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## DEVELOP A SIMPLE CALCULATOR USING XML-RPC

### AIM:

To develop a simple calculator application using XML-RPC in python where the server performs arithmetic operations (addition ,subtraction ,multiplication and division) on inputs sent from the client.

### ALGORITHM:

#### Server:

- 1.Import simple XML-RPC (server from xml/rpc ,server)
- 2.Define arithmetic functions (add,sub,mul,div)
- 3.Create an XML-RPC server object with host and port  
(eg: localhost:8000)
- 4.Register the functions with the server
- 5.Start the server

#### Client:

- 1.Import xmlrpc.client
- 2.Create a server proxy object to connect to the server
- 3.Ask the user for the operation and input values
- 4.Call the appropriate function (add, sub, mul, div) through the proxy.

5.Display the result received from the server.

PROGRAM:

Server:

```
def add(a, b):  
    return a + b  
  
def sub(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:

```
import xmlrpc.client

proxy = xmlrpc.client.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 numbers is %d" % (proxy.add(a, b)))
    print("Subtraction of given numbers is %d" % (proxy.sub(a, b)))
    print("Multiplication of given numbers is %d" % (proxy.mul(a,
b)))

    print("Division of given numbers is %d" % (proxy.div(a, b)))
    print("Modulus of given numbers is %d" % (proxy.mod(a, b)))

    print("-----")
```

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.