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43139 BE-9 R9 CL-9

**Assignment 5**

Webservice-SOAP based: Implement a SOAP based Arithmetic web service which will accept a two values and operation to be performed (a, b, op) and return operation's result to a web based service requestor. (The result of "operation" is ....).

Implement the same using RESTful webservices.

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**// SOAP METHOD**

package com.mycompany.soap\_calculator;

import javax.jws.WebService;

import javax.jws.WebMethod;

import javax.jws.WebParam;

import javax.ejb.Stateless;

@WebService(serviceName = "Calculator")

@Stateless()

public class Calculator {

int k;

/\*\*

\* This is a sample web service operation

\*/

@WebMethod (operationName="add")

public int add(@WebParam(name="a")int a,@WebParam(name = "b")int b){

k=a+b;

return k;

}

@WebMethod (operationName="subtract")

public int subtract(@WebParam(name="a")int a,@WebParam(name = "b")int b){

k=a-b;

return k;

}

@WebMethod (operationName="multiply")

public int multiply(@WebParam(name="a")int a,@WebParam(name = "b")int b){

k=a\*b;

return k;

}

@WebMethod (operationName="divide")

public int divide(@WebParam(name="a")int a,@WebParam(name = "b")int b){

k=(a/b);

return k;

}

}

**// RESTFUL METHODTop of Form**

Bottom of Form

|  |  |
| --- | --- |
|  | @GET |
|  | @Path("/add/{a},{b},{opt}") |
|  | public int add(@PathParam("a") int a,@PathParam("b") int b,@PathParam("opt") String opt) |
|  | { |
|  | if(opt.equals("+")) |
|  | return a+b; |
|  | else |
|  | return 0; |
|  | } |
|  |  |
|  | @GET |
|  | @Path("/sub/{a},{b},{opt}") |
|  | public int sub(@PathParam("a") int a,@PathParam("b") int b,@PathParam("opt") String opt) |
|  | { |
|  | if(opt.equals("-")) |
|  | return a-b; |
|  | else |
|  | return 0; |
|  | } |
|  |  |
|  | @POST |
|  | @Path("/mul") |
|  | public int mul(@FormParam("a") int a,@FormParam("b") int b,@FormParam("opt") String opt) |
|  | { |
|  | if(opt.equals("\*")) |
|  | return a\*b; |
|  | else |
|  | return 0; |
|  | } |
|  |  |
|  | @POST |
|  | @Path("/div") |
|  | public int div(@FormParam("a") int a,@FormParam("b") int b,@FormParam("opt") String opt) |
|  | { |
|  | if(opt.equals("/")) |
|  | return a/b; |
|  | else |
|  | return 0; |
|  | } |
|  |  |
|  |  |
|  | @POST |
|  | @Path("/calculator\_Post") |
|  | public int calculator\_Post(@FormParam("a") int a,@FormParam("b") int b,@FormParam("opt") String opt) |
|  | { |
|  | if(opt.equals("#")) |
|  | return a+b; |
|  | else if(opt.equals("-")) |
|  | return a-b; |
|  | else if(opt.equals("\*")) |
|  | return a\*b; |
|  | else if(opt.equals("/")) |
|  | return a/b; |
|  | else |
|  | return 0; |
|  | } |
|  |  |
|  | @GET |
|  | @Path("/calget/{a},{b},{opt}") |
|  | public float calget(@PathParam("a") int a,@PathParam("b") int b,@PathParam("opt") String opt) |
|  | { |
|  | if(opt.equals("+")) |
|  | return a+b; |
|  | else if(opt.equals("-")) |
|  | return a-b; |
|  | else if(opt.equals("\*")) |
|  | return a\*b; |
|  | else if(opt.equals("!")) |
|  | return (a/b); |
|  | else |
|  | return 0; |
|  | } |