

Name - Yash Lakhtariya
Enrollment number - 21162101012
Branch - CBA Batch - 51
Microservices Practical 1

Aim : Implement an application of web service using JAX-RPC in JAVA.

(A shop owner wants to make an arithmetic calculator using JAX-RPC and wants to acquire that service as a java client. Help them to make this service.)

Hardware Specifications :

- OS : Garuda Linux x64 (Base - Archlinux x64)
- Kernel : linux-zen v6.3.9
- RAM : 8 GB

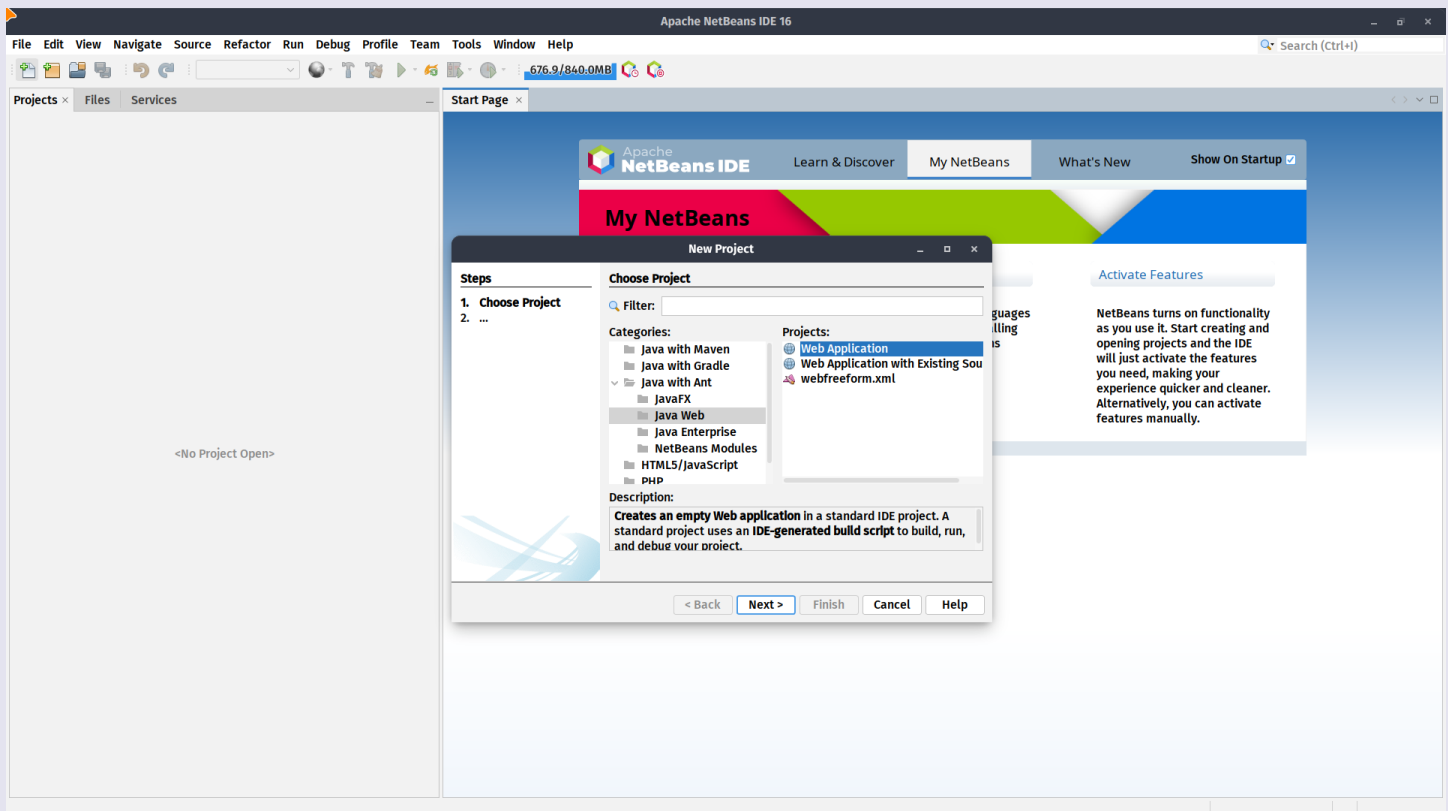
Software Specifications :

- IDE : Netbeans 16
- Java SE : openjdk8
- Java EE : version 5
- Server : Glassfish 4.1.1
- Browser : Vivaldi 6.1 (Base : Chromium 114)

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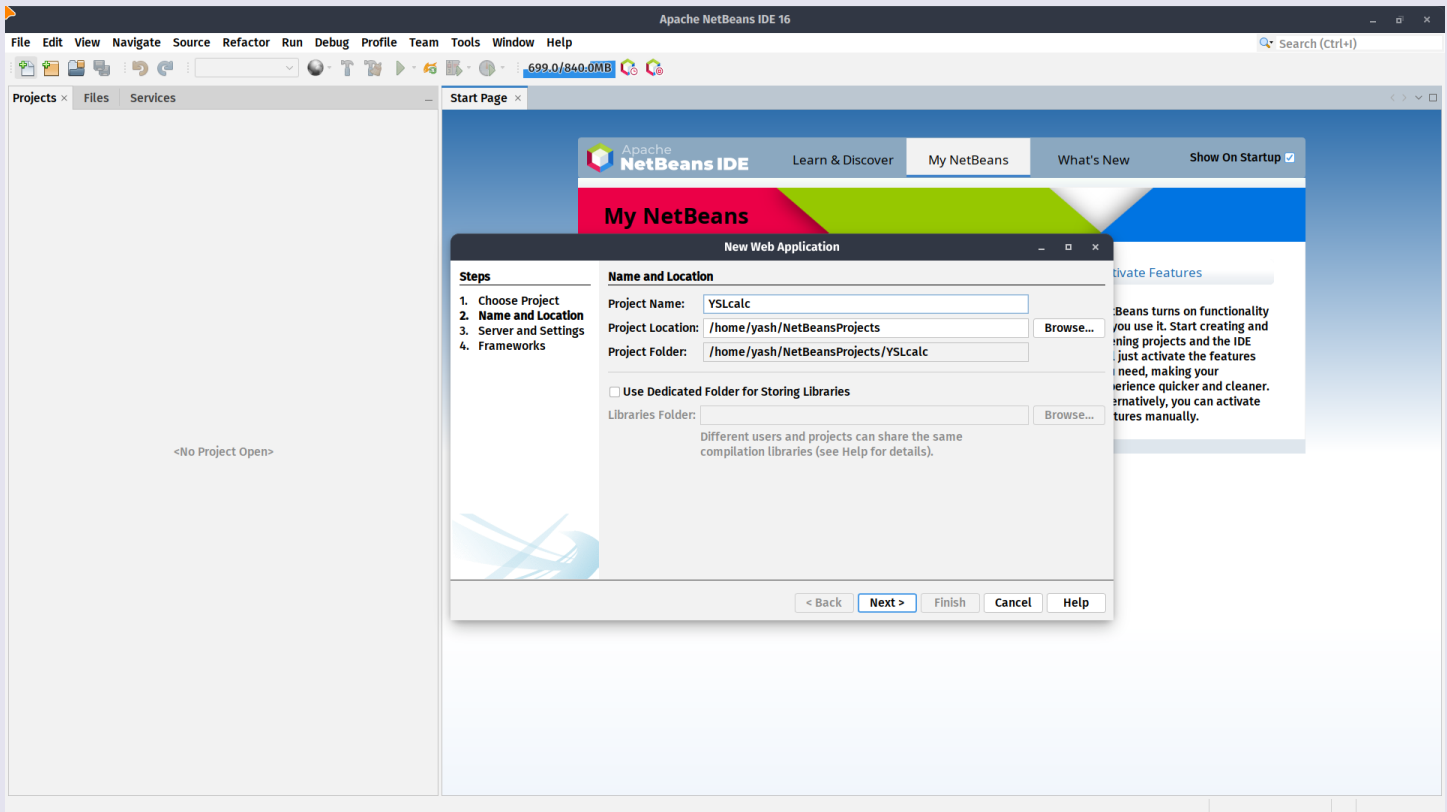
Steps with screenshots :

