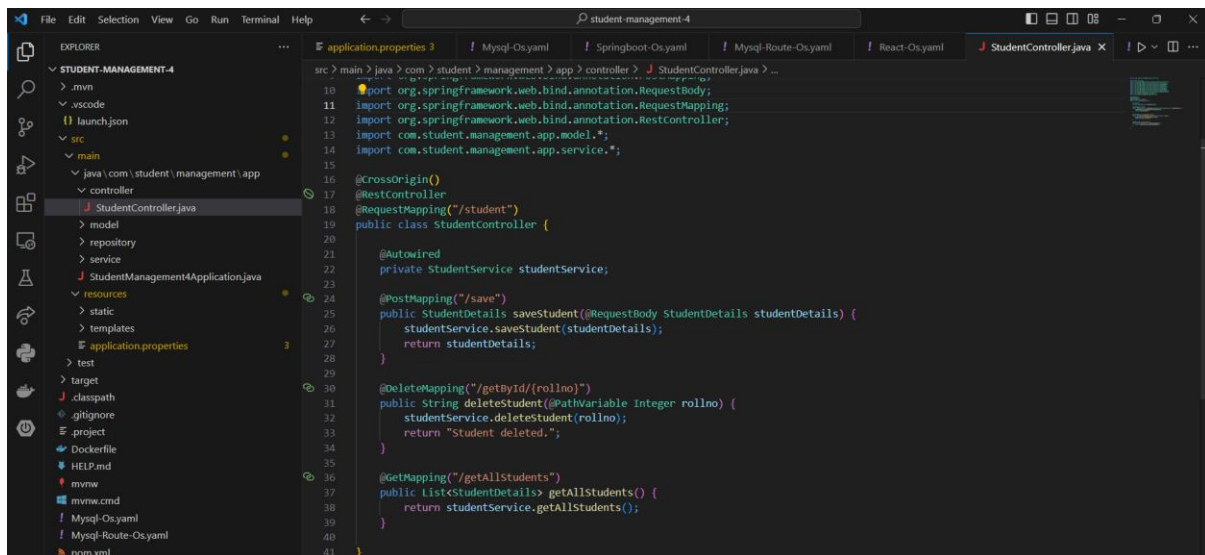


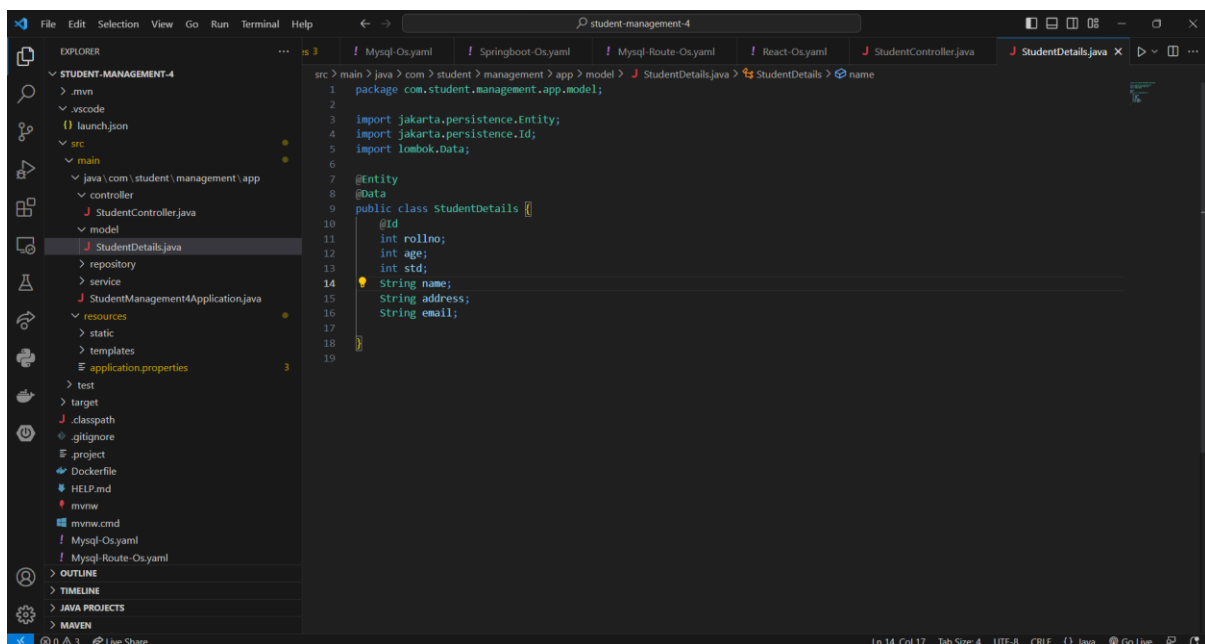
Name : Madhavi Suratkar

Topic : Openshift project Deployment

Date : 14-05-2023



```
src > main > java > com > student > management > app > controller > StudentController.java > ...
10 import org.springframework.web.bind.annotation.RequestBody;
11 import org.springframework.web.bind.annotation.RequestMapping;
12 import org.springframework.web.bind.annotation.RestController;
13 import com.student.management.app.model.*;
14 import com.student.management.app.service.*;
15
16 @CrossOrigin()
17 @RestController
18 @RequestMapping("/student")
19 public class StudentController {
20
21     @Autowired
22     private StudentService studentService;
23
24     @PostMapping("/save")
25     public StudentDetails saveStudent(@RequestBody StudentDetails studentDetails) {
26         studentService.saveStudent(studentDetails);
27         return studentDetails;
28     }
29
30     @DeleteMapping("/getId/{rollno}")
31     public String deleteStudent(@PathVariable Integer rollno) {
32         studentService.deleteStudent(rollno);
33         return "Student deleted.";
34     }
35
36     @GetMapping("/getAllStudents")
37     public List<StudentDetails> getAllStudents() {
38         return studentService.getAllStudents();
39     }
40
41 }
```



```
src > main > java > com > student > management > app > model > StudentDetails.java > StudentDetails > name
1 package com.student.management.app.model;
2
3 import jakarta.persistence.Entity;
4 import jakarta.persistence.Id;
5 import lombok.Data;
6
7 @Entity
8 @Data
