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## DEVELOP A SIMPLE CALCULATOR USING XML-RPC

### **Aim:**

To develop a simple calculator using XML-RPC that performs basic arithmetic operations like addition, subtraction, multiplication, and division between two numbers.

### **ALGORITHM:**

#### **Server:**

- 1.Start the server program.
- 2.Import the XML-RPC library.
- 3.Define functions for add, subtract, multiply, and divide.
- 4.Register these functions with the XML-RPC server.
- 5.Run the server and wait for client requests.

#### **Client:**

- 1.Start the client program.
- 2.Import the XML-RPC library.
- 3.Connect to the XML-RPC server using its URL.
- 4.Call the required calculator function (add, subtract, etc.) with input values.
- 5.Display the result returned by the server.
- 6.Stop the program.

## PROGRAM:

Server:

Server.py

```
From xmlrpclib import  
SimpleXMLRPCServer def add(a,b):  
    return a+b  
def sum(a,b):  
    return a-b  
def mul(a,b):  
    return a*b  
def div(a,b):  
    return a/b  
def mod(a,b):  
    return a%b
```

```
server=SimpleXMLRPCServer(("localhost",8000  
)) print("Listening on port 8000...")  
server.register_function(add,"add")  
server.register_function(sub,"sub")  
server.register_function(mul,"mul")  
server.register_function(div,"div")  
server.register_function(mod,"mod")  
server.serve_forever()
```

Client:

Client.py

```
Import xmlrpclib  
proxy=xmlrpclib.ServerProxy('http://localhost:8000/')  
for i in range(5):  
    a=int(input("Enter a number:"))  
    b=int(input("Enter b number:"))  
    print("addition of given number is %d "%((proxy.add(a,b))))  
    print("sub of given number is %d "%((proxy.sub(a,b))))  
    print("mul of given number is %d "%((proxy.mul(a,b))))  
    print("div of given number is %d "%((proxy.div(a,b))))  
    print("mod of given number is %d "%((proxy.mod(a,b))))
```

## OUTPUT

Server:

```
Microsoft Windows [Version 10.0.26100.1457]  
(c) Microsoft Corporation. All rights reserved.  
  
C:\Users\user>cd C:\Users\user\OneDrive\Documents  
  
C:\Users\user\OneDrive\Documents>python calserver.py  
Listening on port 8000...  
127.0.0.1 - - [06/Oct/2025 14:25:20] "POST / HTTP/1.1" 200 -  
127.0.0.1 - - [06/Oct/2025 14:25:22] "POST / HTTP/1.1" 200 -  
127.0.0.1 - - [06/Oct/2025 14:25:24] "POST / HTTP/1.1" 200 -  
127.0.0.1 - - [06/Oct/2025 14:25:26] "POST / HTTP/1.1" 200 -  
127.0.0.1 - - [06/Oct/2025 14:25:28] "POST / HTTP/1.1" 200 -
```

### Client:

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\user> cd C:\Users\user\OneDrive\Documents
PS C:\Users\user\OneDrive\Documents> python calclient.py
Enter a number: 4
Enter b number: 7
Addition of given numbers is 11
Subtraction of given numbers is -3
Multiplication of given numbers is 28
Division of given numbers is 0
Modulus of given numbers is 4
-----
Enter a number: |
```

### Result:

A simple calculator using XML-RPC in python is successfully developed and performed arithmetic operation.