1. Create a new Web Application in Netbeans via Java Web option (inside Java with Ant for newer Netbeans versions)



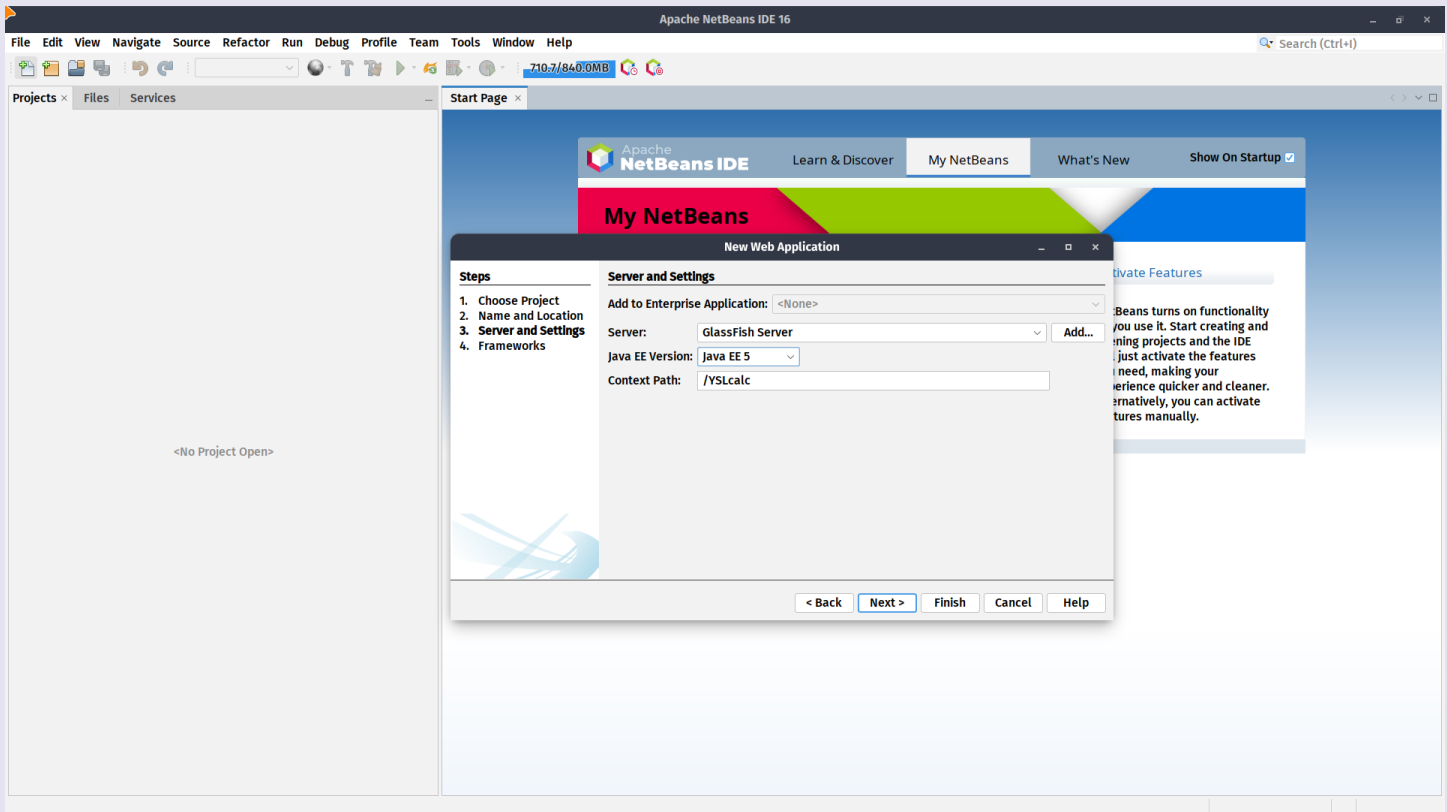
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2. Give the project name (here YSLcalc) and specify its directory



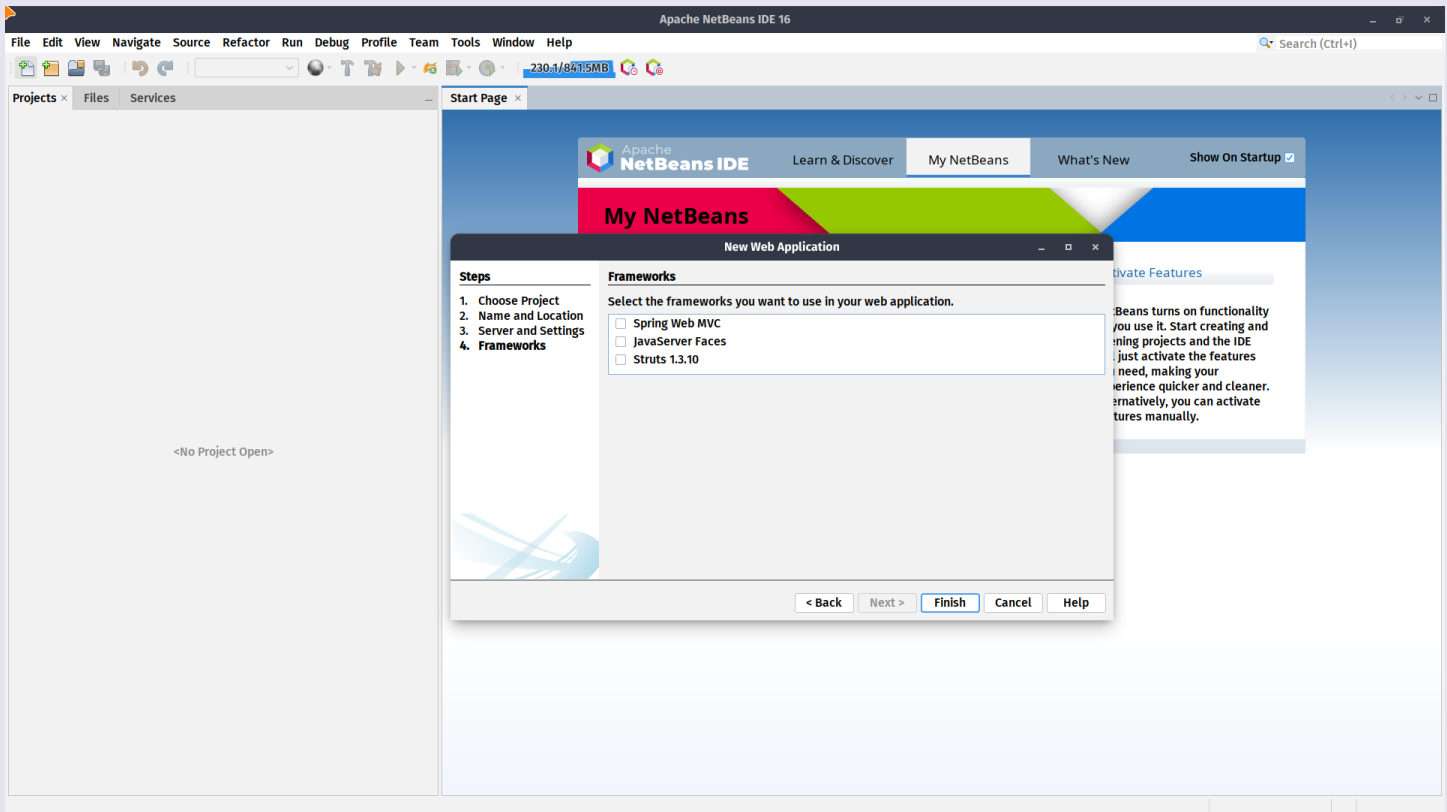
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3. Select GlassFish server with Java EE 5 for the project (if not added)



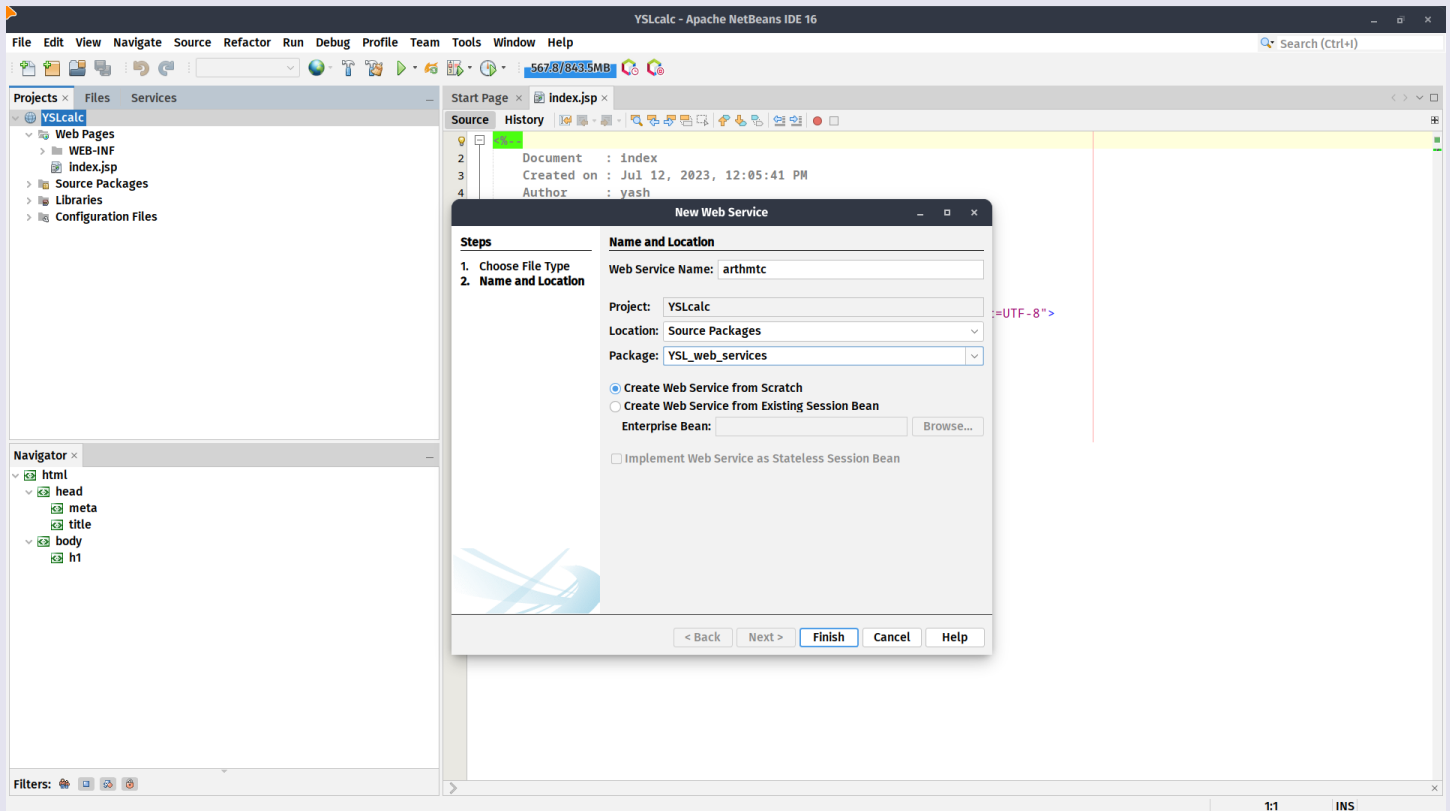
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4. Finish creating the project without selecting any framework



