

**A
Project Report
On
“VideoCall Using Python”**

Prepared by:

Parth Chodvadiya(16IT017)

Saurabh Borsiwala(16IT012)

Under the supervision of

Prof. Pinal Shah

A Report Submitted to
Charotar University of Science and Technology
for Partial Fulfillment of the Requirements for the
Degree of Bachelor of Technology
in Information Technology
IT345 Software Group Project-II (5th sem)

Submitted at



DEPARTMENT OF INFORMATION TECHNOLOGY

Chandubhai S. Patel Institute of Technology

At: Changa, Dist: Anand – 388421

October 2018



CERTIFICATE

This is to certify that the report entitled “**VideoCall in Python**” is a bonafied work carried out by **Parth Chodvadiya (16IT017)** and **Saurabh Borsiwala (16IT012)** under the guidance and supervision of **Prof. Pinal Shah** for the subject **Software Group Project-II (IT345)** of 5th Semester of Bachelor of Technology in **Information Technology** at Faculty of Technology & Engineering – CHARUSAT, Gujarat.

To the best of my knowledge and belief, this work embodies the work of candidate herself, has duly been completed, and fulfills the requirement of the ordinance relating to the B.Tech. Degree of the University and is up to the standard in respect of content, presentation and language for being referred to the examiner.

Under supervision of,

Prof. Pinal Shah
Assistant Professor
Dept. of Information Technology
CSPIT, Changa, Gujarat.

Dr. Parth Shah
Head & Associate Professor
Department of Information Technology
CSPIT, Changa, Gujarat.

Chandubhai S Patel Institute of Technology

At: Changa, Ta. Petlad, Dist. Anand, PIN: 388 421. Gujarat

TABLE OF CONTENTS

• Acknowledgement.....	5
• Abstract.....	6
• Chapter 1 Project Definition.....	7
• Chapter 2 Objective.....	8
• Chapter 3 Software and hardware requirement	9
• Chapter 4 Screenshots of the project output.....	10
• Chapter 5 Limitations	17
• Chapter 6 Outcome.....	18
• Chapter 7 Future enhancement.....	19
• References.....	20

LIST OF FIGURES

- **Fig 1.1 13**
- **Fig 1.2 13**
- **Fig 1.3 14**
- **Fig 1.4 14**
- **Fig 1.5 15**
- **Fig 1.6 16**

ACKNOWLEDGEMENT

We have found this rare opportunity to evince a word of thanks to all those who played a key role in the successful completion of our project. We sincerely thank our Head of Department **Parth Shah Sir** for giving the chance as well as support for all the time being. And his able guidance and continuous encouragement made us work in all the challenges during project development. We express deep gratitude to **Prof. Pinal Shah** assistant professor and internal project guide from Faculty of Engineering, CHARUSAT for their valuable suggestions, help and moral support. Finally, most of all, we thank our family members for their unconditional love, encouragement and support to complete our project work. We also thank to all those who could not find a separate name but have helped directly and indirectly.

Parth Chodvadiya (16IT017)

Saurabh Borsiwala (16IT012)

ABSTRACT

This application is useful to do VideoCall in Intranet. It's had hybrid architecture. It's work on only for same Network. Suddenly if you are in collage or some huge area of company who has in intranet between their different Department, Internet is goes down and their pc connected in same Network this application is useful to do VideoCall.

CHAPTER- 1:

PROJECT DEFINITION

- This project is user for communication of videocall .
- Project is an application to do VideoCall in same network and no needed to setup requirement of any server.
- Project is based on Desktop application, portable version and easy to use (more user friendly) for communication of two people.

CHAPTER- 2:

OBJECTIVE

- User has to insert friend's IP and click on Start
- **VideoCall:** User send his IP to the friend and friend has to insert that ip in his application and press start button. After press start button start VideoCall.
- Main purpose behind this project is to do videocall in the same network without internet connection.

CHAPTER-3:

SOFTWARE AND HARDWARE REQUIREMENT

❖ **Software Requirement :-**

PYTHON 2.X

❖ **Hardware Requirement :-**

512 MHZ or more processor

512 MB RAM

Web Camera

CHAPTER- 4:

