PANJAB UNIVERSITY SWAMI SARVANAND GIRI REGIONAL
BAJWARA HOSHIARPUR

IPD

INOVATIVE PRODUCT DESIGN

CREATOR

NIKHIL KUMAR SRIVASTAVA(SG-19333)

CSE 2ND SEM

TABLE OF CONTENTS

1. INTODUCTION: -

Video chat App is a Web App which will help everyone to connected with each other. It is having a personal chat box no other can see the chat of you with proper security system.

2. PURPOSE: -

The Video chat App is made for the people who want that they communicate with each other in small area which means who will have the Django setup is his Pc only they can use it. The App is made for only personal use only.

3. Target Audience: -

The app will be targeted to that people only to those people which is allowed by the developer of app because the developer will be sharing this app only to those audience which he wants. The chat app will be making a personal room for them.

4. SCOPE: -

The app will help the people by saving the memory of phone by not downloading the other application for having fun by chatting and video calling and it will also help in saving the money we are using for internet connection.

5. PROJECT OBJECTIVES: -

The objective of the project is to build a full flagged static webapp with a tone to APIs that should fulfil all the requirements of the Video chat App like the text message, Audio call, Video call.

5.1 GOALS: -

As like of any project the very first goal is to complete the work on Time with all the functionalities working and with proper testing and bug fixings. Now coming to the others goals, the list is as follows:

1. Responsive Web APP

2. Models of video

3. Models of audio

4. Models of chatting

5. Dashboard of person online

6. Private room

7. Java Script

5.2 TASKS: -

a) Proper Environment Setup:

Before stating the actual coding, it is necessary that we should first set up the Development Environment for the whole team. It involves installing software's and adding Content delivery Network Links to the required sites in the project. The list is as follows:

a.1) Adobe Photoshop

a.2) ATOM Text editor

a.3) Brackets Text Editor

a.4) Bootstrap 4 CDN links

a.5) jQuery plugin links

a.6) Django

a.7) Team Viewer

a.8) Visual studio code editor

b) Frame Work building:

Even after the environment setup we could not start the core coding because the very next requirement is to build the frame work of the website which involves things like total number of pages, layout of every single page, which functionality should work on which page and how we are going to implement it and more things.

c) Designing:

Now, after when the frame work building is completed, the next step is to make a beautiful design because whenever a coder starts the

coding, he/she should not think about the design because it will ultimately reduce the efficiency of the coder. Not only this reason, design is very important for the website because everything in this world is first determined by the looks. If looks are not good, one is not going to like it and, in our case, it looks of our website is not good, and then visitors are not going to visit the website.

d) Coding:

This section involves the core development of the website that is the coding. As now layout and design are ready, coders can start working on the project. The most important and necessary thing for Web Developer is to build the website as is it is to the design given by the Web Designer.

e) Testing:

Now as the development of the website is completed it's the time for the Tester to start working. Testing can be done manually or automated. In our case we have done it manually. Testing is the one of the most essential part of any product-based project. It involves the checking if all the functionalities are working properly or not, if all the APIs are properly fetched or not, if all the web pages are properly aligned or not, if server is working properly or not, if all the pages are linked properly or not. In short, development is incomplete without testing.

f) Bug Fixing:

No any project is completed in the first run. Every app, every website is built in several versions. After the testing definitely several bugs occur. That bugs are then reported to the

Developer Team and now it's the duty of the developer team to fix them and send to tester for rechecking. We have also done our

project in the same way. Several bugs Occurs while coding that were fixed with time to time and even still now some bugs are not fixed.

g) Final Documentation:

Now after all the above steps completed, it's time for us to build a beautiful documentation of our project that contains the whole information about the Project like Objective, tasks, goals, working model, functionalities, milestone, theme, aim and many more. Documentation should be very beautiful because it is the complete image of your project and Image must be good.

5.3 RESOURCES: -

If we are talking about the resource then Human resource is the greatest valuable resource .We have a very strong team who workings with team coordination and not only a strong team we a strong guidance of our respected Seniors Chandan Bansal and Abhishek Dubey who guides us at every point of time and we are really thankful to them. Now, coming to our team we have been assigned with the specific work as follows:

   a) Nikhil (Full-Stack Developer and designer)

5.4 BUDGET: -

For a CSE group, Budget is not at all a problem. We just need a Laptop. The investment is only of time which we feel is more important than money. So, we have designed our budget based on time:

a) Module 1:

Designing Framework (4 days)

b) Module 2:

Page 1 + Page 2 (vision + Mission), (5 days)

c) Module 3:

Page 3 (Management Board), (4 days)

Page 4 + Page 5 (Project Page + Volunteers)

d) Module 4:

   Some External Website if required (5 days)

e) Module 5:

Final Finishing the Design (3 days)

f) Module 6:

Implementing functionalities (5 days)

g) Module 7:

1 Extra day if any kind of problem arises

Final: Approx. Time 30 days

6. MILESTONE: -

Description	Fixed Date
Kick Off	Project start date – June3,2020
Meetings	Total 10 meetings were held
Design	Design and layout must be completed till June12, 2020
Basic Structure	Basic structure of these website must be completed till June15,2020
Functionalities	All the functionalities and APIs must be completed till June19,2020
Testing	Testing should be done till July3,2020
Bug Fixing	Till June28,2020
Finishing	Design finishing should be done till July4,2020

7. ACRONYMS: -

API	Application Programming Interface
Video Chat App	Chat App

8. PROJECT CLIENT: -

Client Name	Sunil Kumar
Client Country	INDIA
Communication Language	English
Communication Time	24hrs
Project Title	Video Chat App
Starting Date	June3,2020
Deadline	July4,2020
Status	Continue

9. PROJECT MANAGER: -

NIKHIL KUMAR SRIVASTAVA is the manager of the project.

10. PROJECT GROUP: -

NAME	RESPONSIBILITIES
NIKHIL KUMAR SRIVASTAVA	Full Stack Developer

11. STEERING GROUP: -

Vrajesh Sharma	Training IN charge

12. REQUIREMENTS: -

Description	Completed
API	YES
Environmental setup (i)Visual Studio Code (ii) Brackets	YES
Bootstrap Framework	YES
jQuery Plugin	YES
Basic (i)HTML (ii)CSS (iii)JS	YES
Django	YES
Internet	YES
Team Viewer	YES
Npm	YES

13. PAGES: -

1. Home

2. Dialog Box (USER ID)

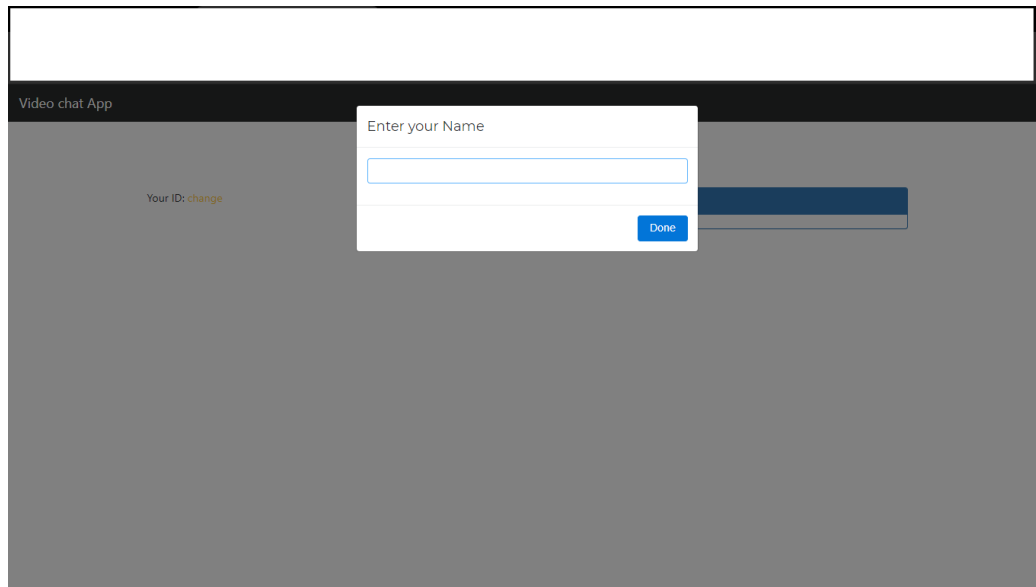3. Dashboard Online User

4. Chat Room

5. Video Call

6. Audio Call

14. PROJECT EXPERIENCE: -

(i) Positive and excellent experience during doing this project.

(ii) Learn Time management and get to know how to tackle problems.

(iii) Skills Improvement

(iv) Improve Mistakes.