9 public class StudentDetails {
10
11     @Id
12     int rollno;
13     int age;
14     int std;
15     String name;
16     String address;
17     String email;
18
19 }
```

Visual Studio Code

```
src > main > java > com > student > management > app > repository > StudentRepository.java / ...
1 package com.student.management.app.repository;
2
3 import org.springframework.data.jpa.repository.JpaRepository;
4 // import org.springframework.stereotype.Repository;
5
6 import com.student.management.app.model.*;
7
8 // @Repository
9 public interface StudentRepository extends JpaRepository<StudentDetails, Integer> {
10
11 }
12
```

STUDENT-MANAGEMENT-4

- > mvnw
- > vscode
- () launch.json
- > src
 - > main
 - > java\com\student\management\app
 - > controller
 - StudentController.java
 - > model
 - StudentDetails.java
 - > repository
 - StudentRepository.java
 - > service
 - StudentManagement4Application.java
 - > resources
 - > static
 - > templates
 - application.properties
 - > test
 - > target
 - .classpath
 - .gitignore
 - .project
 - Dockerfile
 - HELP.md
 - mvnw
 - mvnw.cmd
 - Mysql-Os.yaml
 - > OUTLINE
 - > TIMELINE
 - > JAVA PROJECTS

```
src > main > java > com > student > management > app > service > StudentService.java > StudentService
1 package com.student.management.app.service;
2
3 import java.util.List;
4 import com.student.management.app.model.*;
5
6 public interface StudentService {
7     public StudentDetails saveStudent(StudentDetails studentDetails);
8     public String deleteStudent(Integer id);
9     public List<StudentDetails> getAllStudents();
10 }
11
```

