

DA51 Lab Session 1 Part II : Python

Description:

Lab session 1 (Part II) focuses on distinguishing service, interface, and protocol, implementing a connection-oriented service, and using Python's socket library. Students will implement a service for reliable data transmission between a client and server.

The tow files:

Server.py

```
server.py ×
1  from socket import *
2
3  s = socket(AF_INET, SOCK_STREAM)
4  s.bind(("127.0.0.1", 12345))
5  s.listen(5)
6  while True: # forever
7      (conn, addr) = s.accept() # accept connection from client
8      data = conn.recv(1024) # receive data from client
9      if not data: break # stop if client stopped
10     print(data)
11     conn.send((str(data) + "*").encode('utf-8')) # return sent data plus an "*"
12     conn.close() # close the connection
```

Client.py

```
client.py ×
1  from socket import *
2
3  s = socket(AF_INET, SOCK_STREAM)
4  s.connect(("localhost", 12345)) # connect to server (block until accepted)
5  s.send('Hello, world'.encode('utf-8')) # send some data
6  data = s.recv(1024) # receive the response
7  print(data) # print the result
8  s.close() # close the connectio
```