18. REFERENCES:- Many Chat App
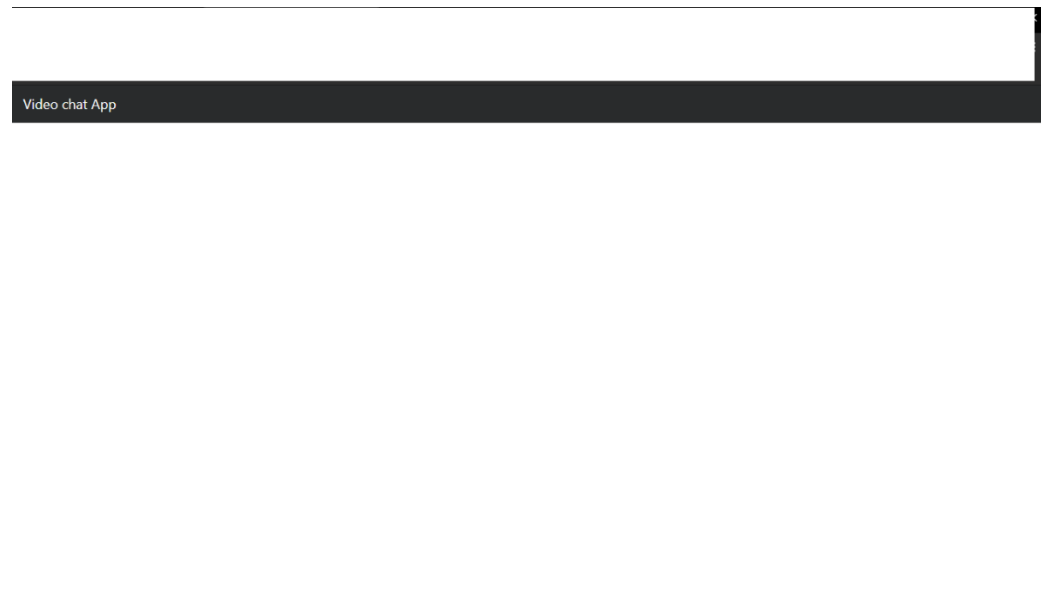
PAGES

Dialog Box

HTML CODE

```
<div class="modal" id="getUserNameModal" tabindex="-1" role="dialog" data-
keyboard="false" aria-labelledby="exampleModalLabel" aria-hidden="true" data-
backdrop='static'>
        <div class="modal-dialog" role="document">
            <div class="modal-content">
                <div class="modal-header">
                    <h5 class="modal-title" id="exampleModalLabel">Enter your Name</h5>
                </div>
                <div class="modal-body">
                    <div class="form-group">
                        <input type="text" class="form-control" id="user-name">
                    </div>
                </div>
                <div class="modal-footer">
                    <button type="button" data-dismiss="modal" class="btn btn-
primary username-done">Done</button>
                </div>
            </div>
        </div>
    </div>
```

CSS code

```css
body {
  overflow-x: hidden;
  font-family: "Roboto Slab", "Helvetica Neue", Helvetica, Arial, sans-serif;
}
.text-muted {
  color: #777777;
}
.text-primary {
  color: #fed136;
}
p {
  font-size: 14px;
  line-height: 1.75;
}
p.large {
  font-size: 16px;
}
a,
a:hover,
a:focus,
a:active,
a.active {
  outline: none;
}
a {
  color: #fed136;
}
a:hover,
a:focus,
a:active,
a.active {
  color: #fec503;
}
h1,
h2,
h3,
h4,
h5,
h6 {
  font-family: "Montserrat", "Helvetica Neue", Helvetica, Arial, sans-serif;
  font-weight: 300;
  display: initial;
}
header {
  text-align: center;
  color: #9e79e0;
  position: fixed;
  height: 100vh;
  width: 100vw;
  top: 0;
  left: 0;
```

```
}
header .intro-text {
  padding-top: 100px;
  padding-bottom: 50px;
}
```

Nav-Bar

Video chat App

HTML Code

```
<nav class="navbar navbar-toggleable-sm navbar-inverse fixed-top bg-inverse">
        <a class="navbar-brand" href="/">Video chat App</a>

    </nav>
```
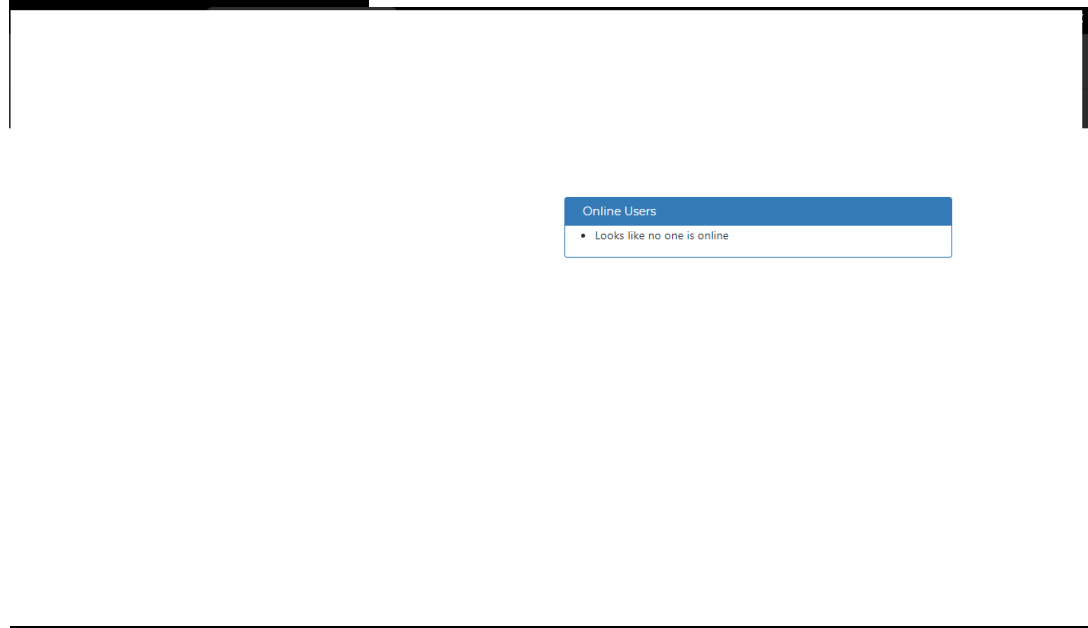
CSS Code

```
header {
    text-align: center;
    color: #9e79e0;
    position: fixed;
    height: 100vh;
    width: 100vw;
    top: 0;
    left: 0;
}

header .intro-text {
    padding-top: 100px;
    padding-bottom: 50px;
}
```

Dash Board

Online Users
- Looks like no one is online

HTML Code

```html
<div class="col-lg-6 col-md-6 mb-4">
            <div class="panel panel-primary">
                <div class="panel-heading">
                    <h3 class="panel-title">Online Users</h3>
                </div>
                <div class="panel-body">
                    <ul class="onlinepeers"></ul>
                </div>
            </div>
        </div>
    </div>
</section>

<div class="container-fluid chat-container">
    <div class="row">
    </div>
</div>
```

CSS Code

```css
header .intro-text .intro-heading {
    font-family: "Montserrat", "Helvetica Neue", Helvetica, Arial, sans-serif;
    text-transform: uppercase;
    font-weight: 700;
    font-size: 50px;
    line-height: 50px;
    margin-bottom: 25px;
}
```

```css
@media (min-width: 768px) {
    header .intro-text {
        padding-top: 300px;
        padding-bottom: 200px;
    }
    header .intro-text .intro-lead-in {
        font-family: "Droid Serif", "Helvetica Neue", Helvetica, Arial, sans-serif;
        font-style: italic;
        font-size: 40px;
        line-height: 40px;
        margin-bottom: 25px;
    }
    header .intro-text .intro-heading {
        font-family: "Montserrat", "Helvetica Neue", Helvetica, Arial, sans-serif;
        text-transform: uppercase;
        font-weight: 700;
        font-size: 75px;
        line-height: 75px;
        margin-bottom: 50px;
    }
}

section {
    padding: 100px 0;
}

section h2.section-heading {
    font-size: 40px;
    margin-top: 0;
    margin-bottom: 15px;
}

section h3.section-subheading {
    font-size: 16px;
    font-family: "Droid Serif", "Helvetica Neue", Helvetica, Arial, sans-serif;
    text-transform: none;
    font-style: italic;
    font-weight: 400;
    margin-bottom: 75px;
}

@media (min-width: 768px) {
    section {
        padding: 150px 0;
    }
}

.service-heading {
    margin: 15px 0;
    text-transform: none;
}

#portfolio .portfolio-item {
```

```css
    margin: 0 0 15px;
    right: 0;
}

#portfolio .portfolio-item .portfolio-link {
    display: block;
    position: relative;
    max-width: 400px;
    margin: 0 auto;
}

#portfolio .portfolio-item .portfolio-link .portfolio-hover {
    background: rgba(254, 209, 54, 0.9);
    position: absolute;
    width: 100%;
    height: 100%;
    opacity: 0;
    transition: all ease 0.5s;
    -webkit-transition: all ease 0.5s;
    -moz-transition: all ease 0.5s;
}

#portfolio .portfolio-item .portfolio-link .portfolio-hover:hover {
    opacity: 1;
}

#portfolio .portfolio-item .portfolio-link .portfolio-hover .portfolio-hover-content {
    position: absolute;
    width: 100%;
    height: 20px;
    font-size: 20px;
    text-align: center;
    top: 50%;
    margin-top: -12px;
    color: white;
}

#portfolio .portfolio-item .portfolio-link .portfolio-hover .portfolio-hover-content i {
    margin-top: -12px;
}

#portfolio .portfolio-item .portfolio-link .portfolio-hover .portfolio-hover-content h3,
#portfolio .portfolio-item .portfolio-link .portfolio-hover .portfolio-hover-
content h4 {
    margin: 0;
}

#portfolio .portfolio-item .portfolio-caption {
    max-width: 400px;
    margin: 0 auto;
    background-color: white;
    text-align: center;
    padding: 25px;
```

```
}

#portfolio .portfolio-item .portfolio-caption h4 {
    text-transform: none;
    margin: 0;
}

#portfolio .portfolio-item .portfolio-caption p {
    font-family: "Droid Serif", "Helvetica Neue", Helvetica, Arial, sans-serif;
    font-style: italic;
    font-size: 16px;
    margin: 0;
}

#portfolio * {
    z-index: 2;
}

@media (min-width: 767px) {
    #portfolio .portfolio-item {
        margin: 0 0 30px;
    }
}

.btn:focus,
.btn:active,
.btn.active,
.btn:active:focus {
    outline: none;
}
```
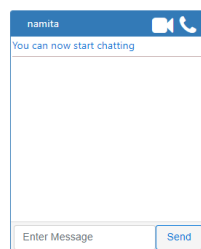
CHAT BOX