SCREENSHOTS OF THE PROJECT OUTPUT

Coding Standards

1) Client.py :-

```
import socket, videosocket
import StringIO
from videofeed import VideoFeed
import sys

class Client:
    def __init__(self, ip_addr = "127.0.0.1"):
        self.client_socket = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
        self.client_socket.connect((ip_addr, 6000))
        self.vsock = videosocket.videosocket (self.client_socket)
        self.videofeed = VideoFeed(1,"client",1)
        self.data = StringIO.StringIO()

    def connect(self):
        while True:
            frame=self.videofeed.get_frame()
            self.vsock.vsend(frame)
            frame = self.vsock.vreceive()
            self.videofeed.set_frame(frame)
```

```
if __name__ == "__main__":  
    ip_addr = "192.168.43.59"  
    if len(sys.argv) == 2:  
        ip_addr = sys.argv[1]  
  
    print "Connecting to " + ip_addr + "...."  
    client = Client(ip_addr)  
    client.connect()
```

2) server.py:-

```
import socket, videosocket  
from videofeed import VideoFeed  
  
class Server:  
    def __init__(self):  
        self.server_socket = socket.socket(socket.AF_INET, socket.SOCK_STREAM)  
        self.server_socket.bind(("", 6000))  
        self.server_socket.listen(5)  
        self.videofeed = VideoFeed(1, "server", 1)  
        print "TCPServer Waiting for client on port 6000"  
  
    def start(self):  
        while 1:  
            client_socket, address = self.server_socket.accept()  
            print "I got a connection from ", address  
            vsock = videosocket.videosocket(client_socket)
```

```
        while True:

            frame=vsock.vreceive()

            self.videofeed.set_frame(frame)

            frame=self.videofeed.get_frame()

            vsock.vsend(frame)

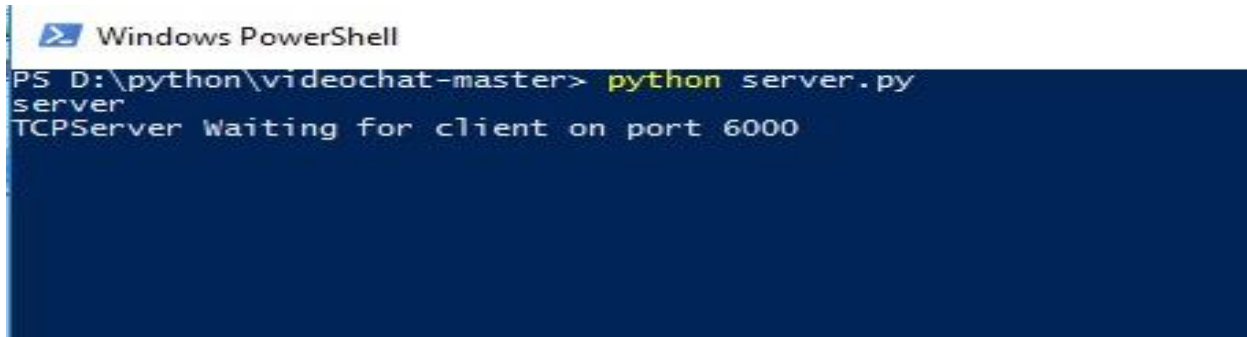

if __name__ == "__main__":

    server = Server()

    server.start()
```

Snapshots of project

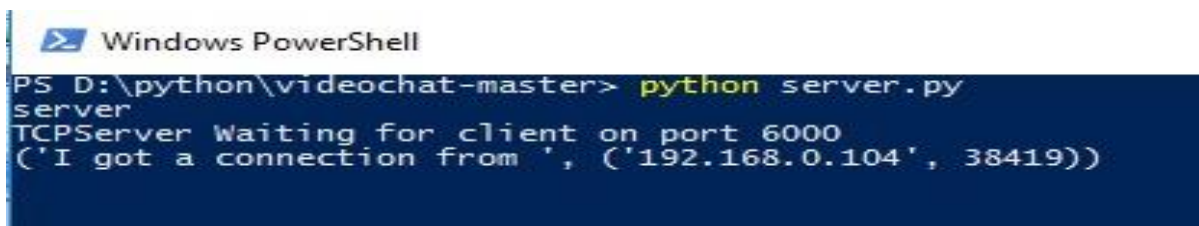
Fig 1.1



```
Windows PowerShell
PS D:\python\videochat-master> python server.py
server
TCPServer Waiting for client on port 6000
```