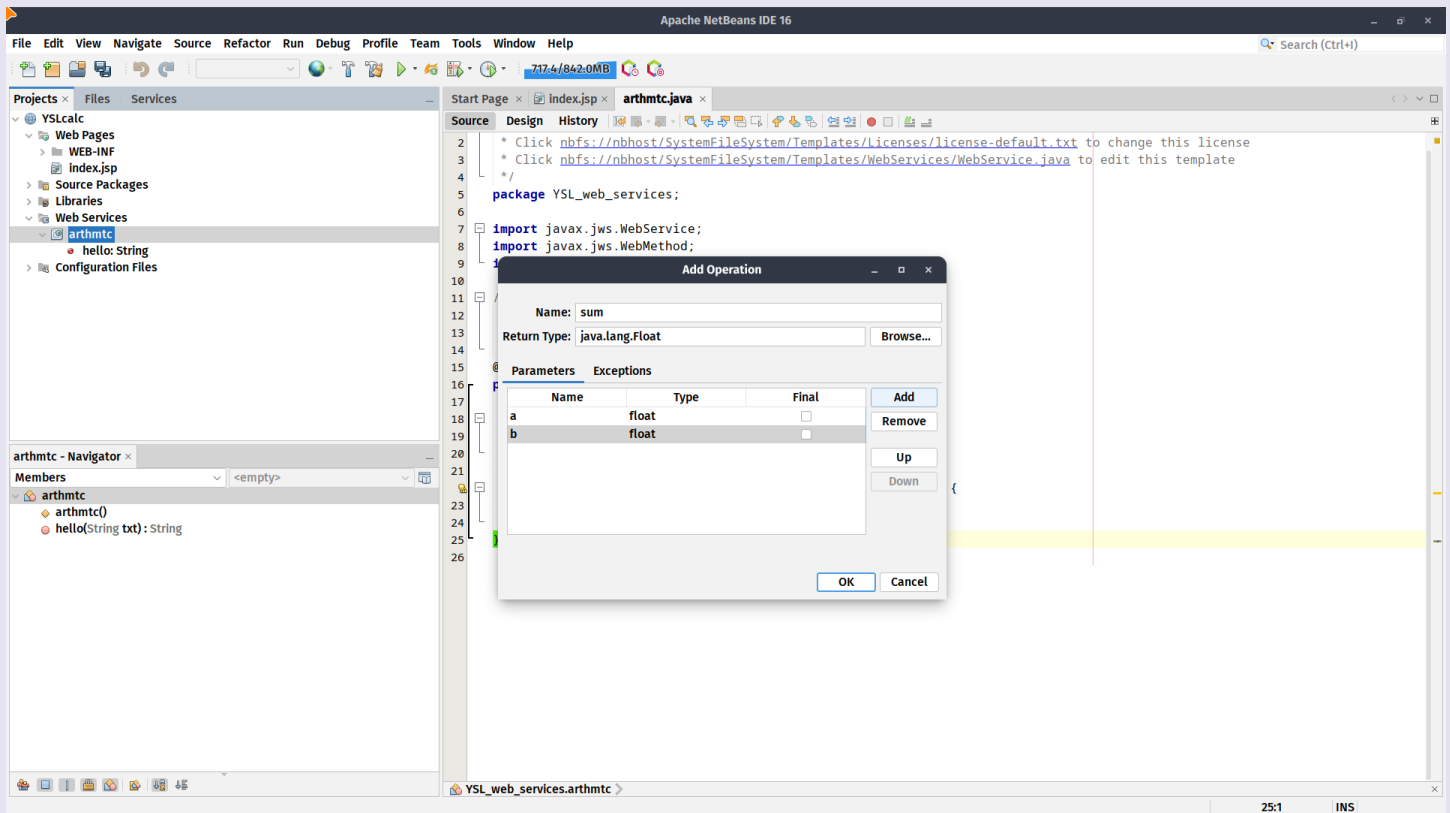
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5. On right clicking the project in Projects Tab, create new Web Service for the same with name (arthmtc here) and package (YSL_web_services here) from Scratch



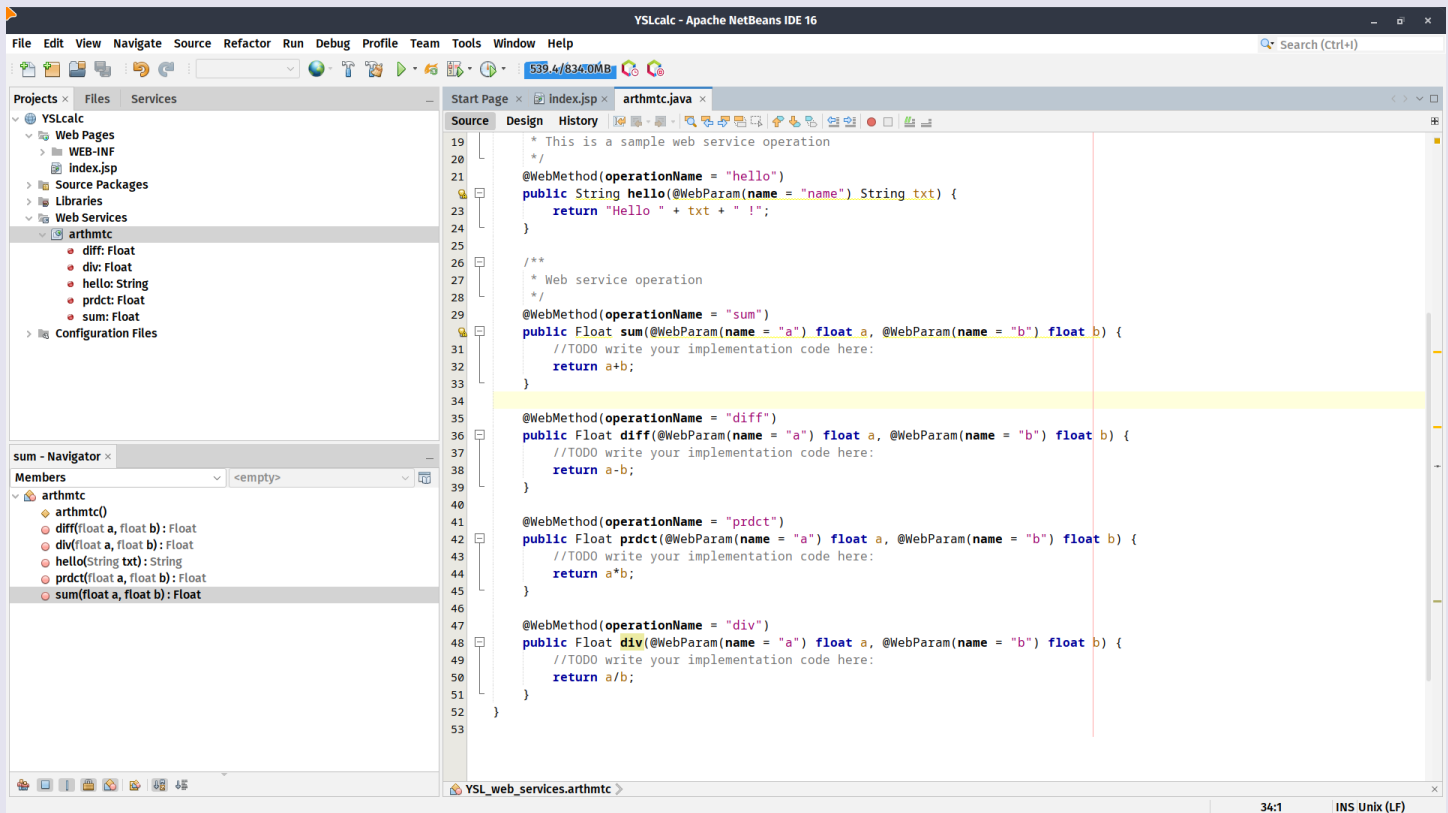
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6. On right clicking the Web service folder created, Add Operation of name sum with return type java.lang.Float and parameters a, b of float type



