PROJECT DEVELOPMENT APPLICATION BUILDING

TEAM ID	PNT2022TMID39730
PROJECT TITLE	REAL TIME COMMUNICATION SYSTEM POWERED BY AI FOR SPECIALLY ABLED

Home.html

```
<!DOCTYPE html>
<html lang="en">
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0,</pre>
shrink-to-fit=no">
    <title>SmartBridge WebApp VideoTemplate</title>
    k
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2J10vWa8Ck2rdkQ2Bzep5IDxbcnCeu0xjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
    <link rel="stylesheet"</pre>
href="https://use.fontawesome.com/releases/v5.12.0/css/all.css">
    <link rel="stylesheet" href="{{ url_for('static',</pre>
filename='css/styles.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Navbar-</pre>
Centered-Brand.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Banner-</pre>
Heading-Image') }}">
    <nav class="navbar navbar-light navbar-expand-md py-3 bg-transparent</pre>
shadow-lg">
        <div class="container">
                 <a class="navbar-brand d-flex align-items-center"</pre>
href="/"><span class="bs-icon-sm bs-icon-rounded bs-icon-primary d-flex</pre>
justify-content-center align-items-center me-2 bs-icon">≺i
                         class="fas fa-flask"></i></span><span style="color:</pre>
rgb(255,255,255);">Real-Time Communication System Powered By AI For
Specially Abled</span></a>
```

Communication plays a significant role in making the world a better place. Communication creates bonding and relations among the people, whether personal, social, or political views. Most people communicate efficiently without any issues, but many cannot due to disability. They cannot hear or speak, which makes Earth a problematic place to live for them. Even simple basic tasks become difficult for them. Disability is an emotive human condition. It limits the individual to a certain level of performance. Being deaf and dumb pushes the subject to oblivion, highly introverted. In a world of inequality, this society needs empowerment. Harnessing technology to improve their welfare is necessary. In a tech era, no one should be limited due to his or her inability. The application of technology should create a platform or a world of equality despite the natural state of humans. On the other hand, technology is the most innovative thing on Earth for every time the clock ticks, researchers, software engineers, programmers, and information technology specialists are always coming up with bright ideas to provide convenience to everyone

This project shows how artificial intelligence is being used to help people who are unable to do what most people do in their everyday lives. This system provides detailed hand gestures that show the interpretation at the bottom so that everyone can understand them.

This project helps a deaf and dumb people try to communicate with normal people without having any hesitation. Because generally deaf and dumb people have some sort of hesitate to interact with people.

```
<a href="{{ url_for('loginPage') }}" class="btn btn-warning fw-</pre>
bolder"> Open Camera</a>
            Please Login before <b>Open the Camera</b>
    </section>
    <section>
        <div class="container">
           <div>
                <div class="text-center">
                   <h2 class="fw-bolder">About Our Project</h2>
                <div class="content-text">
                       Artificial Intelligence has made it possible to handle
our daily activities
                       in new and simpler ways. With the ability to automate
tasks that normally require human
                       intelligence, such as speech and voice recognition,
visual perception, predictive text functionality, decision-making, and a
variety of other tasks, AI can assist people with
                       disabilities by significantly improving their ability
to get around and participate in daily activities.<br><br><br>Currently, Sign
Recognition is available <strong>only for alphabets A-I</strong> and not for
J-Z, since J-Z alphabets also require Gesture Recognition for them to be able
to be predicted correctly to a certain degree of accuracy.
                   </div>
               <div class="mt-5 bg-transparent shadow-lg text-white">
                    <div class="text-center">
                       Students at Ganadipathy
Tulsi's Jain Engineering College during IBM Program. <br>
                           1. <strong>Prasanth S</strong>--510819205301<br>
                           2. <strong>Janani S</strong>--510819205003<br>
                           3. <strong>Sanjai P</strong>--510819205011<br>
                           4. <strong>Venkatakrishnan G</strong>--
510819205018<br>
                           5. <strong>Madeshwaran K</strong>--
510819205006<br>
                   </div>
               </div>
            </div>
        </div>
    </section>
    <footer class="bg-black mt-3">
       <div class="text-center">
```