STUDENT-MANAGEMENT-4

- > mvnw
- > vscode
- () launch.json
- > src
 - > main
 - > java\com\student\management\app
 - > controller
 - StudentController.java
 - > model
 - StudentDetails.java
 - > repository
 - StudentRepository.java
 - > service
 - StudentService.java
 - StudentServiceImpl.java
 - StudentManagement4Application.java
 - > resources
 - > static
 - > templates
 - application.properties
 - > test
 - > target
 - .classpath
 - .gitignore
 - .project
 - Dockerfile
 - HELP.md
 - mvnw
 - mvnw.cmd
 - Mysql-Os.yaml
 - > OUTLINE
 - > TIMELINE
 - > JAVA PROJECTS

```
STUDENT-MANAGEMENT-4
> .mvn
> .vscode
() launch.json
src
  main
    java\com\student\management\app
      controller
        StudentController.java
      model
        StudentDetails.java
      repository
        StudentRepository.java
      service
        StudentService.java
        StudentServiceImpl.java
        StudentManagement4Application.java
      resources
      static
      templates
      application.properties
    test
    target
    .classpath
    .gitignore
    .project
    Dockerfile
    HELP.md
    mvnw
OUTLINE
TIMELINE
JAVA PROJECTS
MAVEN

src > main > java > com > student > management > app > service > StudentServiceImpl.java > Language Support for Java(TM) by Red Hat > StudentServiceImpl > deleteStudent(Integer)
1 package com.student.management.app.service;
2
3 import java.util.List;
4
5 import org.springframework.beans.factory.annotation.Autowired;
6 import org.springframework.stereotype.Service;
7 import com.student.management.app.model.*;
8 import com.student.management.app.repository.*;
9
10 @Service
11 public class StudentServiceImpl implements StudentService {
12
13     @Autowired
14     private StudentRepository studentRepository;
15
16     @Override
17     public StudentDetails saveStudent(StudentDetails studentDetails) {
18         studentRepository.save(studentDetails);
19         return studentDetails;
20     }
21
22     @Override
23     public String deleteStudent(Integer id) {
24         studentRepository.deleteById(id);
25         return "Student deleted.";
26     }
27
28     @Override
29     public List<StudentDetails> getAllStudents() {
30         return studentRepository.findAll();
31     }
32
33 }
34
```

```
STUDENT-MANAGEMENT-4
> .mvn
> .vscode
() launch.json
src
  main
    java\com\student\management\app
      controller
        StudentController.java
      model
        StudentDetails.java
      repository
        StudentRepository.java
      service
        StudentService.java
        StudentServiceImpl.java
        StudentManagement4Application.java
      resources
      static
      templates
      application.properties
    test
    target
    .classpath
    .gitignore
    .project
    Dockerfile
    HELP.md
    mvnw
OUTLINE
TIMELINE
JAVA PROJECTS
MAVEN

src > main > java > com > student > management > app > StudentManagement4Application.java > ...
1 package com.student.management.app;
2
3 import org.springframework.boot.SpringApplication;
4 import org.springframework.boot.autoconfigure.SpringBootApplication;
5
6 @SpringBootApplication
7 public class StudentManagement4Application {
8
9     Run | Debug
10     public static void main(String[] args) {
11         SpringApplication.run(primarySource:StudentManagement4Application.class, args);
12     }
13
14 }
```

```
STUDENT-MANAGEMENT-4
  StudentDetails.java
  repository
    StudentRepository.java
  service
    StudentService.java
    StudentServiceImpl.java
  StudentManagement4Application.java
  resources
  static
  templates
  application.properties
  test
  target
  .classpath
  .gitignore
  .project
  Dockerfile
  HELP.md
  mvnw
  mvnw.cmd
  ! Mysql-Os.yaml
  ! Mysql-Route-Os.yaml
