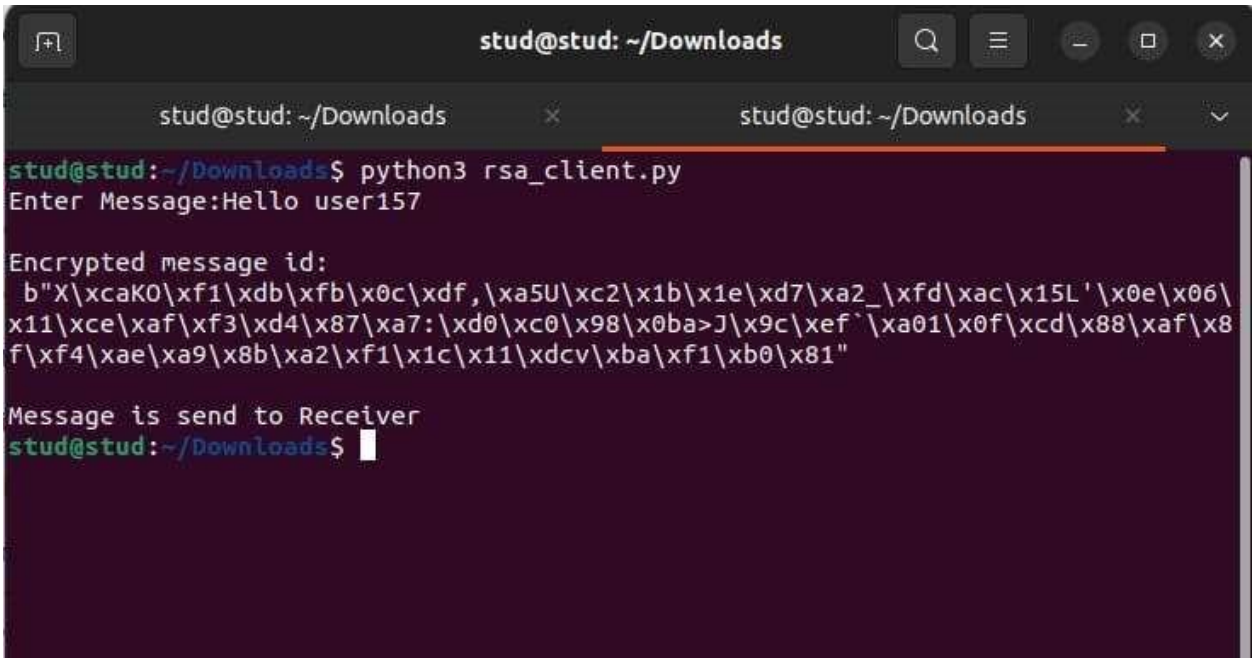
RSA-Client

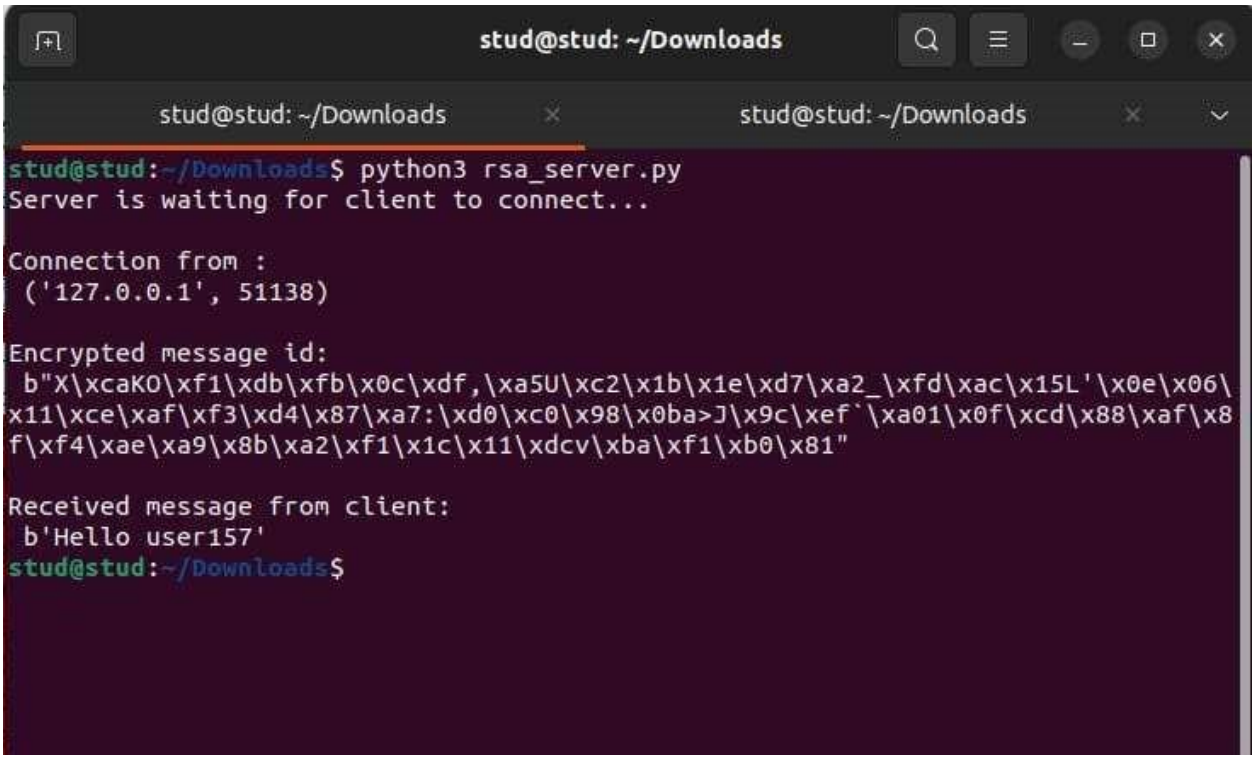
```
import socket
import rsa

client_socket=socket.socket(socket.AF_INET,socket.SOCK_STREAM)

host=socket.gethostname() port=9999

client_socket.connect((host,port))

public_key_data=client_socket.recv(1024)

public_key=rsa.PublicKey.load_pkcs1(public_key_data)

message=input('Enter Message:')

encrypted_message=rsa.encrypt(message.encode('u -8'),public_key)
print("\nEncrypted message id:\n",encrypted_message)

print("\nMessage is send to Receiver")
client_socket.send(encrypted_message)

client_socket.close()
```

RSA-Server:

```
import socket import
rsa
(public_key, private_key) = rsa.newkeys(512)


server_socket=socket.socket(socket.AF_INET,socket.SOCK_STREAM)

host=socket.gethostname()

port=9999
server_socket.bind((host,port))

server_socket.listen(5) print("Server is wai ng for
client to connect...\n")

(client_socket,client_address)=server_socket.accept()

print("Connec on from :\n",str(client_address))

client_socket.send(public_key.save_pkcs1())

encrypted_message=client_socket.recv(1024)