loginPage.html

```
<!DOCTYPE html>
<html lang="en">
    <meta charset="UTF-8">
    <title>Index</title>
    k
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2J10vWa8Ck2rdkQ2Bzep5IDxbcnCeu0xjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
    <link rel="stylesheet"</pre>
href="https://use.fontawesome.com/releases/v5.12.0/css/all.css">
    <link rel="stylesheet" href="{{ url for('static',</pre>
filename='css/styles.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Navbar-</pre>
Centered-Brand.css') }}">
    <link rel="stylesheet" href="{{ url for('static', filename='css/Banner-</pre>
Heading-Image') }}">
     <style>
        .shadow{
            box-shadow:3px 3px 10px black;
            padding:30px;
    </style>
</head>
```

```
<nav class="navbar navbar-light navbar-expand-md py-3 bg-primary shadow-</pre>
lg">
        <div class="container">
                <a class="navbar-brand d-flex align-items-center"</pre>
href="/"><span class="bs-icon-sm bs-icon-rounded bs-icon-primary d-flex</pre>
justify-content-center align-items-center me-2 bs-icon">≺i
                         class="fas fa-flask"></i></span><span style="color:</pre>
rgb(255,255,255);">Real-Time Communication System Powered By AI For
Specially Abled</a>
            </div>
        </div>
    </nav>
    <div class="container justify-content-center" style="margin-top:100px">
        <div class="row">
            <div class="col-md-6">
                 <img src="{{ url_for('static',</pre>
filename='img/login_image.jpeg') }}" class="d-block w-75 rounded" alt="login
            </div>
            <div class=" col-md-6" >
                 <div class="mt-5">
                     <div class="shadow text-white">
                     <form action="/login" method="POST" autocomplete="off">
                         <h3 class="page-header fw-bolder text-</pre>
center">Login</h3>
                          {% with messages =
get_flashed_messages(with_categories=true) %}
                     {% if messages %}
                         {% for category, message in messages %}
                             <div class="alert alert-</pre>
{{category}}">{{message}}</div>
                         {% endfor %}
                     {% endif %}
                     {% endwith %}
                         <div class="form-group">
                             <label>Username</label>
                             <input type="text" name="name" class="form-</pre>
control" required>
                         </div>
                         <div class="form-group">
                             <label>Password</label>
                             <input type="password" name="password"</pre>
class="form-control" required>
```

```
</div>
                        <div class="form-group mt-2">
                            <input type="submit" value="Login" class="btn btn-</pre>
success btn-block">
                            <a href="{{url for('register')}}" class="btn btn-</pre>
primary btn-block">Register</a>
                        </div>
                    </form>
                        </div>
            </div>
    </div>
    <div class="mt-5 bg-transparent shadow-lg text-white">
        <div class="text-center">
            Students at Ganadipathy Tulsi's Jain
Engineering College during IBM Program.<br><br>
                1. <strong>Prasanth S</strong>--510819205301<br>
                2. <strong>Janani S</strong>--510819205003<br>
                3. <strong>Sanjai P</strong>--510819205011<br>
                4. <strong>Venkatakrishnan G</strong>--510819205018<br>
                5. <strong>Madeshwaran K</strong>--510819205006<br>
            </div>
    </div>
    <footer class="bg-black mt-3">
        <div class="text-center">
            <a href="/" class="nav-link active">&copy; 2022 All CopyRights are
Reserved</a>
        </div>
    </footer>
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
.js" integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
</html>
<script>
       $(".alert").hide(3000)
   });
</script>
```

Registration.html

```
<html>
    <title>Registration</title>
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2J10vWa8Ck2rdkQ2Bzep5IDxbcnCeu0xjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
    <link rel="stylesheet"</pre>
href="https://use.fontawesome.com/releases/v5.12.0/css/all.css">
    <link rel="stylesheet" href="{{ url_for('static',</pre>
filename='css/styles.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Navbar-</pre>
Centered-Brand.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Banner-</pre>
Heading-Image') }}">
    <style>
        .shadow{
            box-shadow:3px 3px 10px black;
            padding:30px;
    </style>
</head>
<body>
    <nav class="navbar navbar-light navbar-expand-md py-3 bg-primary shadow-</pre>
lg">
        <div class="container">
            <div>
                <a class="navbar-brand d-flex align-items-center"</pre>
href="/"><span class="bs-icon-sm bs-icon-rounded bs-icon-primary d-flex</pre>
justify-content-center align-items-center me-2 bs-icon">≺i
                         class="fas fa-flask"></i></span><span style="color:</pre>
rgb(255,255,255);">Real-Time Communication System Powered By AI For
Specially Abled
            </div>
        </div>
    </nav>
    <div class="container" style="margin-top:100px">
        <div class="row">
            <div class="col-md-6">
                <img src="{{ url_for('static',</pre>
filename='img/login_image.jpeg') }}" class="d-block w-75 rounded" alt="login
            </div>
```

```
<div class="col-md-offset-3 col-md-5">
                <div class="shadow text-white">
                    <form method="POST" action="/register">
                         <h2 class="page-header fw-bolder text-</pre>
center">Registration</h2>
                        <div class="form-group">
                            <label>Name</label>
                             <input type="text" class="form-control"</pre>
name="name" required>
                        </div>
                         <div class="form-group">
                             <label>Password</label>
                             <input type="password" class="form-control"</pre>
name="password" required>
                        </div>
                        <div class="form-group">
                             <label>Mail</label>
                             <input type="email" class="form-control"</pre>
name="mail" required>
                        </div>
                        <div class="form-group">
                             <label>Contact</label>
                             <input type="text" class="form-control"</pre>
name="contact" required>
                        </div>
                          <div class="form-group mt-2">
                             <input type="submit" class="btn btn-success btn-</pre>
block" value="Register">
                             <a href="{{url for('index')}}" class="btn btn-</pre>
primary btn-block">Back to Home</a>
                        </div>
                    </form>
                </div>
            </div>
        </div>
    </div>
    <div class="mt-5 bg-transparent shadow-lg text-white">
        <div class="text-center">
            Students at Ganadipathy Tulsi's Jain
Engineering College during IBM Program.<br><br>
                1. <strong>Prasanth S</strong>--510819205301<br>
                2. <strong>Janani S</strong>--510819205003<br>
                3. <strong>Sanjai P</strong>--510819205011<br>
                4. <strong>Venkatakrishnan G</strong>--510819205018<br>
                5. <strong>Madeshwaran K</strong>--510819205006<br>
        </div>
```

```
</div>
    <footer class="bg-black mt-3">
        <div class="text-center">
            <a href="/" class="nav-link active">&copy; 2022 All CopyRights are
Reserved</a>
        </div>
    </footer>
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
.js" integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
<script>
    $(document).ready(function(){
        $("form").attr("autocomplete","off");
   });
</script>
```