JS Code

```js
// Generate random room name if needed
if (!location.hash) {
  location.hash = Math.floor(Math.random() * 0xFFFFFF).toString(16);
}
const roomHash = location.hash.substring(1);

// TODO: Replace with your own channel ID
const drone = new ScaleDrone('yiS12Ts5RdNhebyM');
// Room name needs to be prefixed with 'observable-'
const roomName = 'observable-' + roomHash;
const configuration = {
  iceServers: [{
    urls: 'stun:stun.l.google.com:19302'
  }]
};
let room;
let pc;


function onSuccess() {};
function onError(error) {
  console.error(error);
};
```

CSS Code

```css
.portfolio-modal .modal-dialog {
    margin: 0;
    height: 100%;
    width: auto;
}

.portfolio-modal .modal-content {
    border-radius: 0;
    background-clip: border-box;
    -webkit-box-shadow: none;
    box-shadow: none;
    border: none;
    min-height: 100%;
    padding: 20px 0;
    text-align: center;
}

.portfolio-modal .modal-content h2 {
    margin-bottom: 15px;
    font-size: 3em;
}

.portfolio-modal .modal-content p {
```

```css
        margin-bottom: 30px;
}

.portfolio-modal .modal-content p.item-intro {
    margin: 20px 0 30px;
    font-family: "Droid Serif", "Helvetica Neue", Helvetica, Arial, sans-serif;
    font-style: italic;
    font-size: 16px;
}

.portfolio-modal .modal-content ul.list-inline {
    margin-bottom: 30px;
    margin-top: 0;
}

.portfolio-modal .modal-content img {
    margin-bottom: 30px;
}

.portfolio-modal .close-modal {
    position: absolute;
    width: 75px;
    height: 75px;
    background-color: transparent;
    top: 25px;
    right: 25px;
    cursor: pointer;
    z-index: 100;
}

.portfolio-modal .close-modal:hover {
    opacity: 0.3;
}

.portfolio-modal .close-modal .lr {
    height: 75px;
    width: 1px;
    margin-left: 35px;
    background-color: #222222;
    transform: rotate(45deg);
    -ms-transform: rotate(45deg);
    /* IE 9 */
    -webkit-transform: rotate(45deg);
    /* Safari and Chrome */
    z-index: 1051;
}

.portfolio-modal .close-modal .lr .rl {
    height: 75px;
    width: 1px;
    background-color: #222222;
    transform: rotate(90deg);
    -ms-transform: rotate(90deg);
```

```css
    /* IE 9 */
    -webkit-transform: rotate(90deg);
    /* Safari and Chrome */
    z-index: 1052;
}

.portfolio-modal .modal-backdrop {
    opacity: 0;
    display: none;
}

::-moz-selection {
    text-shadow: none;
    background: #fed136;
}

::selection {
    text-shadow: none;
    background: #fed136;
}

img::selection {
    background: transparent;
}

img::-moz-selection {
    background: transparent;
}

body {
    webkit-tap-highlight-color: #fed136;
}
```

Video Call & Voice Call

Video chat App

Incoming Video call from : namita

Reject   Accept

Your ID: nikhil change

• namita

namita		ramu	
You can now start chatting		You can now start chatting	
You:hi			
Enter Message	Send	Enter Message	Send

Video Call

🎤Mute Audio   📷Mute Video   ✖End Call

Video chat App

Incoming Voice call from : nam

Reject   Accept

Your ID: nikhil change

• nam

nam

You can now start chatting

Enter Message   Send

Voice Call

🔇Mute Audio   📷Mute Video   ✖End Call

HTML Code

```html
<div class="modal" id="callConfirmationModal" tabindex="-1" role="dialog" data-keyboard="false" aria-labelledby="exampleModalLabel" aria-hidden="true" data-backdrop='static'>
    <div class="modal-dialog" role="document">
        <div class="modal-content">
            <div class="modal-header">
                <h5 class="modal-title peer-name"></h5>
            </div>
            <div class="modal-body">
            </div>
            <div class="modal-footer">
```
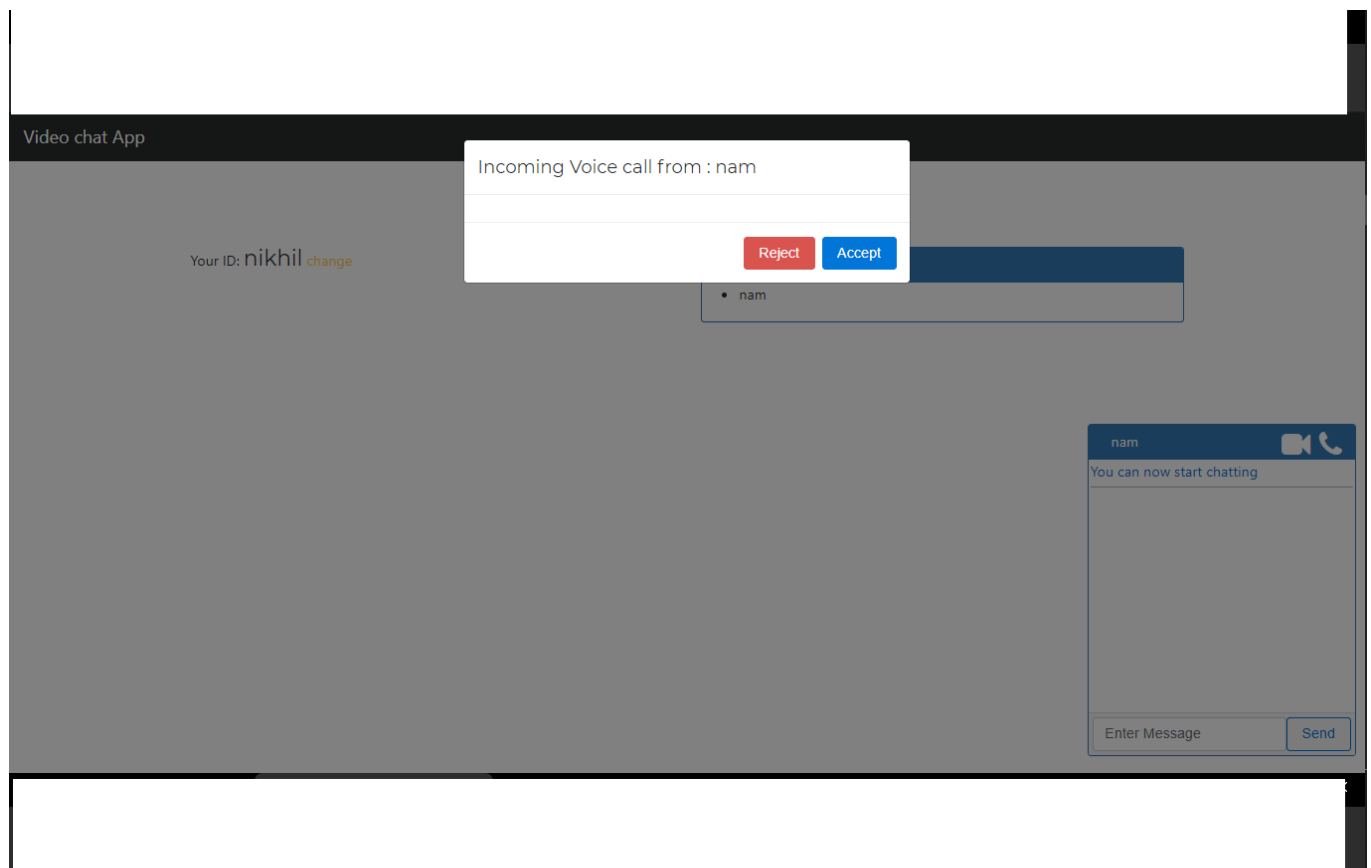
```html
                    <button type="button" class="btn btn-danger reject-call" data-
dismiss="modal">Reject</button>
                    <button type="button" class="btn btn-primary accept-call" data-
dismiss="modal">Accept</button>
                </div>
            </div>
        </div>
    </div>
```

```html
  <div class="portfolio-modal modal" id="videoCallPanel" tabindex="-
1" role="dialog" data-keyboard="false" aria-hidden="true">
        <div class="modal-dialog">
            <div class="modal-content">
                <div class="close-modal end-call hide" data-dismiss="modal">
                    <div class="lr">
                        <div class="rl">
                        </div>
                    </div>
                </div>
                <div class="container">
                    <div class="row">
                        <div class="col-lg-12">
                            <div class="modal-body">
                                <!-- Project Details Go Here -->
                                <h2 class="title">Video Call</h2>
                                <div class="pure-u-2-3" id="video-container">
                                    <video id="their-video" autoplay=""></video>
                                    <video id="my-
video" muted="true" autoplay=""></video>
                                </div>

                                <div class="text-center mt-3">
                                    <button type="button" class="btn btn-secondary mute-
audio ml-3 mt-2"><i class="fa fa-microphone-slash"></i>Mute Audio</button>
                                    <button type="button" class="btn btn-secondary mute-
video ml-3 mt-2"><i class="fa fa-video-camera"></i>Mute Video</button>
                                    <button type="button" class="btn btn-danger end-
call ml-3 mt-2" data-dismiss="modal"><i class="fa fa-times"></i>End Call</button>
                                </div>
                            </div>
                        </div>
                    </div>
                </div>
            </div>
```