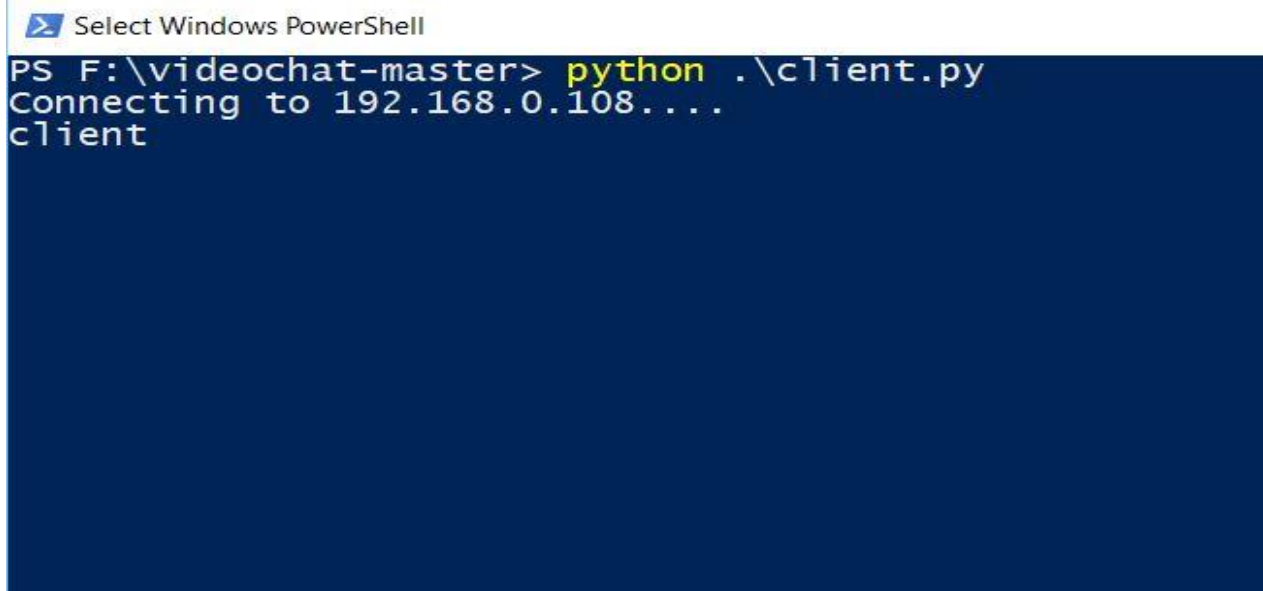
While Server is waiting for client

Fig 1.2



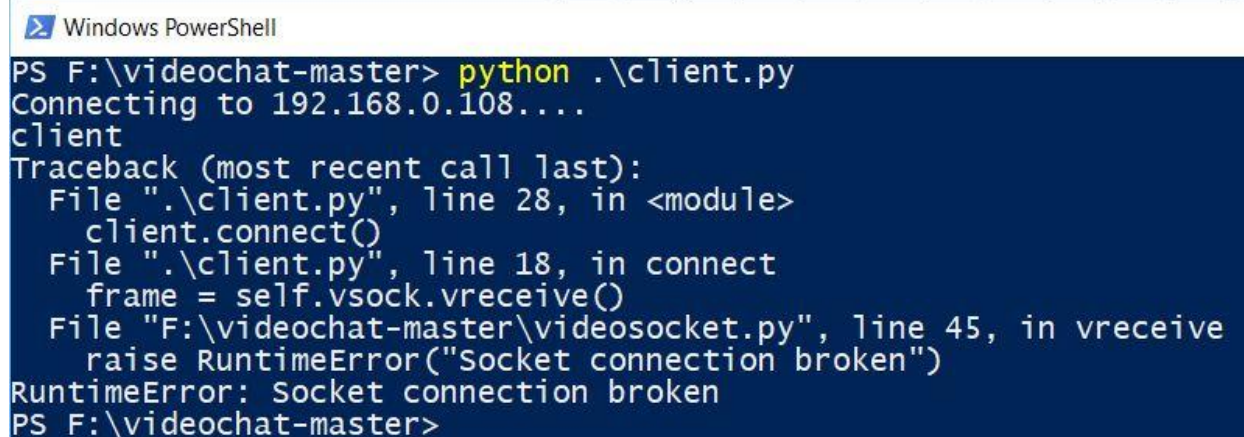
```
Windows PowerShell
PS D:\python\videochat-master> python server.py
server
TCPServer Waiting for client on port 6000
('I got a connection from ', ('192.168.0.104', 38419))
```

While Server Get Connection From Client

Fig 1.3

```
Select Windows PowerShell
PS F:\videochat-master> python .\client.py
Connecting to 192.168.0.108....
client
```

While client searching for Server

Fig 1.4

```
Windows PowerShell
PS F:\videochat-master> python .\client.py
Connecting to 192.168.0.108....
client
Traceback (most recent call last):
  File ".\client.py", line 28, in <module>
    client.connect()
  File ".\client.py", line 18, in connect
    frame = self.vsock.vreceive()
  File "F:\videochat-master\videocket.py", line 45, in vreceive
    raise RuntimeError("Socket connection broken")
RuntimeError: Socket connection broken
PS F:\videochat-master>
```