  pom.xml
  ! React-Os.yaml
  ! React-Route-Os.yaml
  ! Springboot-Os.yaml
  ! Springboot-Route-Os.yaml
OUTLINE
TIMELINE
JAVA PROJECTS
MAVEN

! Mysql-Os.yaml
3
4 apiVersion: apps/v1
5 kind: Deployment
6 metadata:
7   name: mysql
8   labels:
9     app: mysql
10 spec:
11   replicas: 1
12   selector:
13     matchLabels:
14       app: mysql
15   template:
16     metadata:
17       labels:
18         app: mysql
19     spec:
20       containers:
21         - name: mysql
22           image: mysql
23           ports:
24             - containerPort: 3306
25           volumeMounts:
26             - name: mysql-volume
27               mountPath: /var/lib/mysql
28           env:
29             - name: MYSQL_DATABASE
30               value: studentdb
31             - name: MYSQL_PASSWORD
32               value: "madhavi"
33             - name: MYSQL_ROOT_PASSWORD
34               value: "madhavi"
35       volumes:
36         - name: mysql-volume
37
38 ---
39
```

```
STUDENT-MANAGEMENT-4
  StudentDetails.java
  repository
    StudentRepository.java
  service
    StudentService.java
    StudentServiceImpl.java
  StudentManagement4Application.java
  resources
  static
  templates
  application.properties
  test
  target
  .classpath
  .gitignore
  .project
  Dockerfile
  HELP.md
  mvnw
  mvnw.cmd
  ! Mysql-Route-Os.yaml
  ! Mysql-Route-Os.yaml
  pom.xml
  ! React-Os.yaml
  ! React-Route-Os.yaml
  ! Springboot-Os.yaml
  ! Springboot-Route-Os.yaml
  OUTLINE
  TIMELINE
  JAVA PROJECTS
  MAVEN

! React-Os.yaml
5 kind: Deployment
6 metadata:
7   name: react-app
8   labels:
9     app: react-app
10 spec:
11   replicas: 1
12   selector:
13     matchLabels:
14       app: react-app
15   template:
16     metadata:
17       labels:
18         app: react-app
19     spec:
20       containers:
21         - name: react-app
22           image: /student-web-app-react-v2
23           ports:
24             - containerPort: 3000
25           env:
26             - name: REACT_APP_API_URL
27               value: http://spring-app-service-saurabh7nt-dev.apps.sandbox-m2.119k.p1.openshiftapps.com/student
28 ---
29 #service file
30
31 apiVersion: v1
32 kind: Service
33 metadata:
34   name: react-app-service
35 spec:
36   selector:
37     app: react-app
38   ports:
39     - name: http
40       port: 80
```

```
STUDENT-MANAGEMENT-4
  StudentDetails.java
  repository
    StudentRepository.java
  service
    StudentService.java
    StudentServiceImpl.java
  StudentManagement4Application.java
  resources
  static
  templates
  application.properties
  test
  target
  .classpath
  .gitignore
  .project
  Dockerfile
  HELP.md
  mvnw
  mvnw.cmd
  ! Mysql-Route-Os.yaml
  ! Mysql-Route-Os.yaml
  pom.xml
  ! React-Os.yaml
  ! React-Route-Os.yaml
  ! Springboot-Os.yaml
  ! Springboot-Route-Os.yaml
  OUTLINE
  TIMELINE
  JAVA PROJECTS
  MAVEN

! Springboot-Os.yaml
4 apiVersion: apps/v1
5 kind: Deployment
6 metadata:
7   name: spring-app
8 spec:
9   replicas: 1
10  selector:
11    matchLabels:
12      app: spring-app
13  template:
14    metadata:
15      labels:
16        app: spring-app
17    spec:
18      containers:
19        - name: springapp
20          image: saurabh7nt/student-web-app-spring
21          ports:
22            - containerPort: 8081
23          env:
24            - name: MYSQL_HOST
25              value: mysql-db
26            - name: MYSQL_USER
27              value: root
28            - name: MYSQL_PASSWORD
29              value: madhavi
30            - name: MYSQL_PORT
31              value: "3306"
32          volumeMounts:
33            - name: mysql-volume
34              mountPath: /var/lib/mysql
35      volumes:
36        - name: mysql-volume
37 ---
```

