

# Create Maven Project

## Web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance"
    xmlns="http://java.sun.com/xml/ns/javaee"
    xmlns:web="http://java.sun.com/xml/ns/javaee/web-
app\_2\_5.xsd"
    xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app\_3\_0.xsd"
    version="3.0">

    <display-name>RESTful CRUD Example</display-name>

    <servlet>
        <servlet-name>jerseyServlet</servlet-name>
        <servlet-
class>com.sun.jersey.spi.container.servlet.ServletContainer
</servlet-class>
        <init-param>
            <param-
name>com.sun.jersey.config.property.packages</param-name>
```

```

        <param-value>org.o7planning.restfulcrud</param-
value>
    </init-param>
    <load-on-startup>1</load-on-startup>
</servlet>
<servlet-mapping>
    <servlet-name>jerseyServlet</servlet-name>
    <url-pattern>/rest/*</url-pattern>
</servlet-mapping>
<web->

```

## Pom.xml

```

<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
http://maven.apache.org/maven-v4\_0\_0.xsd">

    <modelVersion>4.0.0</modelVersion>
    <groupId>org.o7planning</groupId>
    <artifactId>RESTfulCRUD</artifactId>
    <packaging>war</packaging>
    <version>0.0.1-SNAPSHOT</version>
    <name>RESTfulCRUD Maven Webapp</name>

```

<url><http://maven.apache.org></url>

<dependencies>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>3.8.1</version>

<scope>test</scope> </dependency>

<!--https://mvnrepository.com/artifact/javax.servlet/javax.servlet-api →

<dependency>

<groupId>javax.servlet</groupId>

<artifactId>javax.servlet-api</artifactId>

<version>3.1.0</version>

<scope>provided</scope>

</dependency>

<!--https://mvnrepository.com/artifact/asm/asm →

<dependency>

<groupId>asm</groupId>

<artifactId>asm</artifactId>

<version>3.3.1</version>

</dependency>

<!--https://mvnrepository.com/artifact/com.sun.jersey/jersey-bundle →

<dependency>

<groupId>com.sun.jersey</groupId>

<artifactId>jersey-bundle</artifactId>

<version>1.19.2</version>

</dependency>

<!--https://mvnrepository.com/artifact/org.json/json →

<dependency>

<groupId>org.json</groupId>

<artifactId>json</artifactId>

<version>20160810</version>

</dependency>

<!--https://mvnrepository.com/artifact/com.sun.jersey/jersey-server →

<dependency>

<groupId>com.sun.jersey</groupId>

<artifactId>jersey-server</artifactId>

<version>1.19.2</version>

</dependency>

<!--https://mvnrepository.com/artifact/com.sun.jersey/jersey-core →

<dependency>

<groupId>com.sun.jersey</groupId>

<artifactId>jersey-core</artifactId>

<version>1.19.2</version>

</dependency>

<!--https://mvnrepository.com/artifact/org.codehaus.jackson/jackson-mapper-asl →

<dependency>

<groupId>org.codehaus.jackson</groupId>

<artifactId>jackson-mapper-asl</artifactId>

<version>1.9.13</version>

</dependency>

</dependencies>

<build>

<finalName>RESTfulCRUD</finalName>

<plugins>

<plugin>

<groupId>org.apache.tomcat.maven</groupId>

<artifactId>tomcat7-maven-plugin</artifactId>

<version>2.2</version>

<configuration>

<path>/RESTfulCRUD</path>

<port>8080</port>

</configuration>

</plugin>

</plugins>

</build>

</project>

# EmployeeDAO.java

```
Package org.o7planning.restfulcrud.dao;
```

```
Import java.util.ArrayList;
```

```
Import java.util.Collection;
```

```
Import java.util.HashMap;
```

```
Import java.util.List;
```

```
Import java.util.Map;
```

```
Import org.o7planning.restfulcrud.model.Employee;
```

```
Public class EmployeeDAO {
```

```
    Private static final Map<String, Employee> empMap = new HashMap<String, Employee>();
```