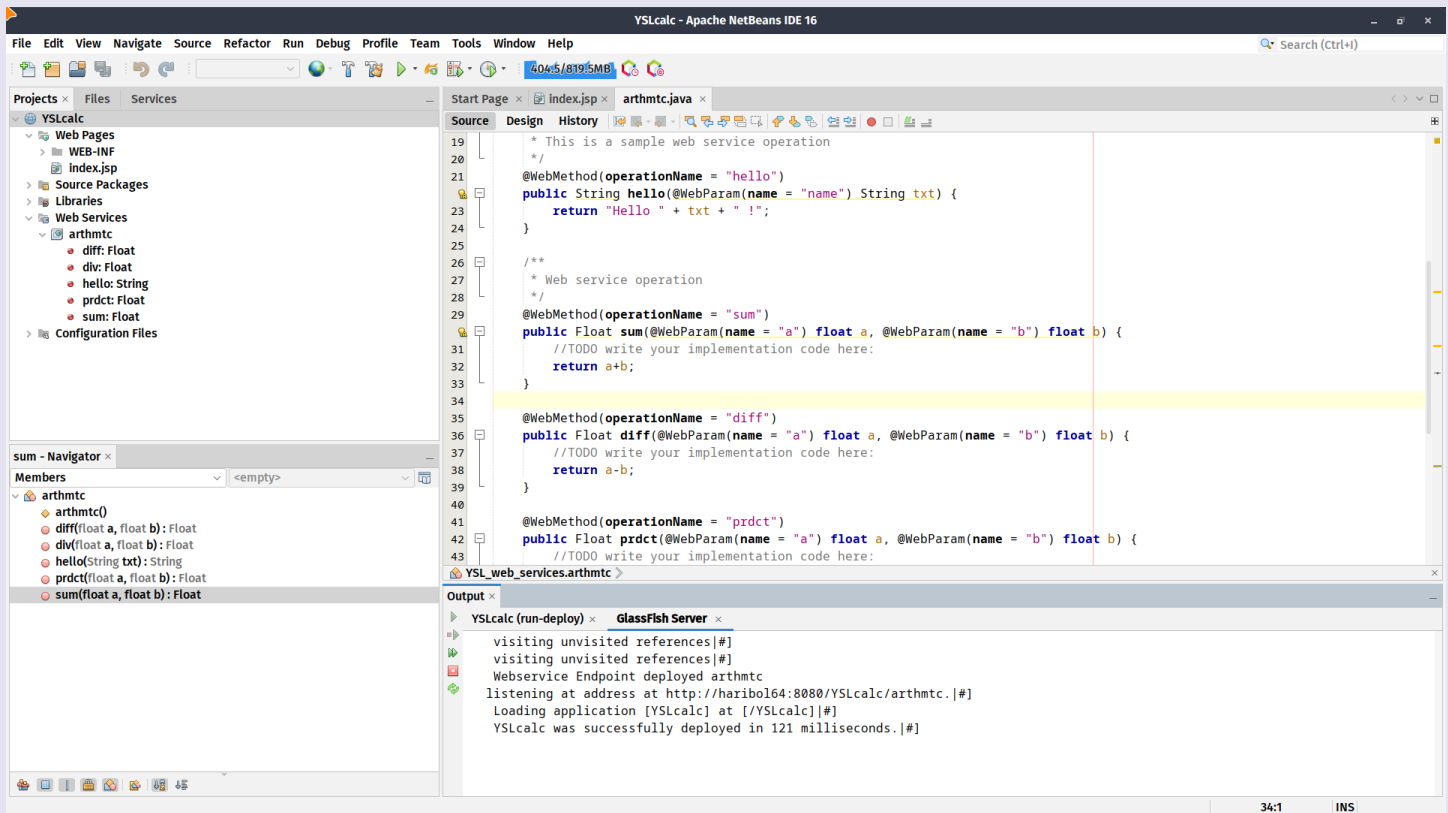
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7. Add some other operations like subtraction, multiplication and division via copying and editing the code or following the previous step



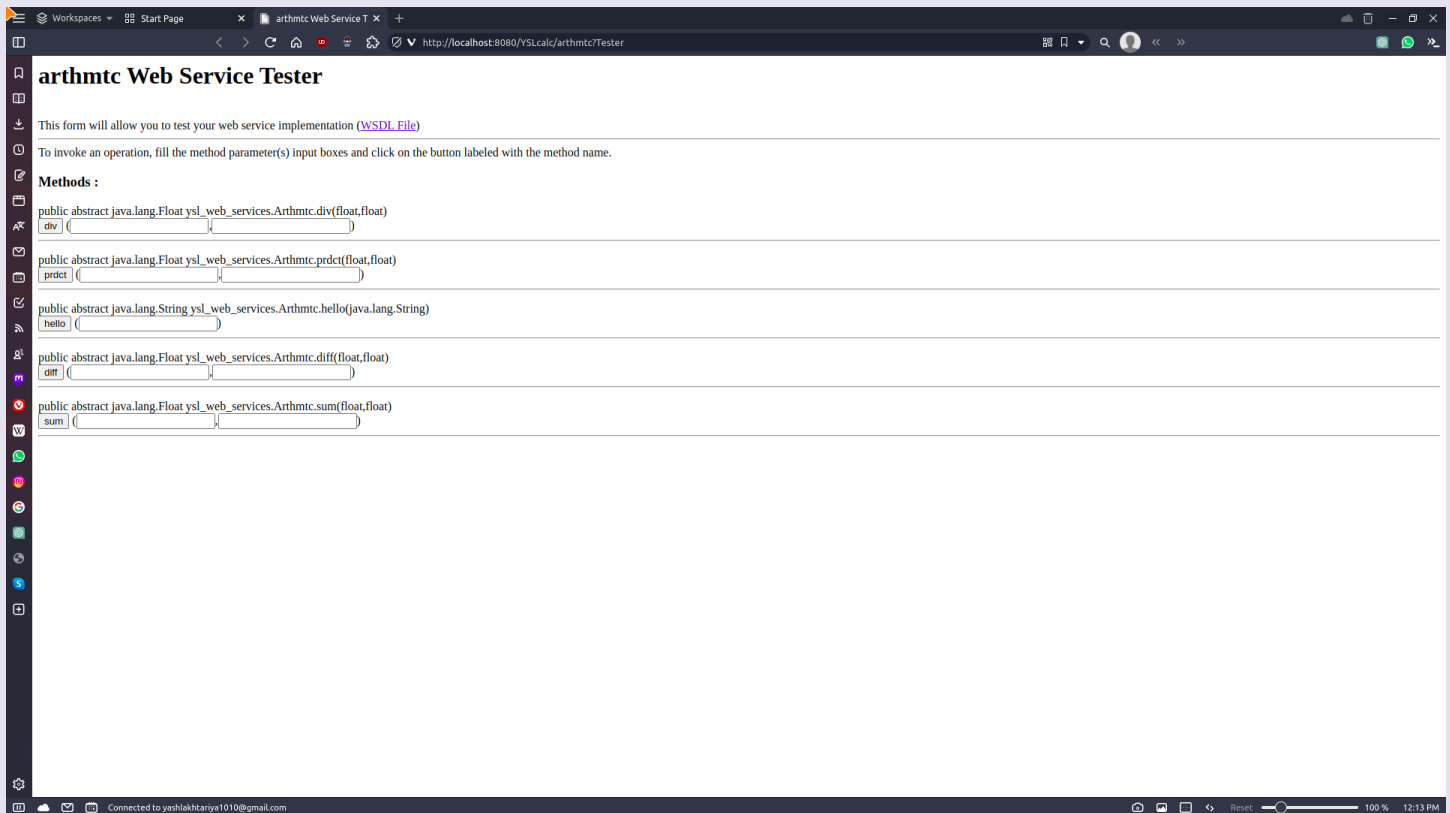
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8. Right-click the project and Deploy it with ensuring the server is running properly



