PROJECT DEVELOPMENT

APPLICATION BUILDING

TEAM ID	PNT2022TMID37233
PROJECT TITLE	REAL TIME COMMUNICATION SYSTEM POWERED BY AI FOR SPECIALLY ABLED

Home.html

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0,
shrink-to-fit=no">
    <title>SmartBridge_WebApp_VideoTemplate</title>
    <!-- CSS only -->
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
    <link rel="stylesheet"
href="https://use.fontawesome.com/releases/v5.12.0/css/all.css">
    <link rel="stylesheet" href="{{ url_for('static',
filename='css/styles.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Navbar-
Centered-Brand.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Banner-
Heading-Image') }}">
<body>
    <nav class="navbar navbar-light navbar-expand-md py-3 bg-transparent
shadow-lg">
        <div class="container">
            <div>
                <a class="navbar-brand d-flex align-items-center"
href="/"><span class="bs-icon-sm bs-icon-rounded bs-icon-primary d-flex
justify-content-center align-items-center me-2 bs-icon"><i
                    class="fas fa-flask"></i></span><span style="color:
rgb(255,255,255);">Real-Time Communication System Powered By AI For
Specially Abled</span></a>
```

```html
            </div>
            <div>
                <a href="{{ url_for('loginPage') }}" class="btn btn-warning
btn-sm">Login</a>
            </div>
        </div>
    </nav>
    <section>
            <div class="container my-4">
                <div class=" d-flex justify-content-center">
                    <img src="{{ url_for('static',
filename='img/deafanddumb.jpeg') }}" class="d-block w-50 rounded" alt="deaf
and dumb image">
                </div>
                <div class="content-text mt-3">
                    <p>
                        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.
                    </p>
                </div>
            </div>
    </section>

    <section class="my-5">
        <div class="text-center">
```

```html
            <a href="{{ url_for('loginPage') }}" class="btn btn-warning fw-
bolder"> Open Camera</a>
            <p>Please Login before <b>Open the Camera</b></p>
        </div>
    </section>

    <section>
        <div class="container">
            <div>
                <div class="text-center">
                    <h2 class="fw-bolder">About Our Project</h2>
                </div>
                <div class="content-text">
                    <p>
                        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>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.
                    </p>
                </div>
                <div class="mt-5 bg-transparent shadow-lg text-white">
                    <div class="text-center">
                        <p class="mb-0 fw-bolder">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>
                        </p>
                    </div>
                </div>
            </div>
        </div>
    </section>

    <footer class="bg-black mt--3">
        <div class="text-center">
```

```html
            <a href="/" class="nav-link active">&copy; 2022 All CopyRights are
Reserved</a>
        </div>
    </footer>

