

CODE :

```
import socket

def cal(g,a,p):
    res = pow(g,a,p)
    return(res)
client = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
client.connect(('127.0.0.1', 8080))
print(client.recv(100))
p = input("Enter first prime Number(P):")
g = input("Enter second prime number (G):")
client.send(str(p))
client.send(str(g))
b = input("Enter a number specific for User 2 :")
print("Calculating the value of B ")
B = cal(g,b,p)
print("value of B :" + str(B))
client.send(str(B))
A = client.recv(100)
print("Recieved value of A :" + A)
print("Calculating the value of Key K1 ")
K1 = cal(int(A),b,p)
print("value of Key K1 is :" + str(K1))
client.close()
```

OUTPUT :

Server Output:

I am server
Enter first prime Number(P):13
Enter second prime number (G):7
Enter a number specific for User 2 :3
Calculating the value of B
value of B :5
Recieved value of A :11
Calculating the value of Key K1
value of Key K1 is :5

Client Output:

First Prime Number : 13,Second Prime Number : 7
Enter a number specific for User 1 :5
Calculating the value of A
value of A :11
Received value of B :5
Calculating the value of Key K2
value of Key K2 is :5
client is disconnected