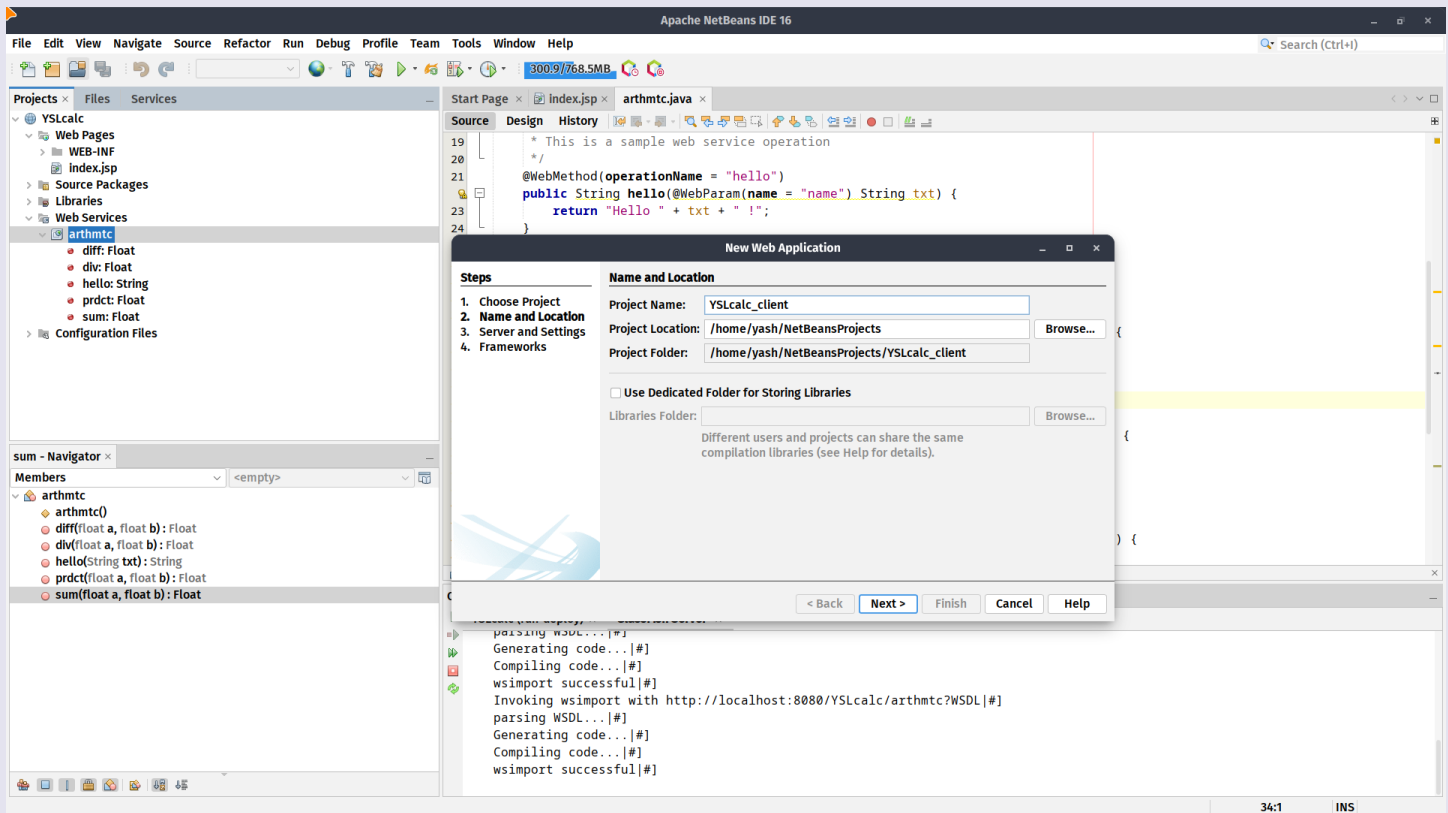
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9. Now right-click the web service folder created earlier and Test Web Service, which would open the webpage on the default browser



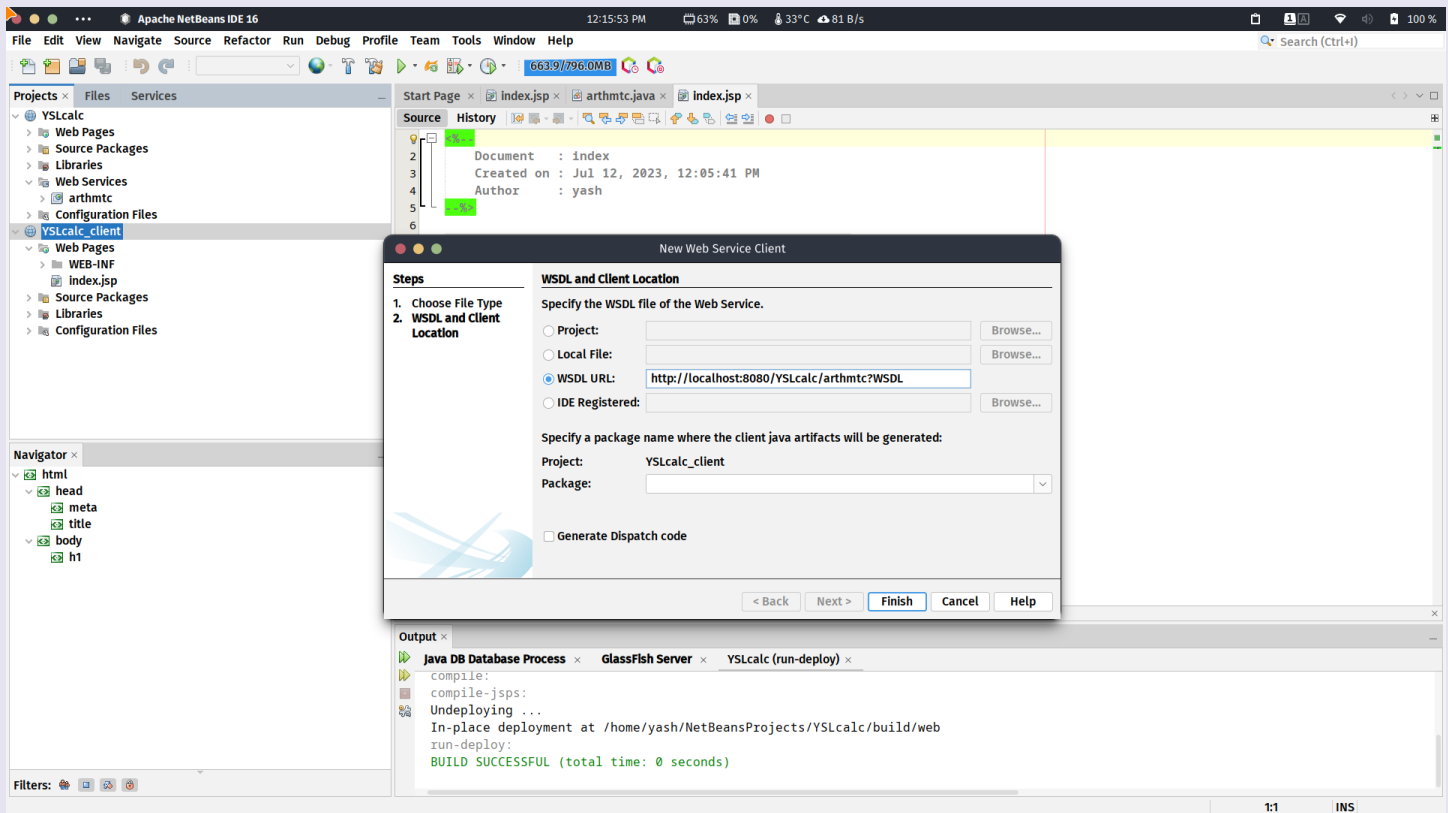
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10. Create new project for client web service similarly as earlier (name : YSLcalc_client here)



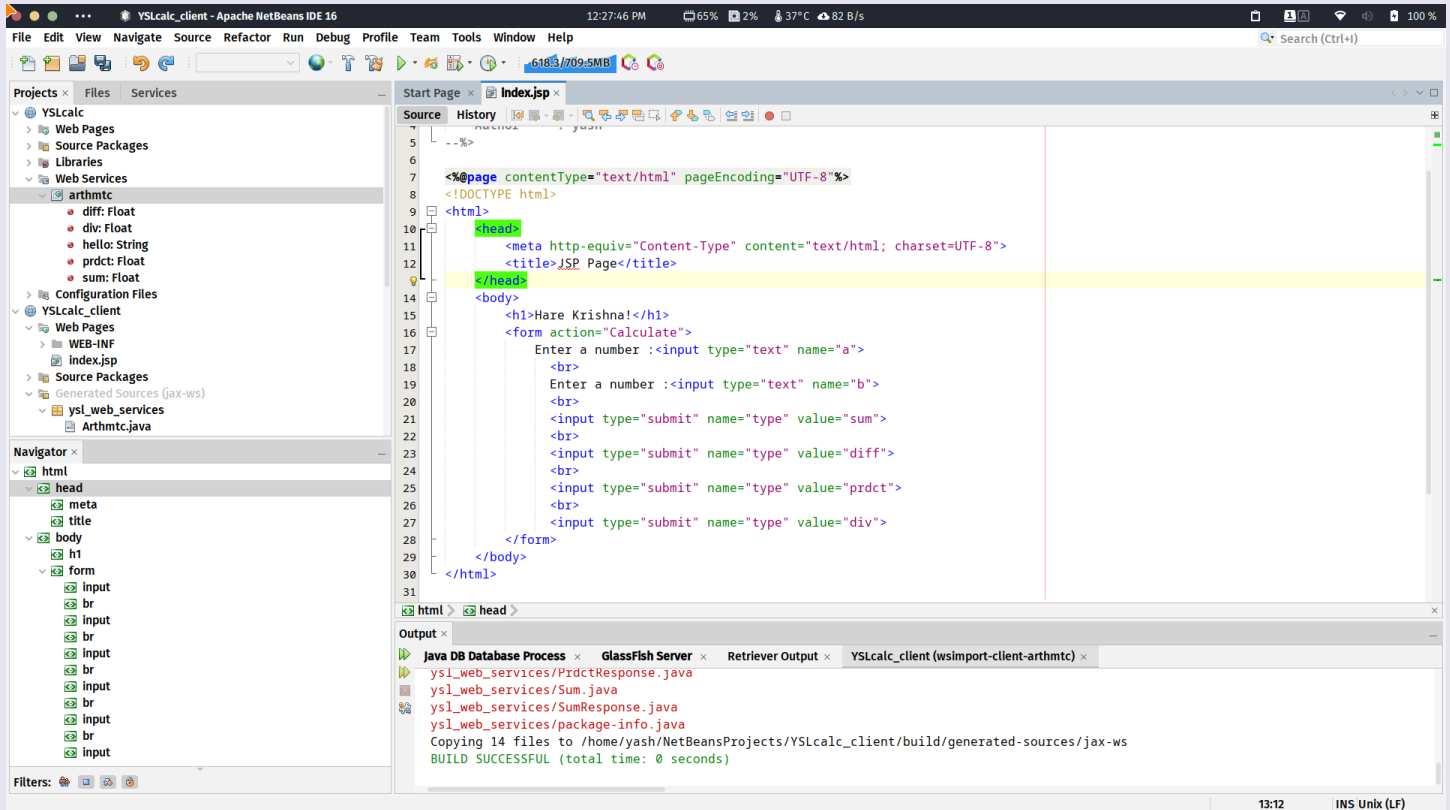
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11. Create New Web Service Client in this project with name and WSDL URL of the file mentioned in screenshot of step -9



