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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()
```



```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))
```
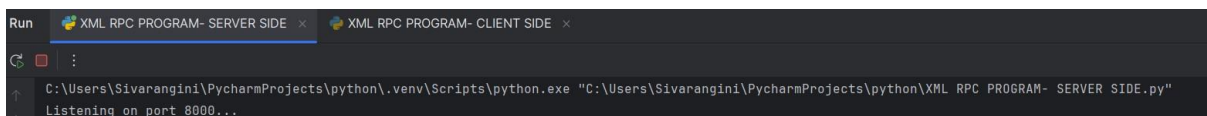
```
import xmlrpc.client
proxy= xmlrpc.client.ServerProxy('http://localhost:8000/')
while True:
 print("PRESS 1-->START || 2--> STOP ")
 c=int(input("ENTER YOUR CHOICE"))
 a=[]
 b=[]
 if c==1:
  print("ENTER THE ELEMENTS TO ADD FIRST LIST")
  print("PRESS -1 TO EXIT THIS LIST")
  while True:
   d=int(input("--->"))
   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))
```

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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
```
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Result:

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