Date	11/19/22
Team ID	PNT2022TMID22022
Project Name	Project – A Novel Method for Handwritten Digit Recognition System

Index.Html

<html>

<head>

 <title>Digit Recognition WebApp</title>

 <meta name="viewport" content="width=device-width">

 <!-- GoogleFont -->

 <link href="https://fonts.googleapis.com/css2?family=Prompt:wght@600&display=swap" rel="stylesheet">

 <link href="https://fonts.googleapis.com/css2?family=Varela+Round&display=swap" rel="stylesheet">

 <link href="https://fonts.googleapis.com/css2?family=Source+Code+Pro:wght@500&display=swap" rel="stylesheet">

 <link href="https://fonts.googleapis.com/css?family=Calistoga|Josefin+Sans:400,700|Pacifico&display=swap" rel="stylesheet">

 <!-- bootstrap -->

 <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css" integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T" crossorigin="anonymous">

 <link rel="stylesheet" type= "text/css" href= "{{ url_for('static',filename='css/style.css') }}">

 <!-- fontawesome -->

 <script src="https://kit.fontawesome.com/b3aed9cb07.js" crossorigin="anonymous"></script>

 <script src="https://code.jquery.com/jquery-3.3.1.slim.min.js" integrity="sha384-q8i/X+965DzO0rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1Pi6jizo" crossorigin="anonymous"></script>

 <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js" integrity="sha384-UO2eT0CpHqdSJQ6hJty5KVphtPhzWj9WO1clHTMGa3JDZwrnQq4sF86dIHNDz0W1" crossorigin="anonymous"></script>

 <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js" integrity="sha384-JjSmVgyd0p3pXB1rRibZUAYoIIy6OrQ6VrjIEaFf/nJGzIxFDsf4x0xIM+B07jRM" crossorigin="anonymous"></script>

 <script src="https://cdn.jsdelivr.net/npm/@tensorflow/tfjs@latest"></script>

</head>

<script>

```
  function preview() {
    frame.src=URL.createObjectURL(event.target.files[0]);
}


    $(document).ready(function() {
        $('#clear_button').on('click', function() {
           $('#image').val('');
           $('#frame').attr('src',"");
         });
      });


</script>

<body>

 <h1 class="welcome">IBM PROJECT
 <div id="team_id">TEAM ID : PNT2022TMID22022</div>
 </h1>
 <section id="title">
  <h4 class="heading">Handwritten Digit Recognition Website</h4>
  <br><br>
   <p>
     The website is designed to predict the handwritten digit.
   </p>
  <p>
     Handwriting recognition is one of the compelling research works going on because every individual in this world
     has their own style of writing. It is the capability of the computer to identify and understand
     handwritten digits or characters automatically. Because of the progress in the field of science and technology,
     everything is being digitalized to reduce human effort.</p>

    <br>
   <p> Hence, there comes a need for handwritten digit recognition in many real-time applications.
     MNIST data set is widely used for this recognition process and it has 70000 handwritten digits.
     We use Artificial neural networks to train these images and build a deep learning model.
     Web application is created where the user can upload an image of a handwritten digit.
     This image is analyzed by the model and the detected result is returned on to UI</p>

 </section>
```

```html
  <section id="content">
        <div class="buttons_div">
<form action = "/upload">
        <button type="submit" class="btn btn-white" id="predict_button">Predict</button></form>
        <button type="button" class="btn btn-white" id="clear_button">&nbsp Clear &nbsp</button>
     </form>
     </div>
  </section>

</body>

</html>
```

Predict.Html
```html
<!DOCTYPE html>
<html lang="en">
<head>
<link rel="shortcut icon" href="data:image/x-icon;," type="image/x-icon">
  <meta charset="UTF-8">
  <title>Prediction</title>
</head>

<style>
  body{
  background-image: url('static/images/.png.jpg');
  background-repeat: no-repeat;
  background-size: cover;
  }

  #rectangle{
  width:400px;
  height:150px;
  background-color: #5796a5;
  border-radius: 25px;
  position:absolute;
  top:25%;
  left:50%;
  transform:translate(-50%,-50%);
```

```
        }

      #ans{
    text-align: center;
    font-size: 40px;
    margin: 0 auto;
    padding: 3% 5%;
    padding-top: 15%;
    color: white;
        }

</style>
<body>
 <form action = "/upload" method = "POST"
       enctype = "multipart/form-data">
      <label>Select a image:</label>
      <input id="image" type="file" name="file" accept="image/png, image/jpeg"
onchange="preview()"><br><br>
          <input type = "submit" name="Recognize">
</form>
   <div id="rectangle">
             <h1 id="ans">Predicted Number : {{msg}}</h1>
   </div>
</body>
</html>
```