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EXP NO:11C **DATE:18/10/24**

REMOTE PROCEDURE CALL FOR LIST OPERATIONS-XMLRPC

Aim:

To Implement 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.

Code: Server

code:

```
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_concate(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_concate,  "list_concate")
server.serve_forever()
```

client code.py server code.py

```python
from xmlrpc.server import SimpleXMLRPCServer
def list_length(a):  1 usage
 return len(a)
def list_maximum(a):  1 usage
 return max(a)
def list_minimum(a):  1 usage
 return min(a)
def list_to_set(a):  1 usage
 f=list(set(a))
 return f
def list_concate(a,b):  1 usage
 return a+b
server = SimpleXMLRPCServer(("localhost", 8000))
print("Listening on port 8000...")
server.register_function(list_length, name: "list_length")
server.register_function(list_maximum,  name: "list_maximum")
server.register_function(list_minimum,  name: "list_minimum")
server.register_function(list_to_set,  name: "list_to_set")
server.register_function(list_concate,  name: "list_concate")
server.serve_forever()
```

Client code: import xmlrpc.client proxy= xmlrpc.client.ServerProxy('http://localhost:8000/') while True: print("PRESS 1-->START || 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

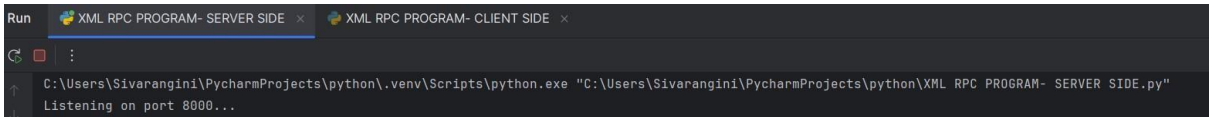
b.append(e) if c == 2: break print(a) print(b) print("list_length", proxy.list_length(a)) print("list_maximum", proxy.list_maximum(a)) print("list_minimum", proxy.list_minimum(a)) print("list_to_set", proxy.list_to_set(a)) print("list_concate", proxy.list_concate(a, b))

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

ect > client code.py

Output:

For server:



For client:

```
PRESS 1-->START || 2--> STOP
ENTER YOUR CHOICE1
ENTER THE ELEMENTS TO ADD FIRST LIST
PRESS -1 TO EXIT THIS LIST
--->5
--->10
--->15
--->20
--->25
--->-1
ENTER THE ELEMENTS TO ADD SECOND LIST
PRESS -2 TO EXIT THIS LIST
--->25
--->30
--->35
--->-1
--->-2
[5, 10, 15, 20, 25]
[25, 30, 35, -1]
list_length 5
list_maximum 25
list_minimum 5
list_to_set [5, 10, 15, 20, 25]
list_concate [5, 10, 15, 20, 25, 25, 30, 35, -1]
PRESS 1-->START || 2--> STOP
ENTER YOUR CHOICE
ject > client code.py
```

Result:

A list is created and list operations are performed using XMLRPC.