CSS Code

```css
.panel-title {
    margin-top: 0;
    margin-bottom: 0;
    font-size: 16px;
```

```css
    color: inherit;
    padding: 10px;
}

.panel-title>a,
.panel-title>small,
.panel-title>.small,
.panel-title>small>a,
.panel-title>.small>a {
    color: inherit;
}

.panel-footer {
    padding: 5px;
    background-color: #f5f5f5;
    border-top: 1px solid #ddd;
    border-bottom-right-radius: 3px;
    border-bottom-left-radius: 3px;
}

.panel>.list-group,
.panel>.panel-collapse>.list-group {
    margin-bottom: 0;
}

.panel>.list-group .list-group-item,
.panel>.panel-collapse>.list-group .list-group-item {
    border-width: 1px 0;
    border-radius: 0;
}

.panel>.list-group:first-child .list-group-item:first-child,
.panel>.panel-collapse>.list-group:first-child .list-group-item:first-child {
    border-top: 0;
    border-top-left-radius: 3px;
    border-top-right-radius: 3px;
}

.panel>.list-group:last-child .list-group-item:last-child,
.panel>.panel-collapse>.list-group:last-child .list-group-item:last-child {
    border-bottom: 0;
    border-bottom-right-radius: 3px;
    border-bottom-left-radius: 3px;
}

.panel>.panel-heading+.panel-collapse>.list-group .list-group-item:first-child {
    border-top-left-radius: 0;
    border-top-right-radius: 0;
}

.panel-heading+.list-group .list-group-item:first-child {
    border-top-width: 0;
}
```

```css
.list-group+.panel-footer {
    border-top-width: 0;
}

.panel-group {
    margin-bottom: 20px;
}

.panel-group .panel {
    margin-bottom: 0;
    border-radius: 4px;
}

.panel-group .panel+.panel {
    margin-top: 5px;
}

.panel-group .panel-heading {
    border-bottom: 0;
}

.panel-group .panel-heading+.panel-collapse>.panel-body,
.panel-group .panel-heading+.panel-collapse>.list-group {
    border-top: 1px solid #ddd;
}

.panel-group .panel-footer {
    border-top: 0;
}

.panel-group .panel-footer+.panel-collapse .panel-body {
    border-bottom: 1px solid #ddd;
}

.panel-default {
    border-color: #ddd;
}

.panel-default>.panel-heading {
    color: #333;
    background-color: #f5f5f5;
    border-color: #ddd;
}

.panel-default>.panel-heading+.panel-collapse>.panel-body {
    border-top-color: #ddd;
}

.panel-default>.panel-heading .badge {
    color: #f5f5f5;
    background-color: #333;
}
```

```css
.panel-default>.panel-footer+.panel-collapse>.panel-body {
    border-bottom-color: #ddd;
}

.panel-primary {
    border-color: #337ab7;
}

.panel-primary>.panel-heading {
    color: #fff;
    background-color: #337ab7;
    border-color: #337ab7;
}

.panel-primary>.panel-heading+.panel-collapse>.panel-body {
    border-top-color: #337ab7;
}

.panel-primary>.panel-heading .badge {
    color: #337ab7;
    background-color: #fff;
}

.panel-primary>.panel-footer+.panel-collapse>.panel-body {
    border-bottom-color: #337ab7;
}

.panel-success {
    border-color: #d6e9c6;
}

.panel-success>.panel-heading {
    color: #3c763d;
    background-color: #dff0d8;
    border-color: #d6e9c6;
}

.panel-success>.panel-heading+.panel-collapse>.panel-body {
    border-top-color: #d6e9c6;
}

.panel-success>.panel-heading .badge {
    color: #dff0d8;
    background-color: #3c763d;
}

.panel-success>.panel-footer+.panel-collapse>.panel-body {
    border-bottom-color: #d6e9c6;
}

.panel-info {
    border-color: #bce8f1;
```

```css
}

.panel-info>.panel-heading {
    color: #31708f;
    background-color: #d9edf7;
    border-color: #bce8f1;
}

.panel-info>.panel-heading+.panel-collapse>.panel-body {
    border-top-color: #bce8f1;
}

.panel-info>.panel-heading .badge {
    color: #d9edf7;
    background-color: #31708f;
}

.panel-info>.panel-footer+.panel-collapse>.panel-body {
    border-bottom-color: #bce8f1;
}

.panel-warning {
    border-color: #faebcc;
}
```

JS Code

```javascript
drone.on('open', error => {
  if (error) {
    return console.error(error);
  }
  room = drone.subscribe(roomName);
  room.on('open', error => {
    if (error) {
      onError(error);
    }
  });
  // We're connected to the room and received an array of 'members'
  // connected to the room (including us). Signaling server is ready.
  room.on('members', members => {
    console.log('MEMBERS', members);
    // If we are the second user to connect to the room we will be creating the offer
    const isOfferer = members.length === 2;
    startWebRTC(isOfferer);
  });
});

// Send signaling data via Scaledrone
function sendMessage(message) {
  drone.publish({
    room: roomName,
    message
```

```javascript
    });
}

function startWebRTC(isOfferer) {
  pc = new RTCPeerConnection(configuration);

  // 'onicecandidate' notifies us whenever an ICE agent needs to deliver a
  // message to the other peer through the signaling server
  pc.onicecandidate = event => {
    if (event.candidate) {
      sendMessage({'candidate': event.candidate});
    }
  };

  // If user is offerer let the 'negotiationneeded' event create the offer
  if (isOfferer) {
    pc.onnegotiationneeded = () => {
      pc.createOffer().then(localDescCreated).catch(onError);
    }
  }

  // When a remote stream arrives display it in the #remoteVideo element
  pc.ontrack = event => {
    const stream = event.streams[0];
    if (!remoteVideo.srcObject || remoteVideo.srcObject.id !== stream.id) {
      remoteVideo.srcObject = stream;
    }
  };

  navigator.mediaDevices.getUserMedia({
    audio: true,
    video: true,
  }).then(stream => {
    // Display your local video in #localVideo element
    localVideo.srcObject = stream;
    // Add your stream to be sent to the conneting peer
    stream.getTracks().forEach(track => pc.addTrack(track, stream));
  }, onError);

  // Listen to signaling data from Scaledrone
  room.on('data', (message, client) => {
    // Message was sent by us
    if (client.id === drone.clientId) {
      return;
    }

    if (message.sdp) {
      // This is called after receiving an offer or answer from another peer
      pc.setRemoteDescription(new RTCSessionDescription(message.sdp), () => {
        // When receiving an offer lets answer it
        if (pc.remoteDescription.type === 'offer') {
          pc.createAnswer().then(localDescCreated).catch(onError);
        }
```

```
      }, onError);
    } else if (message.candidate) {
      // Add the new ICE candidate to our connections remote description
      pc.addIceCandidate(
        new RTCIceCandidate(message.candidate), onSuccess, onError
      );
    }
  });
}

function localDescCreated(desc) {
  pc.setLocalDescription(
    desc,
    () => sendMessage({'sdp': pc.localDescription}),
    onError
  );
}
```

Backend Coding Python & Django

Asgi.py

```
"""
ASGI config for chat project.

It exposes the ASGI callable as a module-level variable named ``application``.

For more information on this file, see
https://docs.djangoproject.com/en/3.0/howto/deployment/asgi/
"""

import os

from django.core.asgi import get_asgi_application

os.environ.setdefault('DJANGO_SETTINGS_MODULE', 'chat.settings')

application = get_asgi_application()
```

