Date: 2/20/2023 Parallel. Distributed. C

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## Q:- RPC working and it's Implementation?

Ans: RPC is a protocol that one program can use to request a service from a program located in another computer on a network without having to understand the network details.

## Working of RPC:

1. The client program makes a function call as it would do with a local function.
2. The client's RPC runtime library packages the function call parameters into message and send it to the server.
3. The server's RPC runtime library recieves the message, unpacks the parameters, and calls the corresponding function.
4. The server function executes and returns a result to the RPC runtime library.
5. The RPC runtime library packages the result into a message and sends it back to the client.
6. The client's RPC runtime library recieves the result message, unpacks the result, and return it to a calling program.

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# Implementation of RPC:

I am going to implement simple client server in python using 'xmlrpc' library. client will be going to call an add function of server and print the result returned by server.

## Server Side:

```
import xmlrpc.server

def add(x,y):
    return x+y

with xmlrpc.server.SimpleXMLRPCServer(('localhost', 8000)) as server:
    server.register_function(add, 'add')
    server.serve_forever()
```

## Client Side:

```
import xmlrpc.client

with xmlrpc.client.ServerProxy('http://localhost:8000') as proxy:
    result = proxy.add(4,5)
    print(result)
```

FAIQ NOTES