```
    Static {
```

```
        initEmps();
```

```
    }
```

```
    Private static void initEmps() {
```

```
        Employee empid= new Employee("E01");
```

```
        Employee empname = new Employee("Sushant");
```

```
        Employee empLname = new Employee("naik");
```

```
        Employee empsdate= new Employee("01/01/2020");
```

```
        Employee empdesignation= new Employee("manager");
```

```
        Employee empDepartment = new Employee("java developer");
```

```
Employee empEdate= new Employee("04/07/2021");

Employee empstatus = new Employee("managing department");

Employee empdob = new Employee("01/01/2000");

Employee empreportingmanager= new Employee("radha");

Employee empgender = new Employee("femal");

Employee empaddress= new Employee("murdeshwar");


empMap.put(empid.getEmpId(), empid);

empMap.put(empname.getEmpName(), empname);

empMap.put(empLname.getEmpLname(), empLname);

empMap.put(empsdate.getEmpsdate(), empsdate);

empMap.put(empdesignation.getEmpdesignatuon(), empdesignation);
empMap.put(empdepartment.getEmpdepartment(), empdepartment);

empMap.put(empEdate.getEmpEdate(), empEdate);


empMap.put(empsratus.getEmpStatus(), empstatus);


empMap.put(empdob.getEmpDod(), empdob);

empMap.put(empreportingmanager.getEmpReportingmanager(), empreporting manager);
empMap.put(empgender.getEmpGender(), empgender);


empMap.put(empbloodgroup.getEmpBloodgroup(), empbloodgroup);


empMap.put(empaddress.getEmpAddress(), empaddress);

}
```

```
Public static Employee getEmployee(String empNo) {  
    Return empMap.get(empNo);  
}
```

```
Public static Employee addEmployee(Employee emp) {  
    empMap.put(emp.getEmpNo(), emp);  
    return emp;  
}
```

```
Public static Employee updateEmployee(Employee emp) {  
    empMap.put(emp.getEmpNo(), emp);  
    return emp;  
}
```

```
Public static void deleteEmployee(String empNo) {  
    empMap.remove(empNo);  
}
```

```
Public static List<Employee> getAllEmployees() {  
    Collection<Employee> c = empMap.values();  
    List<Employee> list = new ArrayList<Employee>();  
    List.addAll©;  
    Return list;  
}
```

```
List<Employee> list;
```

```
}
```



# Employee.java

```
Package org.o7planning.restfulcrud.model;
```

```
Import javax.xml.bind.annotation.XmlAccessType;
```

```
Import javax.xml.bind.annotation.XmlAccessorType;
```

```
Import javax.xml.bind.annotation.XmlRootElement;
```

```
@XmlRootElement(name = "employee")
```

```
@XmlAccessorType(XmlAccessType.FIELD)
```

```
Public class Employee {
```

```
    Private String empid;
```

```
    Private String empName;
```

```
    Private String Lname;
```

```
    Private String empsdate;
```

```
    Private String empdesignation;
```

```
    Private String empdepartment;
```

```
    Private String empEdate;
```

```
    Private String empsatuts;
```

```
    Private String empdob;
```

```
    Private String empreporting manager;
```

```
    Private String empgender;
```

```
    Private String empbloodgroup;
```

```
    Private String empaddress;
```

```
    // This default constructor is required if there are other constructors.
```

```
Public Employee() {
```

```
}
```

```
Public Employee(String empId, String empName, String empLname,String empsdate, String  
empdesignation, String empdepartment, String empEdate, String empsatuts, String empdob, String  
empreportingmanager, String empgender, String empbloodgroup, String empaddress) {
```

```
    This.empId = empId;
```

```
    This.empName = empName;
```

```
    This.empLname = empLname;
```

```
    This.empsdate = empsdate;
```

```
    This.empdeparment = empdeparment;
```

```
    This.empEdate = empEdate;
```

```
    This.empstatus = empstatus;
```

```
    This.empdob = empdob;
```

```
    This.empreportingmanager = empreportingmqnager;
```

```
    This.empgender = empgender;
```

```
    This.empbloodgroup = empbloodgroup;
```

```
    This.empaddress= empaddress;
```

```
}
```

```
Public String getEmpNo() {
```

```
    Return empNo;
```

```
}
```

```
Public void setEmpId(String empId) {
```

```
    This.empId= empId;
```

```
}

Public String getEmpName() {
    Return empName;
}

Public void setEmpName(String empName) {
    This.empName = empName;
}

Public String getPosition() {
    Return position;
}

Public void setPosition(String position) {
    This.position = position;
}

}
```

## EmployeeService.java

```
Package org.o7planning.restfulcrud.service;