Settings.py

```
"""
Django settings for chat project.

Generated by 'django-admin startproject' using Django 3.0.7.

For more information on this file, see
```

```
https://docs.djangoproject.com/en/3.0/topics/settings/

For the full list of settings and their values, see
https://docs.djangoproject.com/en/3.0/ref/settings/
"""

import os

# Build paths inside the project like this: os.path.join(BASE_DIR, ...)
BASE_DIR = os.path.dirname(os.path.dirname(os.path.abspath(__file__)))


# Quick-start development settings - unsuitable for production
# See https://docs.djangoproject.com/en/3.0/howto/deployment/checklist/

# SECURITY WARNING: keep the secret key used in production secret!
SECRET_KEY = '&w87y&j^q#e9b)06eco2#prea(6%-i7x-64*!-%a^p=5m+w-bv'

# SECURITY WARNING: don't run with debug turned on in production!
DEBUG = True

ALLOWED_HOSTS = []


# Application definition

INSTALLED_APPS = [
    'myapp',
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
]

MIDDLEWARE = [
    'django.middleware.security.SecurityMiddleware',
    'django.contrib.sessions.middleware.SessionMiddleware',
    'django.middleware.common.CommonMiddleware',
    'django.middleware.csrf.CsrfViewMiddleware',
    'django.contrib.auth.middleware.AuthenticationMiddleware',
    'django.contrib.messages.middleware.MessageMiddleware',
    'django.middleware.clickjacking.XFrameOptionsMiddleware',
]

ROOT_URLCONF = 'chat.urls'

TEMPLATES = [
    {
        'BACKEND': 'django.template.backends.django.DjangoTemplates',
        'DIRS': [],
        'APP_DIRS': True,
```

```python
        'OPTIONS': {
            'context_processors': [
                'django.template.context_processors.debug',
                'django.template.context_processors.request',
                'django.contrib.auth.context_processors.auth',
                'django.contrib.messages.context_processors.messages',
            ],
        },
    },
]


WSGI_APPLICATION = 'chat.wsgi.application'



# Database
# https://docs.djangoproject.com/en/3.0/ref/settings/#databases

DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.sqlite3',
        'NAME': os.path.join(BASE_DIR, 'db.sqlite3'),
    }
}



# Password validation
# https://docs.djangoproject.com/en/3.0/ref/settings/#auth-password-validators

AUTH_PASSWORD_VALIDATORS = [
    {
        'NAME': 'django.contrib.auth.password_validation.UserAttributeSimilarityValidato
r',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.MinimumLengthValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.CommonPasswordValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.NumericPasswordValidator',
    },
]



# Internationalization
# https://docs.djangoproject.com/en/3.0/topics/i18n/

LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'UTC'

USE_I18N = True
```

```python
USE_L10N = True

USE_TZ = True


# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/3.0/howto/static-files/

STATIC_URL = '/static/'

STATICFILES_DIRS  =  [
    os.path.join(BASE_DIR, 'project/static')
    ]

STATIC_ROOT= os.path.join(BASE_DIR, 'static')
STATIC_URL = '/static/'

MEDIA_ROOT= os.path.join(BASE_DIR, 'media')
MEDIA_URL = '/media/'
```

Main urls.py

```python
"""chat URL Configuration

The `urlpatterns` list routes URLs to views. For more information please see:
    https://docs.djangoproject.com/en/3.0/topics/http/urls/
Examples:
Function views
    1. Add an import:  from my_app import views
    2. Add a URL to urlpatterns:  path('', views.home, name='home')
Class-based views
    1. Add an import:  from other_app.views import Home
    2. Add a URL to urlpatterns:  path('', Home.as_view(), name='home')
Including another URLconf
    1. Import the include() function: from django.urls import include, path
    2. Add a URL to urlpatterns:  path('blog/', include('blog.urls'))
"""
from django.contrib import admin
from django.urls import path,include
from django.conf import settings
from django.conf.urls.static import static

urlpatterns = [
    path('admin/', admin.site.urls),
    path("",include('myapp.urls')),

]
```

Wsgi.py

```
"""
WSGI config for chat project.

It exposes the WSGI callable as a module-level variable named ``application``.

For more information on this file, see
https://docs.djangoproject.com/en/3.0/howto/deployment/wsgi/
"""

import os

from django.core.wsgi import get_wsgi_application

os.environ.setdefault('DJANGO_SETTINGS_MODULE', 'chat.settings')

application = get_wsgi_application()
```

APP urls.py

```
from django.urls import path
from .  import views

urlpatterns = [
    path('',views.home, name='home')
]
```

Views.py

```
from django.shortcuts import render

# Create your views here.
def home(request):
    return render(request,'home.html')
```

Full HTML Code

```html
<!DOCTYPE html>
<html lang="en">
{% load static %}
<head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <meta name="description" content="">
    <meta name="author" content="">
    <title>Video Chat</title>
    <!-- Bootstrap Core CSS -->
```

```html
    <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-
alpha.6/css/bootstrap.min.css">
    <!-- Custom Fonts -->
    <link href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-
awesome.min.css" rel="stylesheet" type="text/css">
    <link href="https://fonts.googleapis.com/css?family=Montserrat:400,700" rel="stylesh
eet" type="text/css">
    <link href='https://fonts.googleapis.com/css?family=Kaushan+Script' rel='stylesheet'
 type='text/css'>
    <link href='https://fonts.googleapis.com/css?family=Droid+Serif:400,700,400italic,70
0italic' rel='stylesheet' type='text/css'>
    <link href='https://fonts.googleapis.com/css?family=Roboto+Slab:400,100,300,700' rel
='stylesheet' type='text/css'>
    <!-- Theme CSS -->
    <link href="{% static 'css/agency.css' %}" rel="stylesheet">
</head>

<body>
    <nav class="navbar navbar-toggleable-sm navbar-inverse fixed-top bg-inverse">
        <a class="navbar-brand" href="/">Video chat App</a>

    </nav>

    <section id="chat-app">
        <div class="container">
            <div class="row">
                <div class="col-lg-6 col-md-6 mb-4">
                    Your ID: <h4 id="peer-id" data-toggle="tooltip" data-
placement="top" title="Click to copy peer ID"></h3>
                    <a href="#getUserNameModal" data-toggle="modal">change</a>
                </div>
                <div class="col-lg-6 col-md-6 mb-5 hide">
                    <div class="form-inline">
                        <div class="form-group mr-sm-3">
                            <label for="inputPeerUserId" class="sr-
only">Password</label>
                            <input type="text" class="form-
control" id="inputPeerUserId" placeholder="Enter your friends ID">
                        </div>
                        <button type="button" class="btn btn-outline-
primary" id='connect-btn'>Connect</button>
                    </div>
                </div>
                <div class="col-lg-6 col-md-6 mb-4">
                    <div class="panel panel-primary">
                        <div class="panel-heading">
                            <h3 class="panel-title">Online Users</h3>
                        </div>
                        <div class="panel-body">
                            <ul class="onlinepeers"></ul>
                        </div>
                    </div>
                </div>
```

```html
                </div>
            </div>
        </section>

        <div class="container-fluid chat-container">
            <div class="row">
            </div>
        </div>

        <!-- Portfolio Modals -->
        <!-- Use the modals below to showcase details about your portfolio projects! -->
        <!-- Portfolio Modal 1 -->
        <div class="portfolio-modal modal" id="videoCallPanel" tabindex="-
1" role="dialog" data-keyboard="false" aria-hidden="true">
            <div class="modal-dialog">
                <div class="modal-content">
                    <div class="close-modal end-call hide" data-dismiss="modal">
                        <div class="lr">
                            <div class="rl">
                            </div>
                        </div>
                    </div>
                    <div class="container">
                        <div class="row">
                            <div class="col-lg-12">
                                <div class="modal-body">
                                    <!-- Project Details Go Here -->
                                    <h2 class="title">Video Call</h2>
                                    <div class="pure-u-2-3" id="video-container">
                                        <video id="their-video" autoplay=""></video>
                                        <video id="my-
video" muted="true" autoplay=""></video>
                                    </div>

                                    <div class="text-center mt-3">
                                        <button type="button" class="btn btn-secondary mute-
audio ml-3 mt-2"><i class="fa fa-microphone-slash"></i>Mute Audio</button>
                                        <button type="button" class="btn btn-secondary mute-
video ml-3 mt-2"><i class="fa fa-video-camera"></i>Mute Video</button>
                                        <button type="button" class="btn btn-danger end-
call ml-3 mt-2" data-dismiss="modal"><i class="fa fa-times"></i>End Call</button>
                                    </div>
                                </div>
                            </div>
                        </div>
                    </div>
                </div>
            </div>
        </div>

        <div class="modal" id="getUserNameModal" tabindex="-1" role="dialog" data-
keyboard="false" aria-labelledby="exampleModalLabel" aria-hidden="true" data-
backdrop='static'>
```

```html
        <div class="modal-dialog" role="document">
            <div class="modal-content">
                <div class="modal-header">
                    <h5 class="modal-title" id="exampleModalLabel">Enter your Name</h5>
                </div>
                <div class="modal-body">
                    <div class="form-group">
                        <input type="text" class="form-control" id="user-name">
                    </div>
                </div>
                <div class="modal-footer">
                    <button type="button" data-dismiss="modal" class="btn btn-primary username-done">Done</button>
                </div>
            </div>
        </div>
    </div>


    <!-- Modal -->
    <div class="modal" id="callConfirmationModal" tabindex="-1" role="dialog" data-keyboard="false" aria-labelledby="exampleModalLabel" aria-hidden="true" data-backdrop='static'>
        <div class="modal-dialog" role="document">
            <div class="modal-content">
                <div class="modal-header">
                    <h5 class="modal-title peer-name"></h5>
                </div>
                <div class="modal-body">
                </div>
                <div class="modal-footer">
                    <button type="button" class="btn btn-danger reject-call" data-dismiss="modal">Reject</button>
                    <button type="button" class="btn btn-primary accept-call" data-dismiss="modal">Accept</button>
                </div>
            </div>
        </div>
    </div>


    <script src="https://ajax.googleapis.com/ajax/libs/jquery/2.2.4/jquery.min.js"></script>
    <script src="https://cdnjs.cloudflare.com/ajax/libs/tether/1.4.0/js/tether.min.js"></script>

    <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-alpha.6/js/bootstrap.min.js"></script>

    <script src="{% static 'js/peer.js' %}"></script>
    <script src="{% static 'js/app.js' %}"></script>
    <script src="{% static 'js/peer-client.js' %}"></script>
</body>
```

```
</html>
```