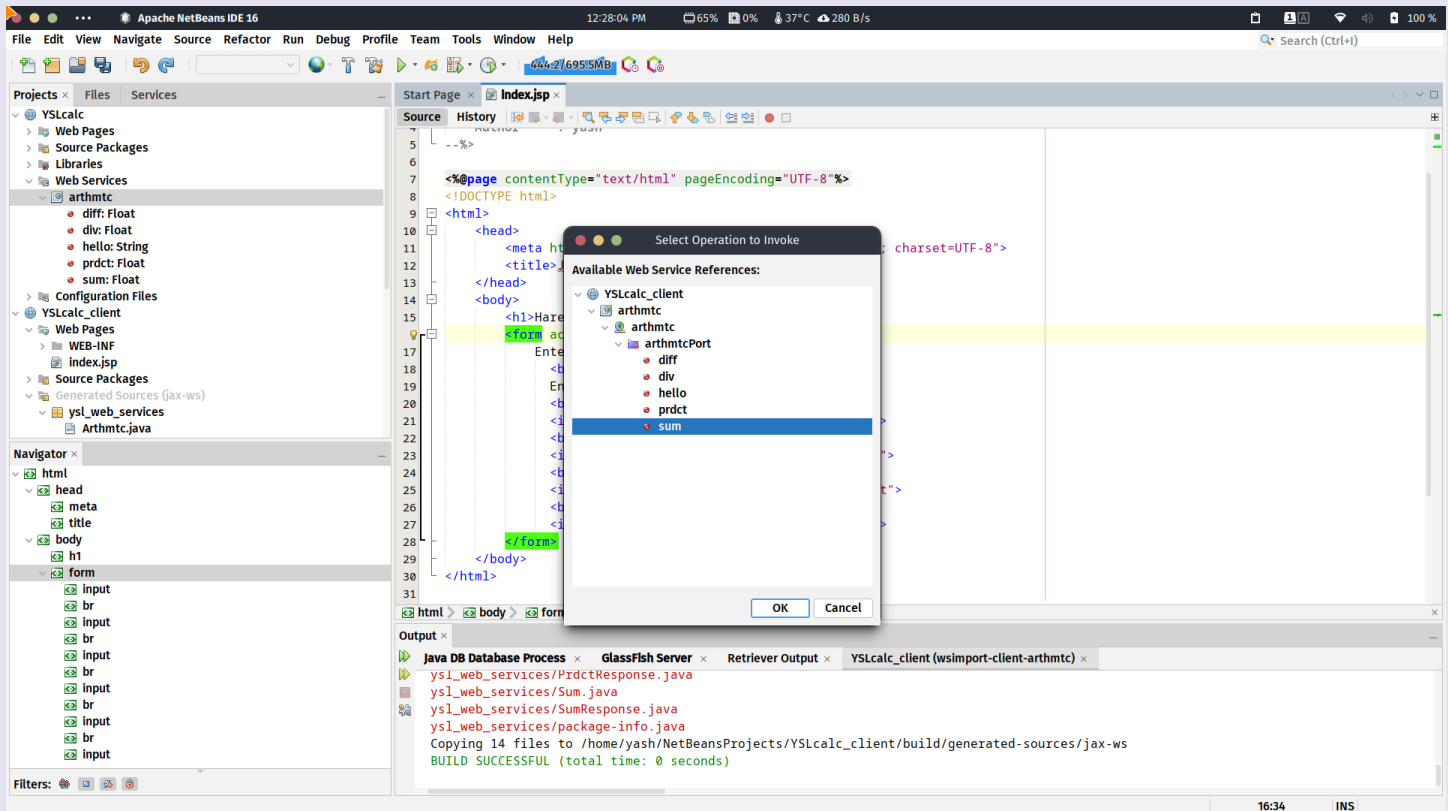
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12. Create an html form in index.jsp to integrate web service with the client



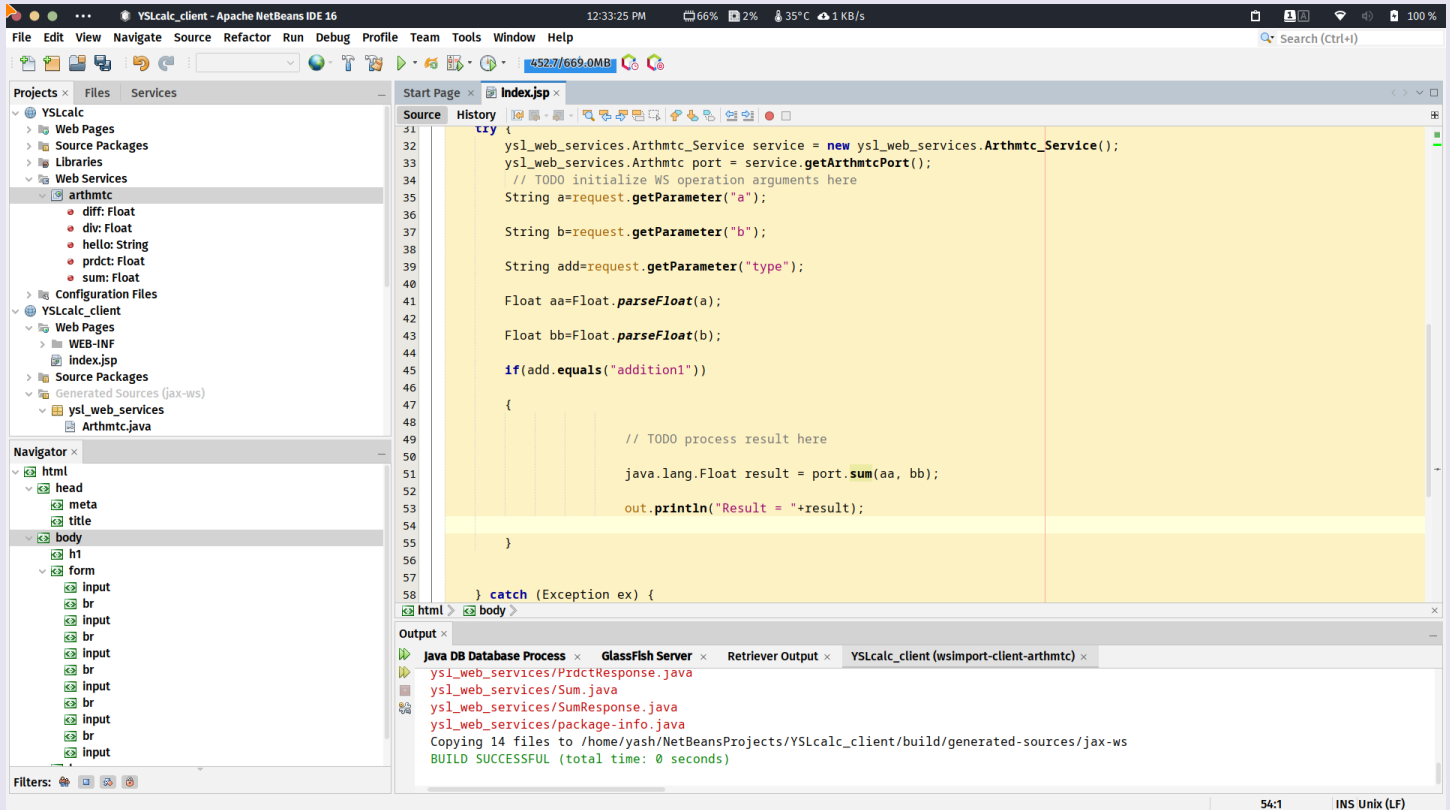
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13. Then, right click in the area where index.jsp is open, and in Web Service Client Resources, click on Call Web Service Operation and add operations created earlier