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' pane displays a tree view of databases, including 'student' and 'student_details'. The main query editor contains the following SQL code:

```

56 show databases;
57
58 use studentdb;
59
60 desc student_details;
61

```

The 'Result Grid' shows the output of the query. It contains a table with the following structure:

Field	Type	Null	Key	Default	Extra
rollno	int	NO	PK		
address	varchar(255)	YES			
age	int	NO			
email	varchar(255)	YES			
name	varchar(255)	YES			
std	int	NO			

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
1	17:55:01	desc student_details	Error Code: 1046. No database selected Select the default DB to be used ...	0.016 sec
2	17:55:18	use studentdb	0 row(s) affected	0.015 sec
3	17:55:25	desc student_details	6 row(s) returned	0.031 sec / 0.000 sec

On the right, a sidebar shows a 'Find' search bar and a 'Share' button. A message states: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.'

The screenshot shows the VS Code interface. The 'EXPLORER' pane on the left displays a project structure for 'STUDENT-MANAGEMENT-4'. The main editor shows a 'Springboot-Route-Os.yaml' file with the following content:

```

1 apiVersion: route.openshift.io/v1
2 kind: Route
3 metadata:
4   name: spring-app-route
5 spec:
6   to:
7     kind: Service
8     name: spring-app-service
9   port:
10     targetPort: http
11   tls:
12     termination: edge

```

The 'TERMINAL' pane at the bottom shows the output of a command:

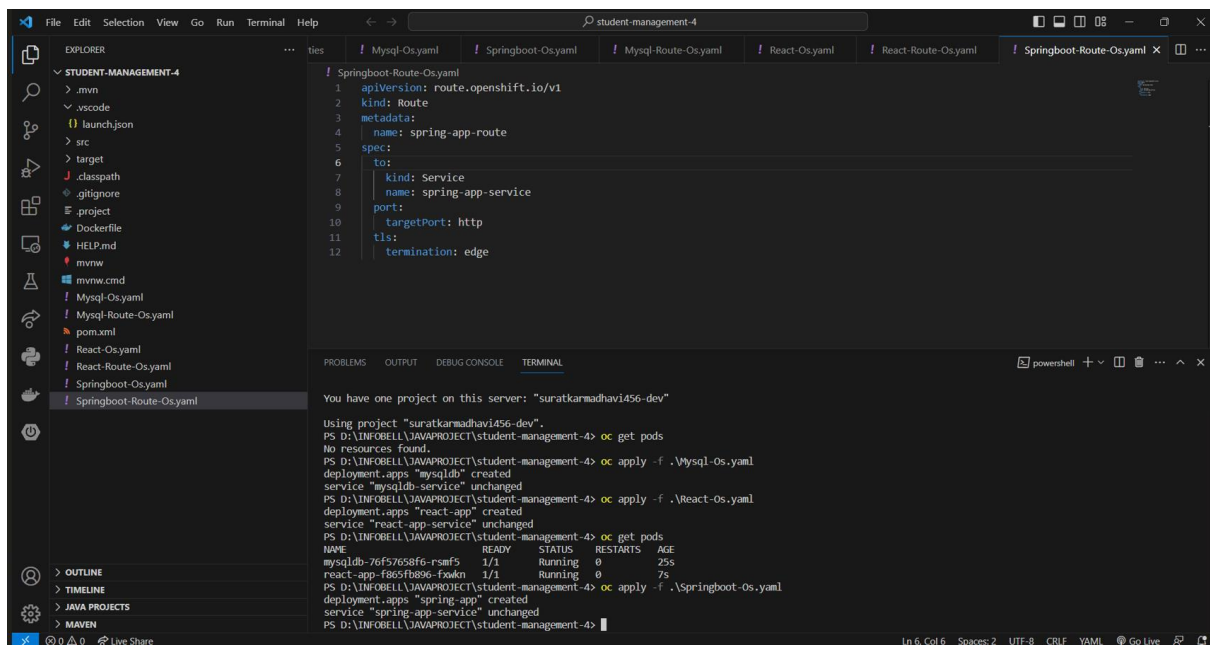
```

PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc login --token=sha256-PPDGeTywqARdgcH2gXW6Eyp8on5EFKXUg9AuiCdM1 --server=https://api.sandbox-m3.1538.p1.openshiftapps.com:6443
Logged into "https://api.sandbox-m3.1538.p1.openshiftapps.com:6443" as "suratkarmadhavi456" using the token provided.

You have one project on this server: "suratkarmadhavi456-dev"

Using project "suratkarmadhavi456-dev".
PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc get pods
No resources found.
PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc apply -f .\Mysql-Os.yaml
deployment.apps "mysqldb" created
service "mysqldb-service" unchanged
PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc apply -f .\React-Os.yaml
deployment.apps "react-app" created
service "react-app-service" unchanged
PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc get pods
NAME READY STATUS RESTARTS AGE
mysqldb-76f57658f6-rsmf5 1/1 Running 0 25s
react-app-f865fb896-fxwkn 1/1 Running 0 7s
PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc apply -f .\Springboot-Os.yaml