User.html

```
<!DOCTYPE html>
<html lang="en">
    <meta charset="UTF-8">
    <title>User Page</title>
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2J10vWa8Ck2rdkQ2Bzep5IDxbcnCeu0xjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
    <link rel="stylesheet"</pre>
href="https://use.fontawesome.com/releases/v5.12.0/css/all.css">
    <link rel="stylesheet" href="{{ url_for('static',</pre>
filename='css/styles.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Navbar-</pre>
Centered-Brand.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Banner-</pre>
Heading-Image') }}">
<body>
```

```
<nav class="navbar navbar-light navbar-expand-md py-3 bg-transparent</pre>
shadow-lg">
        <div class="container">
                 <a class="navbar-brand d-flex align-items-center"</pre>
href="/"><span class="bs-icon-sm bs-icon-rounded bs-icon-primary d-flex</pre>
justify-content-center align-items-center me-2 bs-icon">≺i
                         class="fas fa-flask"></i></span><span style="color:</pre>
rgb(255,255,255);">Real-Time Communication System Powered By AI For
Specially Abled</a>
            </div>
            <div>
               <a href="{{ url for('logout') }}" class="btn btn-danger btn-</pre>
sm">Logout</a>
            </div>
        </div>
    </nav>
     <div class="container">
        <div class="col-md-offset-3 col-md-5">
            <h3 class="fw-bolder text-capitalize">Welcome :
{{session["name"]}}</h3>
            <hr>>
        </div>
        <section>
            <div class="d-flex flex-column justify-content-center align-items-</pre>
                 <div class="d-flex flex-column justify-content-center align-</pre>
items-center" id="div-video-feed"
                     style="width: 640px;height: 480px;margin: 10px;min-height:
480px;min-width: 640px;border-radius: 10px;border: 4px dashed rgb(255,255,255)
                     <img src="{{ url_for('video_feed') }}" style="width:</pre>
100%; height: 100%; color: rgb(255,255,255); text-align: center; font-size: 20px; "
                         alt="Camera Access Not Provided!">
                 </div>
            </div>
            <div class="d-flex flex-column justify-content-center align-items-</pre>
center" style="margin-bottom: 10px;"><button</pre>
                     class="btn btn-info" type="button" data-bs-target="#modal-
1" data-bs-toggle="modal">Quick Reference
                     -<strong> ASL Alphabets</strong></button></div>
        </section>
        <div class="modal fade" role="dialog" tabindex="-1" id="modal-1">
            <div class="modal-dialog" role="document">
                <div class="modal-content">
```

```
<div class="modal-header">
                        <h4 class="modal-title">American Sign Language -
Alphabets</h4><button type="button"
                            class="btn-close" data-bs-dismiss="modal" aria-
label="Close"></button>
                    <div class="modal-body"><img src="{{ url for('static',</pre>
filename='img/ASL_Alphabets.png') }}" width="100%"></div>
                    <div class="modal-footer"><button class="btn btn-</pre>
secondary" type="button"
                           data-bs-dismiss="modal">Close</button></div>
            </div>
        </div>
     </div>
     <div class="mt-5 bg-transparent shadow-lg text-white">
        <div class="text-center">
            Students at Ganadipathy Tulsi's Jain
Engineering College during IBM Program.<br><br>
                1. <strong>Prasanth S</strong>--510819205301<br>
                2. <strong>Janani S</strong>--510819205003<br>
                3. <strong>Sanjai P</strong>--510819205011<br>
               4. <strong>Venkatakrishnan G</strong>--510819205018<br>
                5. <strong>Madeshwaran K</strong>--510819205006<br>
            </div>
    </div>
    <footer class="bg-black mt-3">
        <div class="text-center">
           <a href="/" class="nav-link active">&copy; 2022 All CopyRights are
Reserved</a>
        </div>
    </footer>
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
.js" integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
</html>
```