

Assignment 5

Name : Omkar Deshpande

Roll No : 43212

Batch - Q10

Problem statement -To create simple web service and write any distributed application to consume the web service.

CODE -

```
package net.codejava.ws;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;
import java.util.HashMap;
import java.util.Map;
import java.util.*;

import javax.ws.rs.GET;
import javax.ws.rs.Path;
import javax.ws.rs.PathParam;
import javax.ws.rs.Produces;
import javax.ws.rs.core.Context;
import javax.ws.rs.core.MediaType;
import javax.ws.rs.core.*;

import org.json.JSONArray;
import org.json.JSONObject;

@Path("/student")
public class Student {

    @GET
```

```

@Produces(MediaType.APPLICATION_JSON)
public Response getlist() {

    try{

        List<HashMap<String, String>> obj1 = new ArrayList<HashMap<String, String>>();

        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection con=DriverManager.getConnection(
            "jdbc:mysql://localhost:3306/assignment_login","root","123456");
        //here sonoo is database name, root is username and password
        Statement stmt=con.createStatement();
        ResultSet rs=stmt.executeQuery("select * from students;");
        while(rs.next())
        {

            HashMap<String, String> obj = new HashMap<>();

            obj.put("id", rs.getString(1));
            obj.put("fname", rs.getString(2));
            obj.put("lname", rs.getString(3));
            obj.put("course", rs.getString(4));
            obj1.add(obj);
        }

        con.close();
        System.out.println(obj1);
        return Response
            .status(200)
            .header("Access-Control-Allow-Origin", "")
            .header("Access-Control-Allow-Headers", "origin, content-type, accept, authorization")
            .header("Access-Control-Allow-Credentials", "true")
            .header("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS, HEAD")
            .header("Access-Control-Max-Age", "1209600")
            .entity(obj1)
            .build();
    }
}

```

```
}catch(Exception e){ System.out.println(e);  
JSONArray obj1 = new JSONArray();  
obj1.put(1,"failure");
```

```
}
```

```
List<HashMap<String, String>> obj1 = new ArrayList<HashMap<String, String>>();  
HashMap<String, String> obj = new HashMap<>();  
obj.put("status", "fail");  
obj1.add(obj);
```

```
return Response
```

```
.status(200)  
.header("Access-Control-Allow-Origin", "*")  
.header("Access-Control-Allow-Headers", "origin, content-type, accept, authorization")  
.header("Access-Control-Allow-Credentials", "true")  
.header("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS, HEAD")  
.header("Access-Control-Max-Age", "1209600")  
.entity(obj1)  
.build();
```

```
}
```

```
}
```

