

**EX.NO:11C**

**DATE:**

### **REMOTE PROCEDURE CALL FOR LIST OPERATIONS- XMLRPC**

**AIM:**

To Implement an XML RPC code for the following functions,

- a. No items in a list
- b. Smallest element in a list
- c. Largest element in the list
- d. Converting a list to a set.

**PROGRAM**

**Server Side:**

```
from xmlrpc.server import SimpleXMLRPCServer def
list_length(a):
    return len(a) def
list_maximum(a):
    return max(a) def
list_minimum(a):
    return min(a) def
list_to_set(a):
    f=list(set(a)) return
f def
list_concat(a,b):
    return a+b

server = SimpleXMLRPCServer(("localhost", 8000))
print("Listening on port 8000...")
server.register_function(list_length,"list_length")
server.register_function(list_maximum, "list_maximum")
server.register_function(list_minimum, "list_minimum")
server.register_function(list_to_set, "list_to_set")
server.register_function(list_concat, "list_concat")
server.serve_forever()
```

**Client Side:**

```
import xmlrpc.client
proxy= xmlrpc.client.ServerProxy('http://localhost:8000/') while True:
    print("PRESS 1-->STRAT || 2--> STOP ")
```

```
c=int(input("ENTER YOUR CHOICE"))
a=[]
b=[] if
c==1:
    print("ENTER THE ELEMENTS TO ADD FIRST LIST") print("PRESS -1
    TO EXIT THIS LIST") while True:
        d=int(input("--->"))
        if d== -1: break
        a.append(d)
        print("ENTER THE ELEMENTS TO ADD SECOND LIST") print("PRESS -2
        TO EXIT THIS LIST") while True:
            e=int(input("--->"))
            if e== -2: break
            b.append(e)
        if c==2:
            break
        print(a)
        print(b)
        print("list_length",proxy.list_length(a))
        print("list_maximum",proxy.list_maximum(a))
        print("list_minimum",proxy.list_minimum(a))
        print("list_to_set",proxy.list_to_set(a))
        print("list_concate",proxy.list_concate(a,b))
```

## OUTPUT

```
D:\>python server.py
Listening on port 8000...
127.0.0.1 - - [06/Nov/2024 13:05:13] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [06/Nov/2024 13:05:15] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [06/Nov/2024 13:05:17] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [06/Nov/2024 13:05:19] "POST / HTTP/1.1" 200 -
127.0.0.1 - - [06/Nov/2024 13:05:21] "POST / HTTP/1.1" 200 -
```

```
D:\>python client.py
PRESS 1-->START || 2-->STOP
ENTER YOUR CHOICE: 1
ENTER THE ELEMENTS TO ADD TO FIRST LIST
PRESS -1 TO EXIT THIS LIST
--->1
--->3
--->5
--->-1
ENTER THE ELEMENTS TO ADD TO SECOND LIST
PRESS -2 TO EXIT THIS LIST
--->2
--->4
--->6
--->-2
First List:  [1, 3, 5]
Second List: [2, 4, 6]
list_length 3
list_maximum 5
list_minimum 1
list_to_set [1, 3, 5]
list_concat [1, 3, 5, 2, 4, 6]
PRESS 1-->START || 2-->STOP
ENTER YOUR CHOICE: |
```

**RESULT**

Hence the following list of operations have been Implemented by an XML RPC code for the following functions

- a. No of items in a list
- b. Smallest element in a list
- c. Largest element in the list
- d. Converting a list to a set.