Import java.util.List;

Import javax.ws.rs.DELETE;

Import javax.ws.rs.GET;

Import javax.ws.rs.POST;
```

```
Import javax.ws.rs.PUT;

Import javax.ws.rs.Path;

Import javax.ws.rs.PathParam;

Import javax.ws.rs.Produces;

Import javax.ws.rs.core.MediaType;

Import org.o7planning.restfulcrud.dao.EmployeeDAO;

Import org.o7planning.restfulcrud.model.Employee;

@Path("/employees")

Public class EmployeeService {

    // URI:

    // /contextPath/servletPath/employees

    @GET

    @Produces({ MediaType.APPLICATION_JSON, MediaType.APPLICATION_XML })

    Public List<Employee> getEmployees_JSON() {

        List<Employee> listOfCountries = EmployeeDAO.getAllEmployees();

        Return listOfCountries;

    }

    // URI:
```

```
// /contextPath/servletPath/employees/{empNo}
```

```
@GET
```

```
@Path("/{empid}")
```

```
@Produces({ MediaType.APPLICATION_JSON, MediaType.APPLICATION_XML })
```

```
Public Employee getEmployee(@PathParam("empid") String empid) {
```

```
    Return EmployeeDAO.getEmployee(empid);
```

```
}
```

```
// URI:
```

```
// /contextPath/servletPath/employees
```

```
@POST
```

```
@Produces({ MediaType.APPLICATION_JSON, MediaType.APPLICATION_XML })
```

```
Public Employee addEmployee(Employee emp) {
```

```
    Return EmployeeDAO.addEmployee(emp);
```

```
}
```

```
// URI:
```

```
// /contextPath/servletPath/employees
```

```
@PUT
```

```
@Produces({ MediaType.APPLICATION_JSON, MediaType.APPLICATION_XML })
```

```
Public Employee updateEmployee(Employee emp) {
```

```
    Return EmployeeDAO.updateEmployee(emp);
```

```
}
```

```
@DELETE
```

```
@Path("/{empid}")
```

```
@Produces({ MediaType.APPLICATION_JSON, MediaType.APPLICATION_XML })
```

```
Public void deleteEmployee(@PathParam("empNo") String empid) {
```

```
    EmployeeDAO.deleteEmployee(empid);
```

```
}
```

Restful web service is used to convert a java object into xml

```
@xmlRootElement( name="employee")
@XmlAccessorType(XmlAccessType.FIELD)
public class Employee
{
    private String empId;
    private String empName;
    private String empLName;
    private String empStringDate;
    private String Designation;
    private String Department;
    private String empEndDate;
    private String empStatus;
    private String empDob;
    private String reportingManager;
    private String gender;
    private String bloodGroup;
    private String address;
}

Employee empId=
    new Employee ("E01","smith","naik","01/0/2000"javadeveloper",
        "softwaredeveloper","04/07/2021","Employee",
        "femal","o+ve","Murdeshwar");
```

```

<employee>
    <empID>E01</empID>
    <empname>Smith</empname>
    <empLname>naik</empLname>
    <empSdate>01/01/2020</empSdate>
    <Designation>Java developer</Designation>
    <Department>software developer</Department>
    <empEdate>04/07/2021</empEdate>
    <empstatus>employee</empstatus>
    <empdob>01/01/2000</empdob>
    <reportingmanager>nisha</reportingmanager>
    <gender>Femal</gender>
    <bloodgroup>o+ve</bloodgroup>
    <address>Murdeshwar</address>
</employee>

```

```

import java unit;

Class Employee public static void main(string[] args)
Public static void main( String [args])
{
Int emid empname.....etc
"Employee":[
{
"empid":"EO1"
"empname":"smith"

```



```
"empLname": "naik"  
"empsdate": "01/01/2020"  
"Designation": "java developer"  
"Department": "software developer"  
"empEdate": "04/07/2021"  
"empstatus": "employee"  
"empdob": "01/01/2000"  
"reportingmanager": "Nishy"  
"gender": "femal"  
"bloodgroup": "o+ve"  
"address": "murdeshware"  
},  
]  
}
```