OUTPUT -

The screenshot displays the Eclipse IDE interface. The top toolbar includes icons for File, Edit, Navigate, Search, Project, Run, Window, and Help. The Project Explorer on the left shows the project structure for 'HelloREST', including 'JAX-WS Web Services', 'src', 'net.codejava.ws', 'HelloResource.java', 'Student.java', 'JRE System Library [JavaSE]', 'Maven Dependencies', 'Referenced Libraries', 'Deployment Descriptor: H...', 'Deployed Resources', 'build', 'target', 'WebContent', 'pom.xml', 'JspAssignment', 'Servers', 'WebServiceProject', and 'JSR-109 Web Services'. The main editor area shows the 'http://localhost:8080/HelloREST/' URL. The Console window at the bottom displays the following output:

```
New configuration [Apache Tomcat] C:\Users\Omkar\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_15.0.1.v20201027-0507\jre\bin\javaw.exe (May 26, 2021, 8:15:32 PM)
May 26, 2021 8:15:36 PM org.apache.catalina.startup.Catalina load
INFO: Server initialization in [1213] milliseconds
May 26, 2021 8:15:37 PM org.apache.catalina.core.StandardService startInternal
INFO: Starting service [Catalina]
May 26, 2021 8:15:37 PM org.apache.catalina.core.StandardEngine startInternal
INFO: Starting Servlet engine: [Apache Tomcat/9.0.43]
May 26, 2021 8:15:39 PM org.apache.jasper.servlet.TldScanner scanJars
INFO: At least one JAR was scanned for TLDs yet contained no TLDs. Enable debug logging for this logger for a complete list of JARs that were scanned but no TLDs were found in them
May 26, 2021 8:15:45 PM org.apache.jasper.servlet.TldScanner scanJars
INFO: At least one JAR was scanned for TLDs yet contained no TLDs. Enable debug logging for this logger for a complete list of JARs that were scanned but no TLDs were found in them
May 26, 2021 8:15:47 PM org.apache.axis.configuration.EngineConfigurationFactoryServlet getServerEngineConfig
SEVERE: Unable to find config file. Creating new servlet engine config file: /WEB-INF/server-config.wsdd
May 26, 2021 8:15:47 PM org.apache.axis.utils.JavaUtils isAttachmentSupported
WARNING: Unable to find required classes (javax.activation.DataHandler and javax.mail.internet.MimeMultipart). Attachment support is disabled.
May 26, 2021 8:15:48 PM org.apache.coyote.AbstractProtocol start
INFO: Starting ProtocolHandler ["http-nio-8080"]
May 26, 2021 8:15:48 PM org.apache.catalina.startup.Catalina start
INFO: Server startup in [11404] milliseconds
[{fname=Omkar, lname=Deshpande, course=Android, id=1}, {fname=John, lname=Doe, course=DBMS, id=2}, {fname=Alrik, lname=Weirdo, course=Web-Dev, id=3}, {fname=Devesh, lname=Woodwalke
```

The bottom status bar shows the system clock as 8:19 PM on 5/26/2021, along with weather information (29°C Mostly clear) and system icons.

Browser window showing a REST client interface. The address bar displays `http://localhost:8080/HelloREST/rest/student`. The response body contains a JSON array of student records:

```
[{"fname": "Omkar", "lname": "Deshpande", "course": "Android", "id": "1"}, {"fname": "John", "lname": "Doe", "course": "DBMS", "id": "2"}, {"fname": "Alrik", "lname": "Weirdo", "course": "Web-Dev", "id": "3"}, {"fname": "Devesh", "lname": "Woodwalker", "course": "AI", "id": "4"}, {"fname": "Shubham", "lname": "Daylighter", "course": "Mathematics", "id": "5"}, {"fname": "Atharva", "lname": "Fairchild", "course": "Accounting", "id": "6"}]
```

The bottom of the browser window shows a taskbar with the Windows logo, a search bar, and several application icons. The system tray on the right indicates the time is 8:19 PM on 5/26/2021, with a temperature of 29°C and weather status 'Mostly clear'.

Postman

File Edit View Help

HomeWorkspacesReportsExplore

Search Postman

My Workspace

NewImport

Overview

GET http://192.168.1.9:...

GET http://localhost:80...

+

...

No Environment

▼

👁

+

☰

...

Collections


APIs

Environments

Mock Servers

Monitors

History



You don't have any collections

Collections let you group related requests, making them easier to access and run.

Create Collection

http://localhost:8080/HelloREST/rest/student

Save

✎

💬

</>

GET

▼

http://localhost:8080/HelloREST/rest/student

Send

▼

Params

Authorization

Headers (8)

Body

Pre-request Script

Tests

Settings

Cookies

Query Params

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Body

Cookies

Headers (10)

Test Results

Status: 200 OK

Time: 1752 ms

Size: 799 B

Save Response

▼

Pretty

Raw

Preview

Visualize

JSON

▼

🔍

```
8  {
9    "fname": "John",
10   "lname": "Doe",
11   "course": "DBMS",
12   "id": "2"
13 },
14 {
15   "fname": "Alrik",
16   "lname": "Weirido",
17   "course": "Web-Dev",
18   "id": "3"
19 },
20 {
21   "fname": "Devesh",
22   "lname": "Woodwalker",
23   "course": "AI",
```

Find and Replace

Console

Bootcamp

Runner

Trash

🔍

🔍

29°C Mostly clear

8:19 PM

5/26/2021