Full CSS CODE

```css
body {
    overflow-x: hidden;
    font-family: "Roboto Slab", "Helvetica Neue", Helvetica, Arial, sans-serif;
}

.text-muted {
    color: #777777;
}

.text-primary {
    color: #fed136;
}

p {
    font-size: 14px;
    line-height: 1.75;
}

p.large {
    font-size: 16px;
}

a,
a:hover,
a:focus,
a:active,
a.active {
    outline: none;
}

a {
    color: #fed136;
}

a:hover,
a:focus,
a:active,
a.active {
    color: #fec503;
}

h1,
h2,
h3,
h4,
h5,
h6 {
    font-family: "Montserrat", "Helvetica Neue", Helvetica, Arial, sans-serif;
```

```css
    font-weight: 300;
    display: initial;
}

header {
    text-align: center;
    color: #9e79e0;
    position: fixed;
    height: 100vh;
    width: 100vw;
    top: 0;
    left: 0;
}

header .intro-text {
    padding-top: 100px;
    padding-bottom: 50px;
}

header .intro-text .intro-lead-in {
    font-family: "Droid Serif", "Helvetica Neue", Helvetica, Arial, sans-serif;
    font-style: italic;
    font-size: 22px;
    line-height: 22px;
    margin-bottom: 25px;
}

header .intro-text .intro-heading {
    font-family: "Montserrat", "Helvetica Neue", Helvetica, Arial, sans-serif;
    text-transform: uppercase;
    font-weight: 700;
    font-size: 50px;
    line-height: 50px;
    margin-bottom: 25px;
}

@media (min-width: 768px) {
    header .intro-text {
        padding-top: 300px;
        padding-bottom: 200px;
    }
    header .intro-text .intro-lead-in {
        font-family: "Droid Serif", "Helvetica Neue", Helvetica, Arial, sans-serif;
        font-style: italic;
        font-size: 40px;
        line-height: 40px;
        margin-bottom: 25px;
    }
    header .intro-text .intro-heading {
        font-family: "Montserrat", "Helvetica Neue", Helvetica, Arial, sans-serif;
        text-transform: uppercase;
        font-weight: 700;
        font-size: 75px;
```

```css
        line-height: 75px;
        margin-bottom: 50px;
    }
}

section {
    padding: 100px 0;
}

section h2.section-heading {
    font-size: 40px;
    margin-top: 0;
    margin-bottom: 15px;
}

section h3.section-subheading {
    font-size: 16px;
    font-family: "Droid Serif", "Helvetica Neue", Helvetica, Arial, sans-serif;
    text-transform: none;
    font-style: italic;
    font-weight: 400;
    margin-bottom: 75px;
}

@media (min-width: 768px) {
    section {
        padding: 150px 0;
    }
}

.service-heading {
    margin: 15px 0;
    text-transform: none;
}

#portfolio .portfolio-item {
    margin: 0 0 15px;
    right: 0;
}

#portfolio .portfolio-item .portfolio-link {
    display: block;
    position: relative;
    max-width: 400px;
    margin: 0 auto;
}

#portfolio .portfolio-item .portfolio-link .portfolio-hover {
    background: rgba(254, 209, 54, 0.9);
    position: absolute;
    width: 100%;
    height: 100%;
    opacity: 0;
```

```css
    transition: all ease 0.5s;
    -webkit-transition: all ease 0.5s;
    -moz-transition: all ease 0.5s;
}

#portfolio .portfolio-item .portfolio-link .portfolio-hover:hover {
    opacity: 1;
}

#portfolio .portfolio-item .portfolio-link .portfolio-hover .portfolio-hover-content {
    position: absolute;
    width: 100%;
    height: 20px;
    font-size: 20px;
    text-align: center;
    top: 50%;
    margin-top: -12px;
    color: white;
}

#portfolio .portfolio-item .portfolio-link .portfolio-hover .portfolio-hover-content i {
    margin-top: -12px;
}

#portfolio .portfolio-item .portfolio-link .portfolio-hover .portfolio-hover-content h3,
#portfolio .portfolio-item .portfolio-link .portfolio-hover .portfolio-hover-
content h4 {
    margin: 0;
}

#portfolio .portfolio-item .portfolio-caption {
    max-width: 400px;
    margin: 0 auto;
    background-color: white;
    text-align: center;
    padding: 25px;
}

#portfolio .portfolio-item .portfolio-caption h4 {
    text-transform: none;
    margin: 0;
}

#portfolio .portfolio-item .portfolio-caption p {
    font-family: "Droid Serif", "Helvetica Neue", Helvetica, Arial, sans-serif;
    font-style: italic;
    font-size: 16px;
    margin: 0;
}

#portfolio * {
    z-index: 2;
}
```

```css
@media (min-width: 767px) {
    #portfolio .portfolio-item {
        margin: 0 0 30px;
    }
}

.btn:focus,
.btn:active,
.btn.active,
.btn:active:focus {
    outline: none;
}

.portfolio-modal .modal-dialog {
    margin: 0;
    height: 100%;
    width: auto;
}

.portfolio-modal .modal-content {
    border-radius: 0;
    background-clip: border-box;
    -webkit-box-shadow: none;
    box-shadow: none;
    border: none;
    min-height: 100%;
    padding: 20px 0;
    text-align: center;
}

.portfolio-modal .modal-content h2 {
    margin-bottom: 15px;
    font-size: 3em;
}

.portfolio-modal .modal-content p {
    margin-bottom: 30px;
}

.portfolio-modal .modal-content p.item-intro {
    margin: 20px 0 30px;
    font-family: "Droid Serif", "Helvetica Neue", Helvetica, Arial, sans-serif;
    font-style: italic;
    font-size: 16px;
}

.portfolio-modal .modal-content ul.list-inline {
    margin-bottom: 30px;
    margin-top: 0;
}

.portfolio-modal .modal-content img {
```

```css
        margin-bottom: 30px;
}

.portfolio-modal .close-modal {
    position: absolute;
    width: 75px;
    height: 75px;
    background-color: transparent;
    top: 25px;
    right: 25px;
    cursor: pointer;
    z-index: 100;
}

.portfolio-modal .close-modal:hover {
    opacity: 0.3;
}

.portfolio-modal .close-modal .lr {
    height: 75px;
    width: 1px;
    margin-left: 35px;
    background-color: #222222;
    transform: rotate(45deg);
    -ms-transform: rotate(45deg);
    /* IE 9 */
    -webkit-transform: rotate(45deg);
    /* Safari and Chrome */
    z-index: 1051;
}

.portfolio-modal .close-modal .lr .rl {
    height: 75px;
    width: 1px;
    background-color: #222222;
    transform: rotate(90deg);
    -ms-transform: rotate(90deg);
    /* IE 9 */
    -webkit-transform: rotate(90deg);
    /* Safari and Chrome */
    z-index: 1052;
}

.portfolio-modal .modal-backdrop {
    opacity: 0;
    display: none;
}

::-moz-selection {
    text-shadow: none;
    background: #fed136;
}
```

```css
::selection {
    text-shadow: none;
    background: #fed136;
}

img::selection {
    background: transparent;
}

img::-moz-selection {
    background: transparent;