After closing Connection

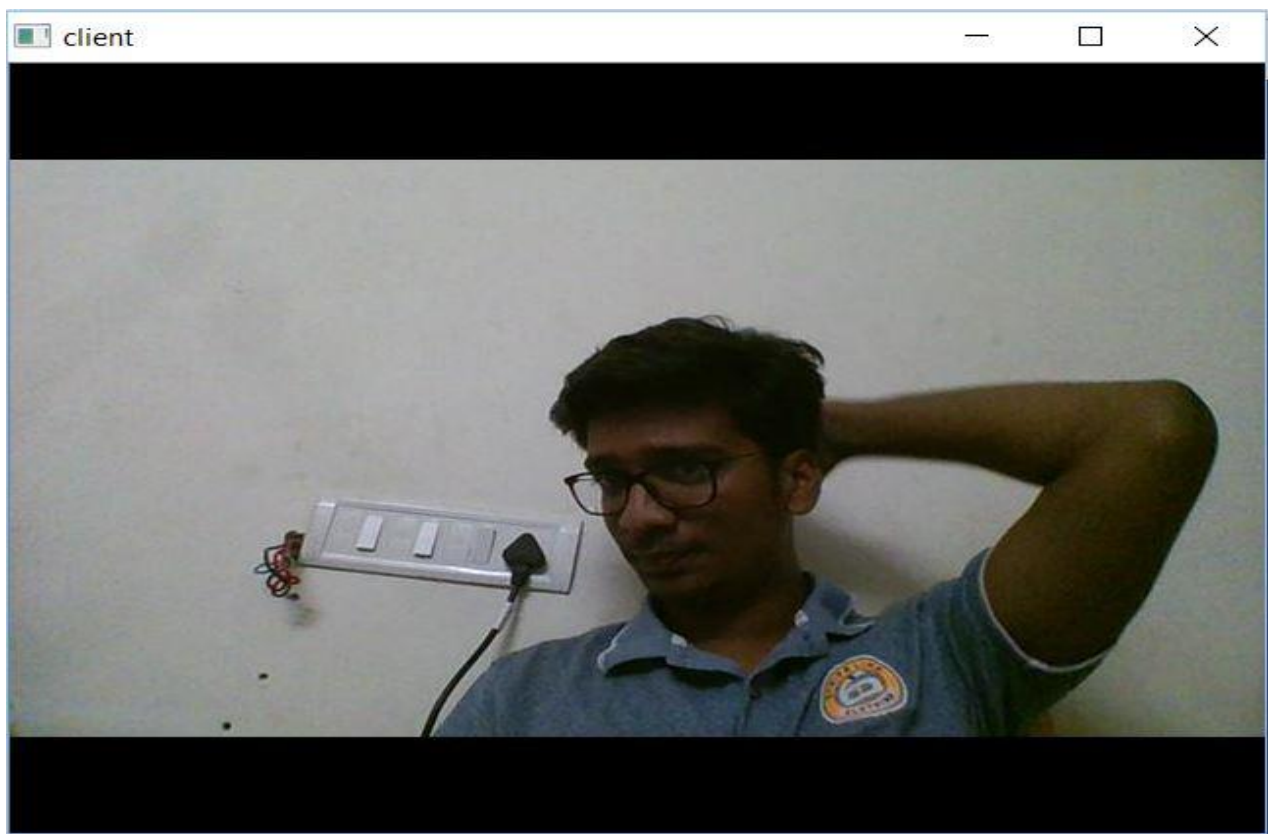
Fig 1.5**Client Window**

Fig 1.6**My Window**

CHAPTER-5

LIMITATIONS

- It is not use in Different Network.
- It has Not Voice .
- If os not given assecs to use camera,application can not useful.
- User has to give permission to assecs firewall.

CHAPTER 6 :

OUTCOME

- From this project we can do videocall to our friend who can connected in same network but at other place.
- From this project we can do videocall easily without any type of server.
- We can implement it without Internet connection.

CHAPTER 7

FUTURE ENHANCEMENT

- Project should be extended in such a way that after submitting your required things your data should have been seen by user and all the other people.
- Project should be extended in such a way that it can use easily and also add voice in videocall.
- We can also add groupcall and voicecall in this Project.
- We can upgrade textchat and make more userfriendly.

References:

- <https://docs.python.org/2/whatsnew/2.7.html>
- https://www.youtube.com/watch?v=UQi-L-_chcc&list=PLA175E8A1816CD64B
- <https://www.udemy.com/learn-python-2-and-3-side-by-side/>