    <!-- JavaScript Bundle with Popper -->
    <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>
```

loginPage.html

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Index</title>
    <!-- CSS only -->
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
    <link rel="stylesheet"
href="https://use.fontawesome.com/releases/v5.12.0/css/all.css">
    <link rel="stylesheet" href="{{ url_for('static',
filename='css/styles.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Navbar-
Centered-Brand.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Banner-
Heading-Image') }}">
    <style>
        .shadow{
            box-shadow:3px 3px 10px black;
            padding:30px;
        }
    </style>
</head>
<body>
```

```html
    <nav class="navbar navbar-light navbar-expand-md py-3 bg-primary shadow-lg">
        <div class="container">
            <div>
                <a class="navbar-brand d-flex align-items-center" href="/"><span class="bs-icon-sm bs-icon-rounded bs-icon-primary d-flex justify-content-center align-items-center me-2 bs-icon"><i class="fas fa-flask"></i></span><span style="color: rgb(255,255,255);">Real-Time Communication System Powered By AI For Specially Abled</span></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', filename='img/login_image.jpeg') }}" class="d-block w-75 rounded" alt="login image">
            </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-center">Login</h3>

                        {% with messages = get_flashed_messages(with_categories=true) %}
                        {% if messages %}
                            {% for category,message in messages %}
                                <div class="alert alert-{{category}}">{{message}}</div>
                            {% endfor %}
                        {% endif %}
                        {% endwith %}


                        <div class="form-group">
                            <label>Username</label>
                            <input type="text" name="name" class="form-control" required>
                        </div>
                        <div class="form-group">
                            <label>Password</label>
                            <input type="password" name="password" class="form-control" required>
```

```html
                        </div>
                        <div class="form-group mt-2">
                            <input type="submit" value="Login" class="btn btn-
success btn-block">
                            <a href="{{url_for('register')}}" class="btn btn-
primary btn-block">Register</a>
                        </div>
                    </form>
                    </div>
                </div>
            </div>
        </div>

    <div class="mt-5 bg-transparent shadow-lg text-white">
        <div class="text-center">
            <p class="mb-0 fw-bolder">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>
            </p>
        </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>

    <!-- JavaScript Bundle with Popper -->
    <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
<html>
<head>
    <title>Registration</title>
    <!-- CSS only -->
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
    <link rel="stylesheet"
href="https://use.fontawesome.com/releases/v5.12.0/css/all.css">
    <link rel="stylesheet" href="{{ url_for('static',
filename='css/styles.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Navbar-
Centered-Brand.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Banner-
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-
lg">
        <div class="container">
            <div>
                <a class="navbar-brand d-flex align-items-center"
href="/"><span class="bs-icon-sm bs-icon-rounded bs-icon-primary d-flex
justify-content-center align-items-center me-2 bs-icon"><i
                    class="fas fa-flask"></i></span><span style="color:
rgb(255,255,255);">Real-Time Communication System Powered By AI For
Specially Abled</span></a>
            </div>

        </div>
    </nav>
    <div class="container" style="margin-top:100px">
        <div class="row">
            <div class="col-md-6">
                <img src="{{ url_for('static',
filename='img/login_image.jpeg') }}" class="d-block w-75 rounded" alt="login
image">
            </div>
```

```html
            <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-center">Registration</h2>
                        <div class="form-group">
                            <label>Name</label>
                            <input type="text" class="form-control" name="name" required>
                        </div>
                        <div class="form-group">
                            <label>Password</label>
                            <input type="password" class="form-control" name="password" required>
                        </div>
                        <div class="form-group">
                            <label>Mail</label>
                            <input type="email" class="form-control" name="mail" required>
                        </div>
                        <div class="form-group">
                            <label>Contact</label>
                            <input type="text" class="form-control" name="contact" required>
                        </div>
                        <div class="form-group mt-2">
                            <input type="submit" class="btn btn-success btn-block" value="Register">

                            <a href="{{url_for('index')}}" class="btn btn-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">
            <p class="mb-0 fw-bolder">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>
            </p>
        </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>

    <!-- JavaScript Bundle with Popper -->
    <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>
    $(document).ready(function(){
        $("form").attr("autocomplete","off");
    });
</script>
```

User.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>User Page</title>
    <!-- CSS only -->
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
    <link rel="stylesheet"
href="https://use.fontawesome.com/releases/v5.12.0/css/all.css">
    <link rel="stylesheet" href="{{ url_for('static',
filename='css/styles.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Navbar-
Centered-Brand.css') }}">
    <link rel="stylesheet" href="{{ url_for('static', filename='css/Banner-
Heading-Image') }}">
</head>
<body>
```

```html
    <nav class="navbar navbar-light navbar-expand-md py-3 bg-transparent
shadow-lg">
        <div class="container">
            <div>
                <a class="navbar-brand d-flex align-items-center"
href="/"><span class="bs-icon-sm bs-icon-rounded bs-icon-primary d-flex
justify-content-center align-items-center me-2 bs-icon"><i
                        class="fas fa-flask"></i></span><span style="color:
rgb(255,255,255);">Real-Time Communication System Powered By AI For
Specially Abled</span></a>
            </div>
            <div>
                <a href="{{ url_for('logout') }}" class="btn btn-danger btn-
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-
center">
                <div class="d-flex flex-column justify-content-center align-
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:
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-
center" style="margin-bottom: 10px;"><button
                    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">
```

```html
                <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>
                <div class="modal-body"><img src="{{ url_for('static',
filename='img/ASL_Alphabets.png') }}" width="100%"></div>
                <div class="modal-footer"><button class="btn btn-
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">
            <p class="mb-0 fw-bolder">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>
            </p>
        </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>

    <!-- JavaScript Bundle with Popper -->
    <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>
```