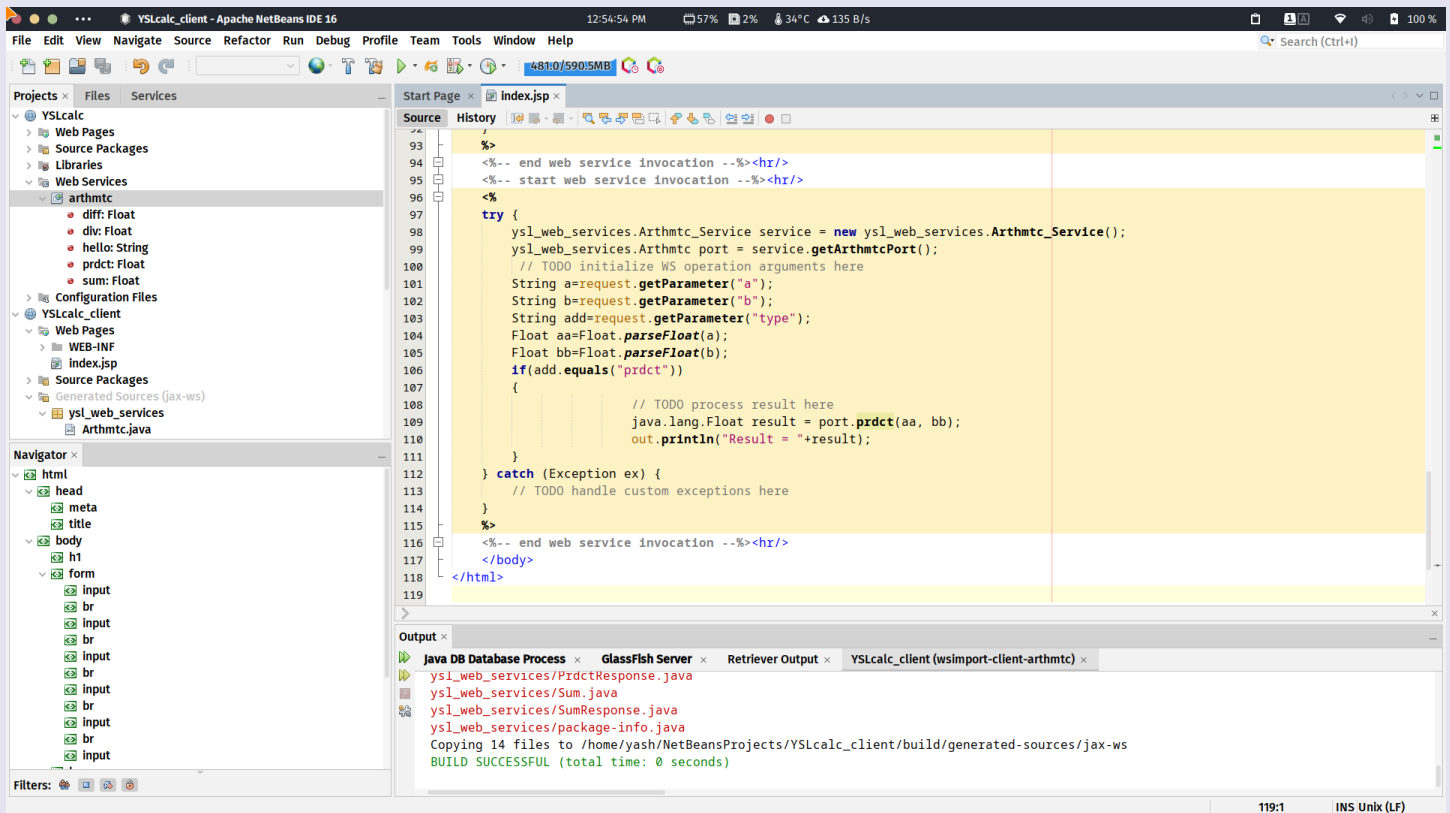
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14. Modify the code according to both the projects



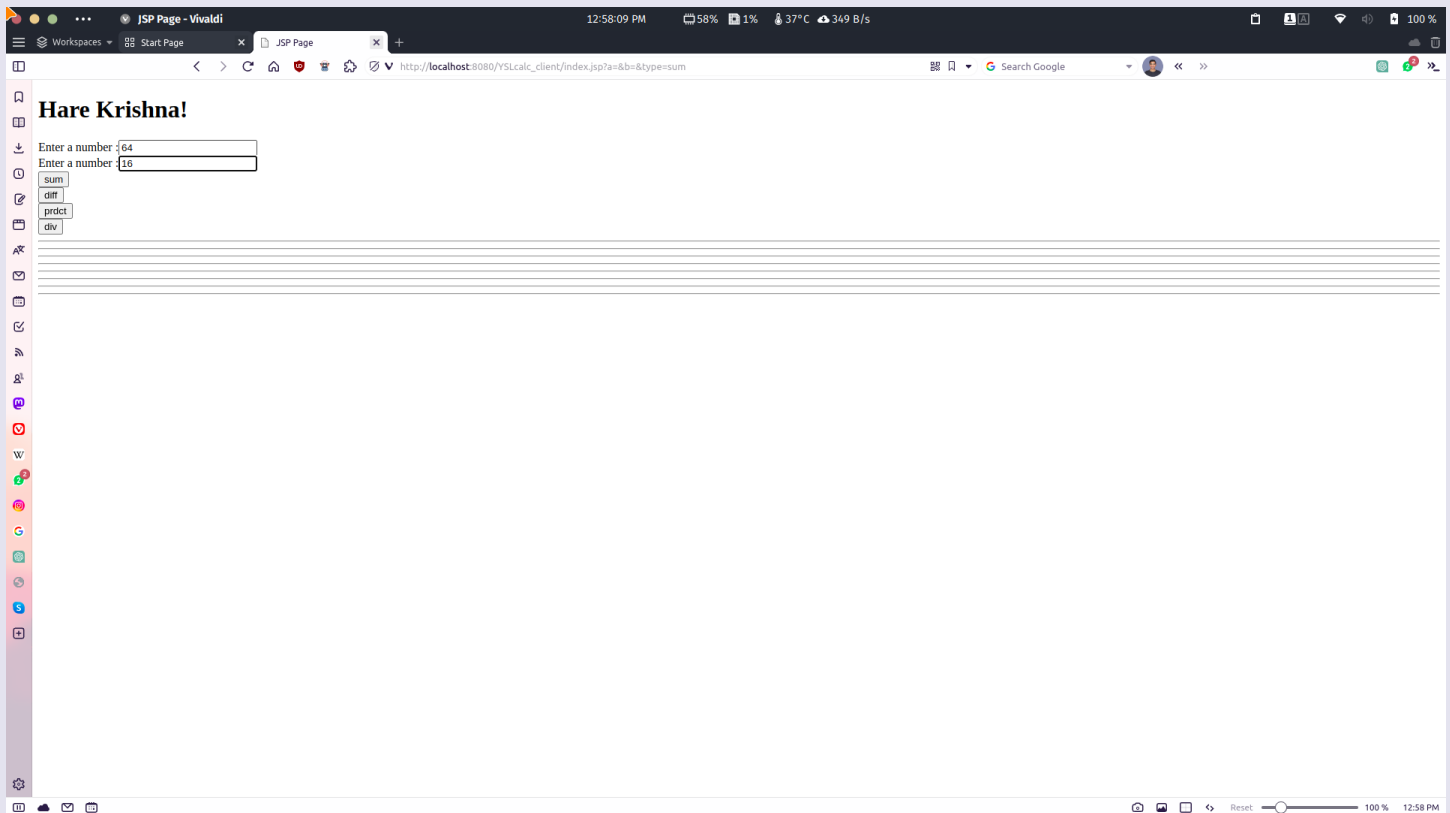
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15. Add all operations following the above step, then Deploy and Run the Client project



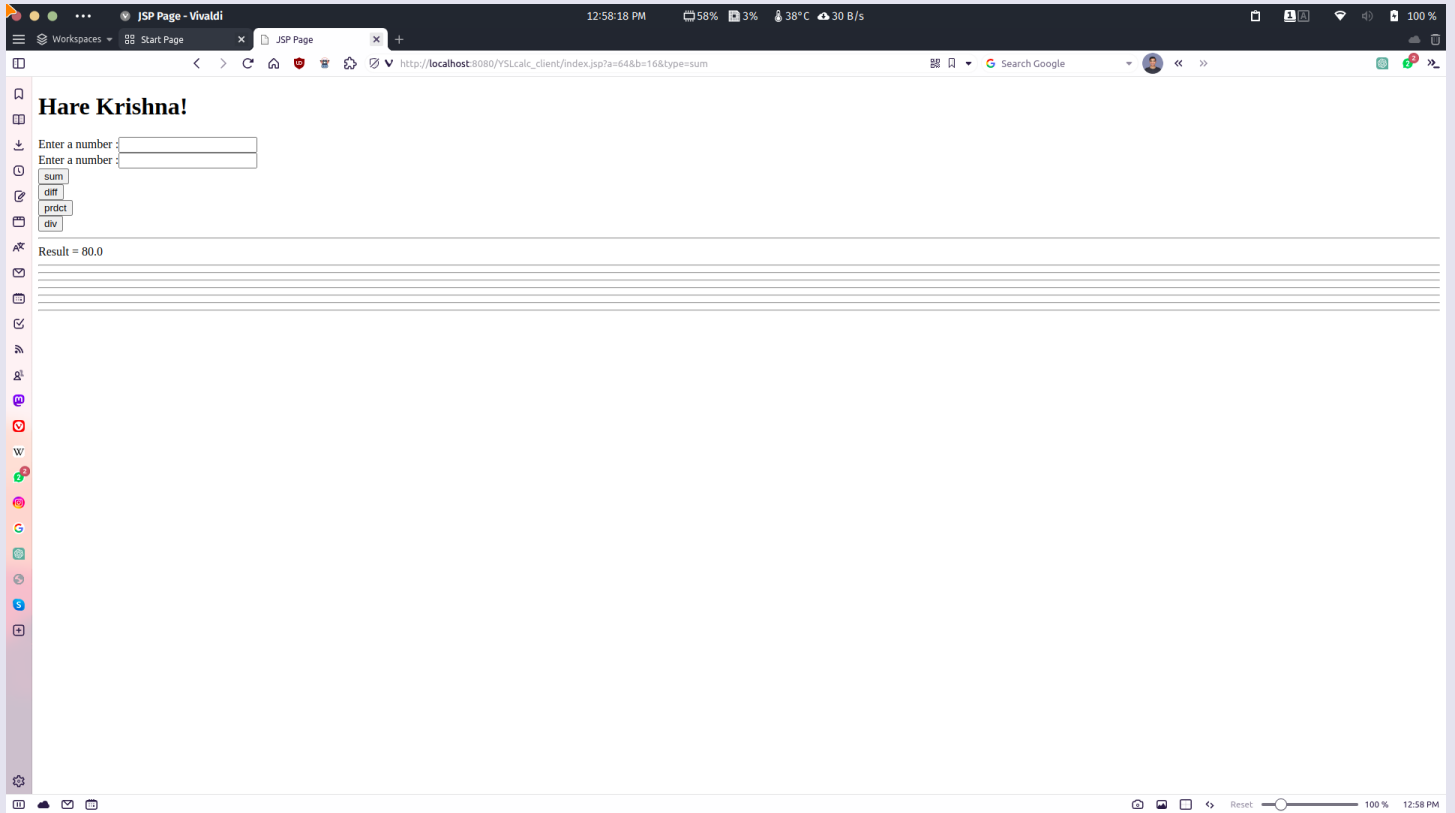
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16. It will be hosted on localhost and give input of two numbers in the html form to get output