```



```
1 apiVersion: route.openshift.io/v1
2 kind: Route
3 metadata:
4   name: spring-app-route
5 spec:
6   to:
7     kind: Service
8     name: spring-app-service
9   port:
10     targetPort: http
11   tls:
12     termination: edge
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

You have one project on this server: "suratkarnadhi456-dev"

Using project "suratkarnadhi456-dev".

PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc get pods
No resources found.

PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc apply -f .\Mysql-Os.yaml
deployment.apps "mysql-db" created
service "mysql-db-service" unchanged

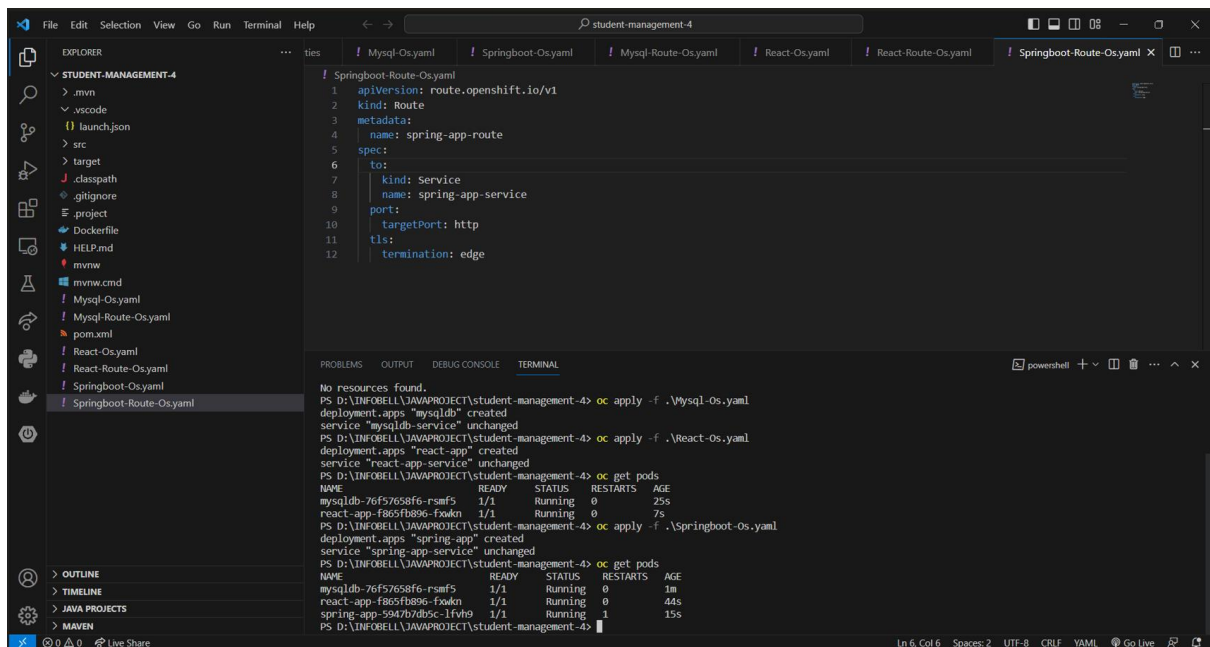
PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc apply -f .\React-Os.yaml
deployment.apps "react-app" created
service "react-app-service" unchanged

PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc get pods

NAME	READY	STATUS	RESTARTS	AGE
mysql-db-76f57658f6-rsmf5	1/1	Running	0	25s
react-app-f865fb896-fxwkn	1/1	Running	0	7s

PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc apply -f .\Springboot-Os.yaml
deployment.apps "spring-app" created
service "spring-app-service" unchanged

PS D:\INFOBELL\JAVAPROJECT\student-management-4>



```
1 apiVersion: route.openshift.io/v1
2 kind: Route
3 metadata:
4   name: spring-app-route
5 spec:
6   to:
7     kind: Service
8     name: spring-app-service
9   port:
10     targetPort: http
11   tls:
12     termination: edge
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

No resources found.

PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc apply -f .\Mysql-Os.yaml
deployment.apps "mysql-db" created
service "mysql-db-service" unchanged

PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc apply -f .\React-Os.yaml
deployment.apps "react-app" created
service "react-app-service" unchanged

PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc get pods

NAME	READY	STATUS	RESTARTS	AGE
mysql-db-76f57658f6-rsmf5	1/1	Running	0	25s
react-app-f865fb896-fxwkn	1/1	Running	0	7s

PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc apply -f .\Springboot-Os.yaml
deployment.apps "spring-app" created
service "spring-app-service" unchanged

PS D:\INFOBELL\JAVAPROJECT\student-management-4> oc get pods

NAME	READY	STATUS	RESTARTS	AGE
mysql-db-76f57658f6-rsmf5	1/1	Running	0	1m
react-app-f865fb896-fxwkn	1/1	Running	0	44s
spring-app-594767db5c-llfv9	1/1	Running	1	15s

PS D:\INFOBELL\JAVAPROJECT\student-management-4>