}

body {
    webkit-tap-highlight-color: #fed136;
}


/* Bootstrap Panel CSS */

.panel {
    margin-bottom: 20px;
    background-color: #fff;
    border: 1px solid transparent;
    border-radius: 4px;
    -webkit-box-shadow: 0 1px 1px rgba(0, 0, 0, .05);
    box-shadow: 0 1px 1px rgba(0, 0, 0, .05);
}

.panel-body {
    padding: 2px;
}

.panel-heading {
    padding: 7px 15px;
    border-bottom: 1px solid transparent;
    border-top-left-radius: 3px;
    border-top-right-radius: 3px;
}

.panel-heading>.dropdown .dropdown-toggle {
    color: inherit;
}

.panel-title {
    margin-top: 0;
    margin-bottom: 0;
    font-size: 16px;
    color: inherit;
    padding: 10px;
}

.panel-title>a,
```

```css
.panel-title>small,
.panel-title>.small,
.panel-title>small>a,
.panel-title>.small>a {
    color: inherit;
}

.panel-footer {
    padding: 5px;
    background-color: #f5f5f5;
    border-top: 1px solid #ddd;
    border-bottom-right-radius: 3px;
    border-bottom-left-radius: 3px;
}

.panel>.list-group,
.panel>.panel-collapse>.list-group {
    margin-bottom: 0;
}

.panel>.list-group .list-group-item,
.panel>.panel-collapse>.list-group .list-group-item {
    border-width: 1px 0;
    border-radius: 0;
}

.panel>.list-group:first-child .list-group-item:first-child,
.panel>.panel-collapse>.list-group:first-child .list-group-item:first-child {
    border-top: 0;
    border-top-left-radius: 3px;
    border-top-right-radius: 3px;
}

.panel>.list-group:last-child .list-group-item:last-child,
.panel>.panel-collapse>.list-group:last-child .list-group-item:last-child {
    border-bottom: 0;
    border-bottom-right-radius: 3px;
    border-bottom-left-radius: 3px;
}

.panel>.panel-heading+.panel-collapse>.list-group .list-group-item:first-child {
    border-top-left-radius: 0;
    border-top-right-radius: 0;
}

.panel-heading+.list-group .list-group-item:first-child {
    border-top-width: 0;
}

.list-group+.panel-footer {
    border-top-width: 0;
}
```

```css
.panel-group {
    margin-bottom: 20px;
}

.panel-group .panel {
    margin-bottom: 0;
    border-radius: 4px;
}

.panel-group .panel+.panel {
    margin-top: 5px;
}

.panel-group .panel-heading {
    border-bottom: 0;
}

.panel-group .panel-heading+.panel-collapse>.panel-body,
.panel-group .panel-heading+.panel-collapse>.list-group {
    border-top: 1px solid #ddd;
}

.panel-group .panel-footer {
    border-top: 0;
}

.panel-group .panel-footer+.panel-collapse .panel-body {
    border-bottom: 1px solid #ddd;
}

.panel-default {
    border-color: #ddd;
}

.panel-default>.panel-heading {
    color: #333;
    background-color: #f5f5f5;
    border-color: #ddd;
}

.panel-default>.panel-heading+.panel-collapse>.panel-body {
    border-top-color: #ddd;
}

.panel-default>.panel-heading .badge {
    color: #f5f5f5;
    background-color: #333;
}

.panel-default>.panel-footer+.panel-collapse>.panel-body {
    border-bottom-color: #ddd;
}
```

```css
.panel-primary {
    border-color: #337ab7;
}

.panel-primary>.panel-heading {
    color: #fff;
    background-color: #337ab7;
    border-color: #337ab7;
}

.panel-primary>.panel-heading+.panel-collapse>.panel-body {
    border-top-color: #337ab7;
}

.panel-primary>.panel-heading .badge {
    color: #337ab7;
    background-color: #fff;
}

.panel-primary>.panel-footer+.panel-collapse>.panel-body {
    border-bottom-color: #337ab7;
}

.panel-success {
    border-color: #d6e9c6;
}

.panel-success>.panel-heading {
    color: #3c763d;
    background-color: #dff0d8;
    border-color: #d6e9c6;
}

.panel-success>.panel-heading+.panel-collapse>.panel-body {
    border-top-color: #d6e9c6;
}

.panel-success>.panel-heading .badge {
    color: #dff0d8;
    background-color: #3c763d;
}

.panel-success>.panel-footer+.panel-collapse>.panel-body {
    border-bottom-color: #d6e9c6;
}

.panel-info {
    border-color: #bce8f1;
}

.panel-info>.panel-heading {
    color: #31708f;
    background-color: #d9edf7;
```

```css
    border-color: #bce8f1;
}

.panel-info>.panel-heading+.panel-collapse>.panel-body {
    border-top-color: #bce8f1;
}

.panel-info>.panel-heading .badge {
    color: #d9edf7;
    background-color: #31708f;
}

.panel-info>.panel-footer+.panel-collapse>.panel-body {
    border-bottom-color: #bce8f1;
}

.panel-warning {
    border-color: #faebcc;
}

.panel-warning>.panel-heading {
    color: #8a6d3b;
    background-color: #fcf8e3;
    border-color: #faebcc;
}

.panel-warning>.panel-heading+.panel-collapse>.panel-body {
    border-top-color: #faebcc;
}

.panel-warning>.panel-heading .badge {
    color: #fcf8e3;
    background-color: #8a6d3b;
}

.panel-warning>.panel-footer+.panel-collapse>.panel-body {
    border-bottom-color: #faebcc;
}

.panel-danger {
    border-color: #ebccd1;
}

.panel-danger>.panel-heading {
    color: #a94442;
    background-color: #f2dede;
    border-color: #ebccd1;
}

.panel-danger>.panel-heading+.panel-collapse>.panel-body {
    border-top-color: #ebccd1;
}
```

```css
.panel-danger>.panel-heading .badge {
    color: #f2dede;
    background-color: #a94442;
}

.panel-danger>.panel-footer+.panel-collapse>.panel-body {
    border-bottom-color: #ebccd1;
}


/* Chat History */

ul.chatHistory {
    list-style: none;
    background: none;
    margin: 0;
    margin-top: 5px;
    padding: 5px;
    height: 250px;
    overflow-y: auto;
    border-top: thin solid #c5adad;
}

ul.chatHistory li {
    padding: 0.25rem 0px;
    overflow: hidden;
    display: flex;
}

.chat-container {
    position: fixed;
    bottom: 0;
    right: 0;
}

.chat-div {
    margin-left: 10px;
    margin-right: 10px;
}

.chat-div.min {
    height: 40px;
    margin-top: calc(100% - 144px);
}

.call-icon {
    float: right;
    cursor: pointer;
    margin-left: 10px;
}

#their-video,
#my-video {
```

```css
    width: 320px;
    height: 480px;
    background-color: black;
}

#my-video {
    position: absolute;
    height: 150px;
    width: 99px;
    bottom: 70px;
    left: calc(50% + 150px);
    background-color: chocolate;
}

@media (max-width: 550px) {
    #my-video {
        left: calc(50% + 61px);
        bottom: 100px;
    }
}

.hide {
    display: none;
}

#videoCallPanel .modal-content {
    width: 100vw;
}

.peeruser {
    cursor: pointer;
}
```