print("\nEncrypted message id:\n",encrypted_message)
message=rsa.decrypt(encrypted_message,private_key)

print("\nReceived message from client:\n",message)

client_socket.close()
```

Outputs:


stud@stud: ~/Downloads
stud@stud: ~/Downloads
stud@stud: ~/Downloads
stud@stud:~/Downloads$ python3 rsa_client.py
Enter Message:Hello user157
Encrypted message id:
b"X\xcaKO\xf1\xdb\xfb\x0c\xdf,\xa5U\xc2\x1b\x1e\xd7\xa2_\xfd\xac\x15L'\x0e\x06\
x11\xce\xaf\xf3\xd4\x87\xa7:\xd0\xc0\x98\x0ba>J\x9c\xef`\xa01\x0f\xcd\x88\xaf\x8
f\xf4\xae\xa9\x8b\xa2\xf1\x1c\x11\xdcv\xba\xf1\xb0\x81"
Message is send to Receiver
stud@stud:~/Downloads$


stud@stud: ~/Downloads
stud@stud: ~/Downloads
stud@stud: ~/Downloads
stud@stud:~/Downloads$ python3 rsa_server.py
Server is waiting for client to connect...
Connection from :
('127.0.0.1', 51138)
Encrypted message id:
b"X\xcaKO\xf1\xdb\xfb\x0c\xdf,\xa5U\xc2\x1b\x1e\xd7\xa2_\xfd\xac\x15L'\x0e\x06\
x11\xce\xaf\xf3\xd4\x87\xa7:\xd0\xc0\x98\x0ba>J\x9c\xef`\xa01\x0f\xcd\x88\xaf\x8
f\xf4\xae\xa9\x8b\xa2\xf1\x1c\x11\xdcv\xba\xf1\xb0\x81"
Received message from client:
b'Hello user157'
stud@stud:~/Downloads$