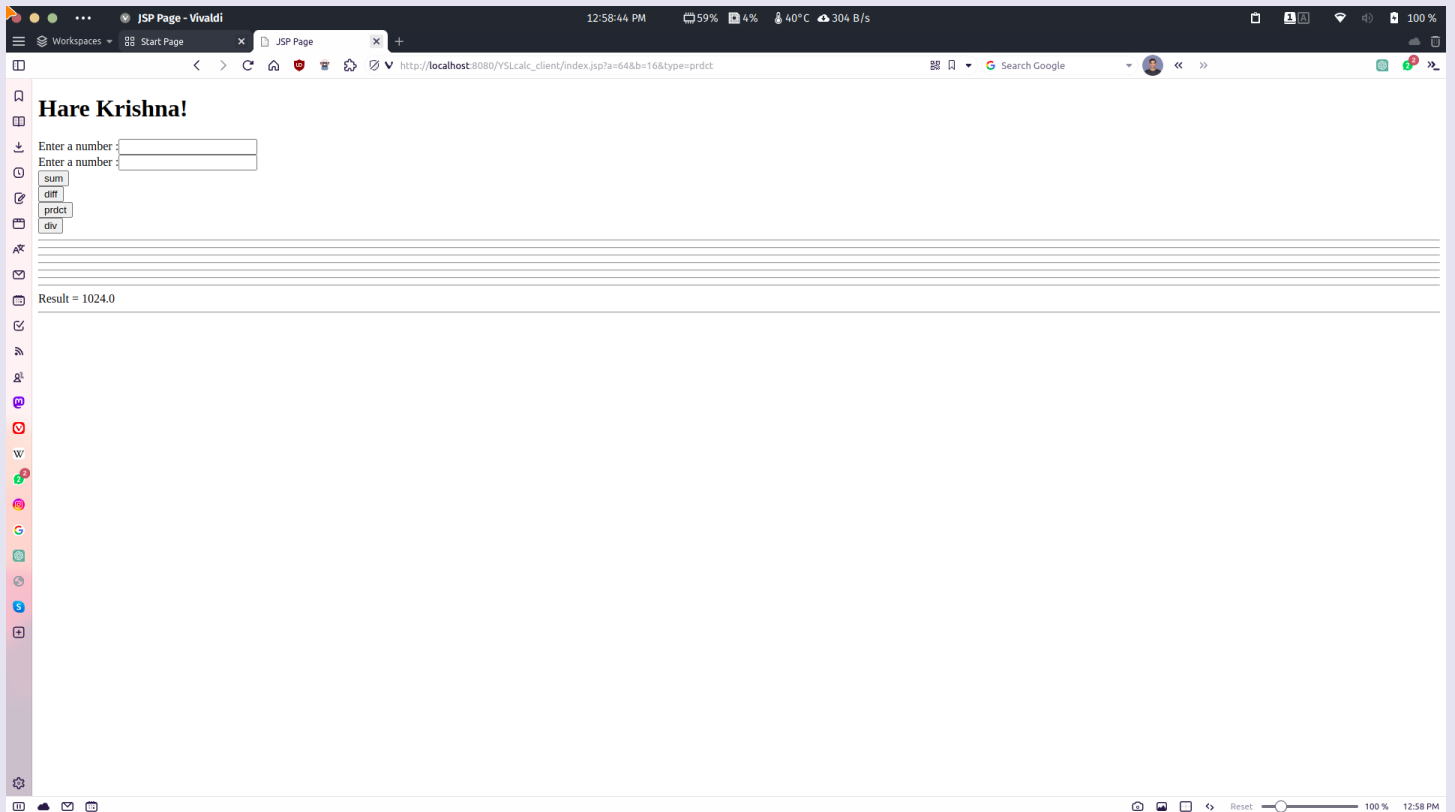
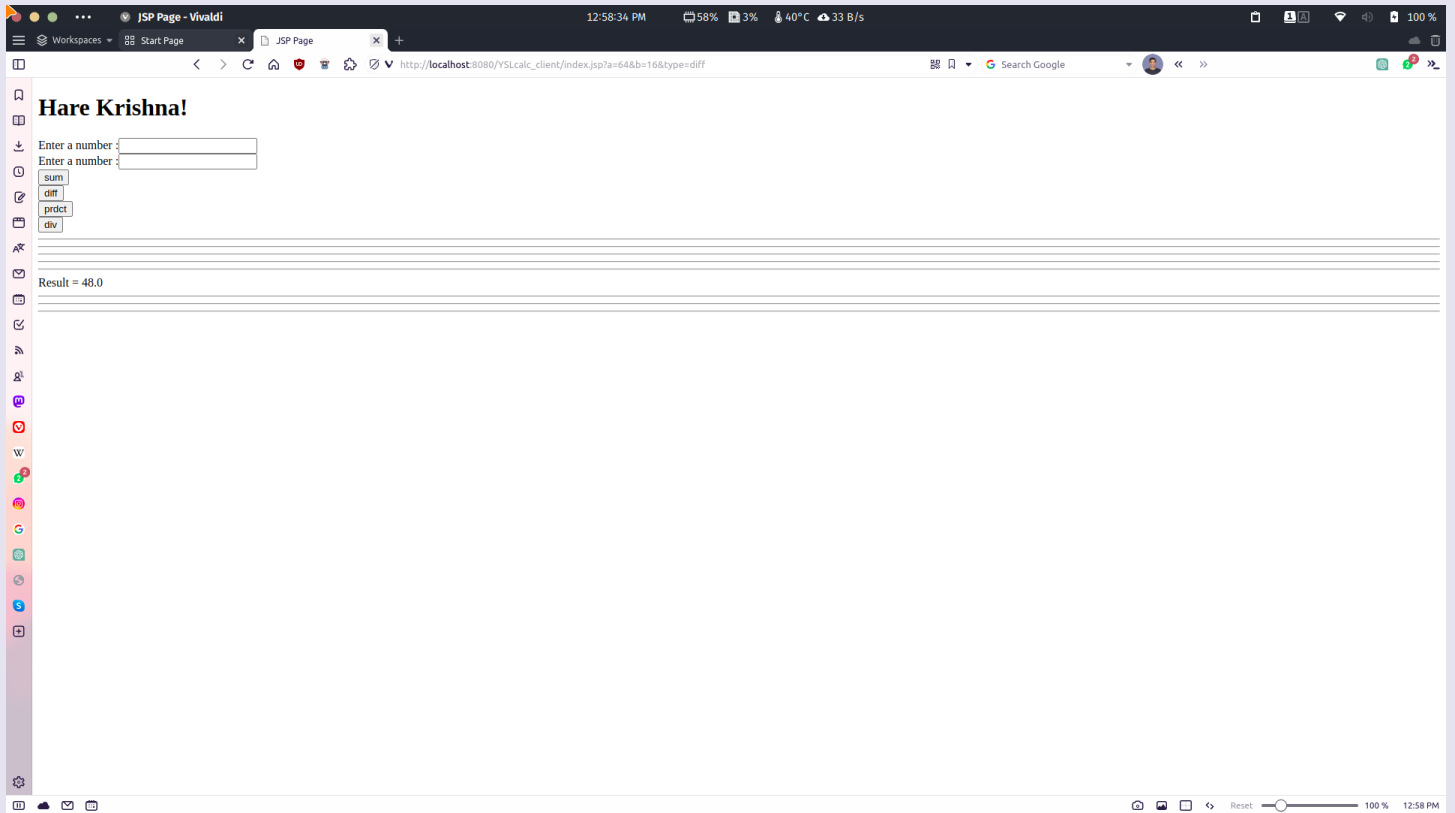


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17. Output will be printed for sum and similarly for other operations



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