

EX.NO:6

## DEVELOP A SIMPLE CALCULATOR USING XML-RPC

### INTRO TO XML-RPC:

XML-RPC (Extensible markup language-remote procedure call) is a simple protocol that allows a program running on one computer to execute functions on another computer(server) over a network.

### AIM:

To develop a simple calculator applications using XML-RPC in python where the server performs arithmetic operations inputs sent from the client.

### ALGORITHM:

#### SERVER:

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

#### CLIENT:

- 1.Import xmlrpc client.
- 2.Create a serverproxy object to connects 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.

#### SERVER CODE:

```
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 CODE:

```
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)))

SERVER:

```
Command Prompt - python s  X + v
Microsoft Windows [Version 10.0.26100.6584]
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C:\Users\vkdha>cd C:\Users\vkdha\OneDrive\Documents

C:\Users\vkdha\OneDrive\Documents>python ser.py
Listening on port 8000...
127.0.0.1 - - [07/Oct/2025 07:34:12] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [07/Oct/2025 07:34:14] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [07/Oct/2025 07:34:16] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [07/Oct/2025 07:34:18] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [07/Oct/2025 07:34:20] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [07/Oct/2025 07:34:55] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [07/Oct/2025 07:34:57] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [07/Oct/2025 07:34:59] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [07/Oct/2025 07:35:01] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [07/Oct/2025 07:35:03] "POST / HTTP/1.1" 200 -
```

CLIENT:

```
Command Prompt - python c × + v
Microsoft Windows [Version 10.0.26100.6584]
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C:\Users\vkdha>cd C:\Users\vkdha\OneDrive\Documents

C:\Users\vkdha\OneDrive\Documents>python cli.py
Enter a number: 5
Enter b number: 8
Addition of given numbers is 13
Subtraction of given numbers is -3
Multiplication of given numbers is 40
Division of given numbers is 0
Modulus of given numbers is 5
Enter a number: 2
Enter b number: 6
Addition of given numbers is 8
Subtraction of given numbers is -4
Multiplication of given numbers is 12
Division of given numbers is 0
Modulus of given numbers is 2
Enter a number: |
```

## RESULT:

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