

CODE :-

Server.py

```
import socket
import sys

host=None
port=None
s=None
def create_socket()::
    global host
    global port
    global s
    host=""
    port=9999
    try:
        s=socket.socket()
    except socket.error as e:
        pass

def bind_socket()::
    global host
    global port
    global s
    try:
        s.bind((host,port))
        print("Listening...",end="")
        s.listen(5)
    except socket.error as e:
        bind_socket()

def socket_accept()::
    global host
    global port
    global s
    try:
        connection,address=s.accept()
        print(f"connection address: {address}")
        send_commands(connection)
        if connection:
            connection.close()
    except socket.error as e:
        pass

def send_commands(connection):
    while True:
        cmd= input("What to solve?\t=>")
        if cmd=="q":
            connection.send(str.encode(cmd))
            connection.close()
            s.close()
            sys.exit()
        if len(str.encode(cmd)):
            connection.send(str.encode(cmd))
            response=str(connection.recv(1024),"utf-8")
```

```

        print("Solution: ",response)

def main():
    create_socket()
    bind_socket()
    socket_accept()

main()

```

Client.py

```

import socket,math

host="100.80.5.251"
port=9999
s=socket.socket()

s.connect((host,port))
print("Client ready to solve...")
while True:
    data=str(s.recv(1024),'utf-8')
    if data=='q':
        s.close()
        break
    print("Solving: ",data)
    try:
        output=eval(data)
    except:
        output="Not a proper calculation"
    s.send(str.encode(str(output),'utf-8'))
    print("Sent result...")

```

OUTPUT :-

Server

```

Listening...connection address: ('100.80.5.251', 60985)
What to solve? =>5*5+5/5
Solution: 26.0
What to solve? =>math.pi*2
Solution: 6.283185307179586
What to solve? =>(10+6)*5
Solution: 80
What to solve? =>math.sin(50)
Solution: -0.26237485370392877
What to solve? =>math.cos(50)
Solution: 0.9649660284921133
What to solve? =>math.tan(50)
Solution: -0.27190061199763077
What to solve? =>math.sin(50)/math.cos(50)
Solution: -0.2719006119976307
What to solve? =>math.abs(-2.67)
Solution: Not a proper calculation
What to solve? =>abs(-2.67)

```

```
Solution: 2.67
What to solve? =>2.69%1.5
Solution: 1.19
What to solve? =>q
```

Client

```
Client ready to solve...
Solving: 5*5+5/5
Sent result...
Solving: math.pi*2
Sent result...
Solving: (10+6)*5
Sent result...
Solving: math.sin(50)
Sent result...
Solving: math.cos(50)
Sent result...
Solving: math.tan(50)
Sent result...
Solving: math.sin(50)/math.cos(50)
Sent result...
Solving: math.abs(-2.67)
Sent result...
Solving: abs(-2.67)
Sent result...
Solving: 2.69%1.5
Sent result...
```