Full JS Code

```js
// Generate random room name if needed
if (!location.hash) {
  location.hash = Math.floor(Math.random() * 0xFFFFFF).toString(16);
}
const roomHash = location.hash.substring(1);

// TODO: Replace with your own channel ID
const drone = new ScaleDrone('yiS12Ts5RdNhebyM');
// Room name needs to be prefixed with 'observable-'
const roomName = 'observable-' + roomHash;
const configuration = {
  iceServers: [{
    urls: 'stun:stun.l.google.com:19302'
  }]
};
```

```javascript
let room;
let pc;


function onSuccess() {};
function onError(error) {
  console.error(error);
};

drone.on('open', error => {
  if (error) {
    return console.error(error);
  }
  room = drone.subscribe(roomName);
  room.on('open', error => {
    if (error) {
      onError(error);
    }
  });
  // We're connected to the room and received an array of 'members'
  // connected to the room (including us). Signaling server is ready.
  room.on('members', members => {
    console.log('MEMBERS', members);
    // If we are the second user to connect to the room we will be creating the offer
    const isOfferer = members.length === 2;
    startWebRTC(isOfferer);
  });
});

// Send signaling data via Scaledrone
function sendMessage(message) {
  drone.publish({
    room: roomName,
    message
  });
}

function startWebRTC(isOfferer) {
  pc = new RTCPeerConnection(configuration);

  // 'onicecandidate' notifies us whenever an ICE agent needs to deliver a
  // message to the other peer through the signaling server
  pc.onicecandidate = event => {
    if (event.candidate) {
      sendMessage({'candidate': event.candidate});
    }
  };

  // If user is offerer let the 'negotiationneeded' event create the offer
  if (isOfferer) {
    pc.onnegotiationneeded = () => {
      pc.createOffer().then(localDescCreated).catch(onError);
    }
```

```javascript
  }

  // When a remote stream arrives display it in the #remoteVideo element
  pc.ontrack = event => {
    const stream = event.streams[0];
    if (!remoteVideo.srcObject || remoteVideo.srcObject.id !== stream.id) {
      remoteVideo.srcObject = stream;
    }
  };

  navigator.mediaDevices.getUserMedia({
    audio: true,
    video: true,
  }).then(stream => {
    // Display your local video in #localVideo element
    localVideo.srcObject = stream;
    // Add your stream to be sent to the conneting peer
    stream.getTracks().forEach(track => pc.addTrack(track, stream));
  }, onError);

  // Listen to signaling data from Scaledrone
  room.on('data', (message, client) => {
    // Message was sent by us
    if (client.id === drone.clientId) {
      return;
    }

    if (message.sdp) {
      // This is called after receiving an offer or answer from another peer
      pc.setRemoteDescription(new RTCSessionDescription(message.sdp), () => {
        // When receiving an offer lets answer it
        if (pc.remoteDescription.type === 'offer') {
          pc.createAnswer().then(localDescCreated).catch(onError);
        }
      }, onError);
    } else if (message.candidate) {
      // Add the new ICE candidate to our connections remote description
      pc.addIceCandidate(
        new RTCIceCandidate(message.candidate), onSuccess, onError
      );
    }
  });
}

function localDescCreated(desc) {
  pc.setLocalDescription(
    desc,
    () => sendMessage({'sdp': pc.localDescription}),
    onError
  );
}
```
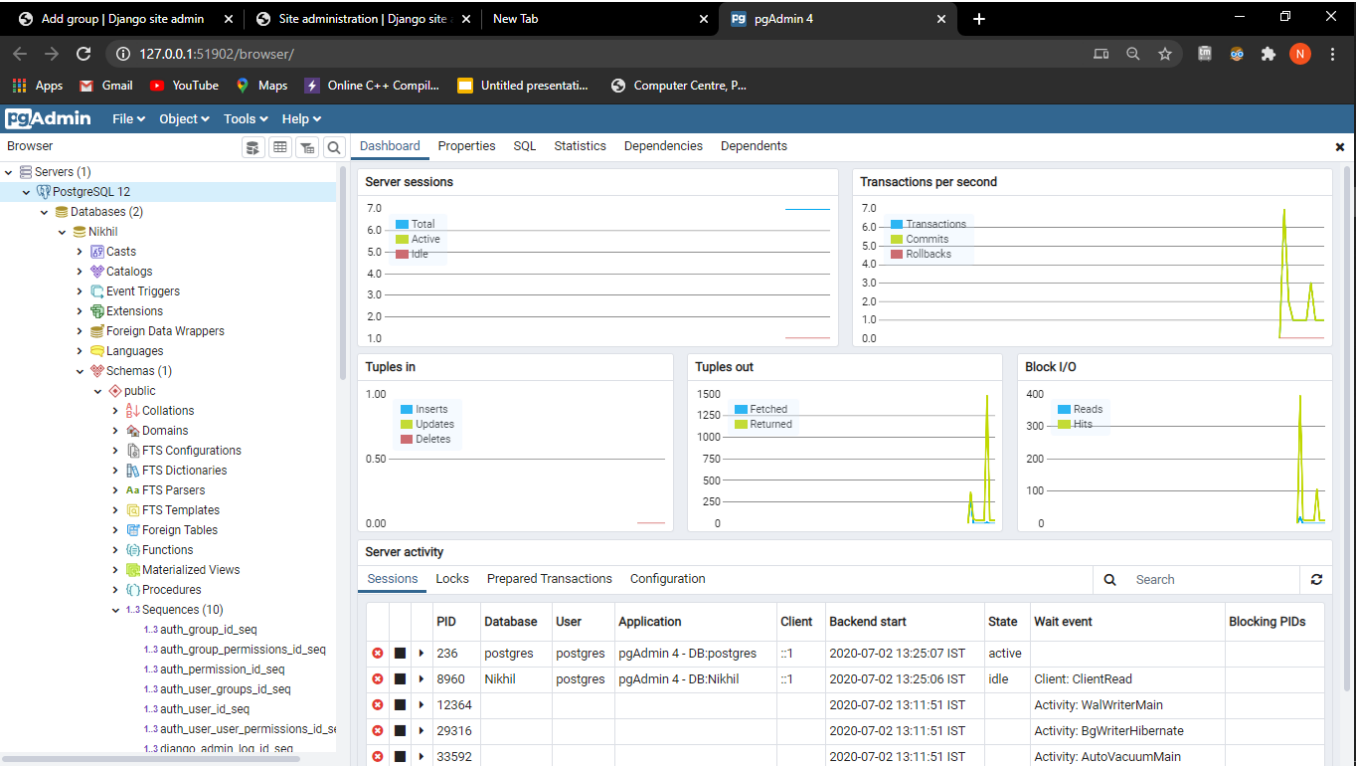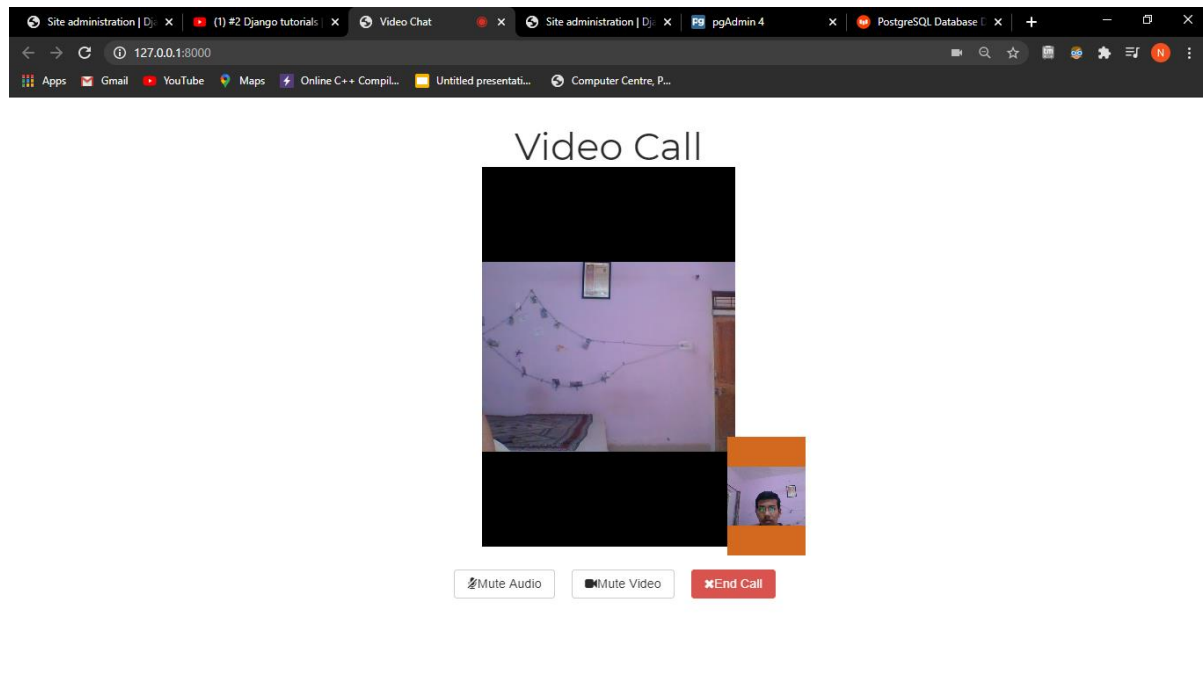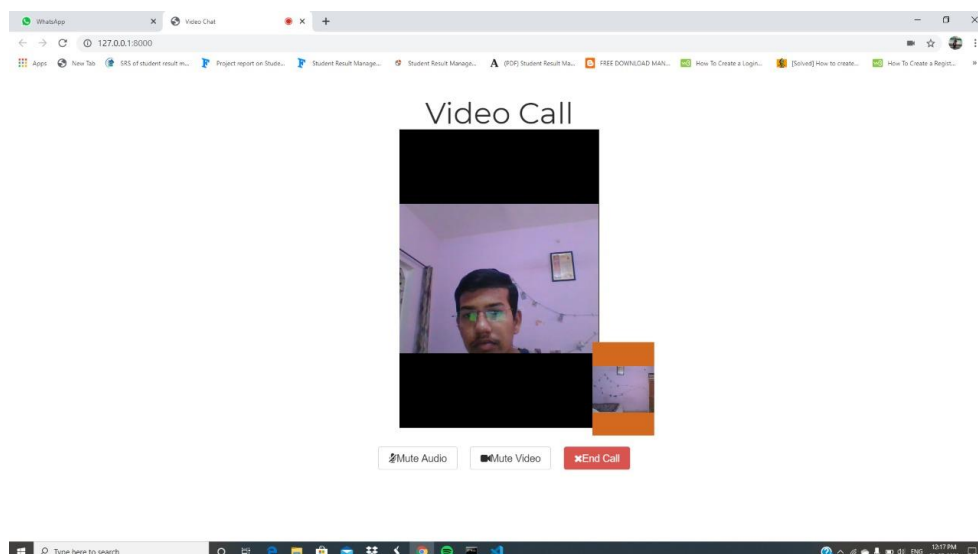
DATABASE SEVER

Tested in two system

First System

Second System

HOW TO USE THE APP

1. First install the python in your system.

2. Then install the Django for the project by using the command in command prompt. **(pip install Django)**

3. Now set the environment by entering in the folder of app by using the command. **(cd chat)** Then enter in the environment by using the command **(code .)** **NOTE: - When you are entering the environment you should be in the folder of project.**

4. Now after entering in virtual environment run server by using the command. **(python manage.py runserver)**

5. The server will be start running.

6. Now the local host sever in your google chrome [127.0.0.1:8000/](127.0.0.1:8000/)

7. Allow to use microphone and webcam for app.

8. Enter the name and start using the app.

THANK YOU