Development Phase
Sprint 2 delivery

Date	18 November 2022
Team ID	PNT2022TMID21553
Project Name	Project – Car Resale Value Prediction

Sprint 2:

The front-end to get the user inputs are created using HTML and CSS.

These inputs will then be used by the ML model for prediction.

Code:

carPrice.html:

```
<!DOCTYPE html>
<html lang="en">
<head xmlns="http://www.w3.org/1999/xhtml">
   <meta charset="UTF-8">
   <title>Car Price Prediction</title>
   <link rel="stylesheet" href="static/css/style.css">
   <link rel="stylesheet" type="text/css"
      href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.11.2/css/all.css">
   <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
   <script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js"
      integrity="sha384-
Q6E9RHvbIyZFJoft+2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo"
      crossorigin="anonymous"></script>

   <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css"
      integrity="sha384-
9aIt2nRpC12Uk9gS9baDl411NQApFmC26EwAOH8WgZl5MYYxFfc+NcPb1dKGj7Sk"
crossorigin="anonymous">
   <script
src="https://cdn.jsdelivr.net/npm/@tensorflow/tfjs@2.0.0/dist/tf.min.js"></script>

</head>
<body class="bg-dark">

   <div class="container">
```

```
    <input type="checkbox" id="flip">
    <div class="cover">
      <div class="front">
        <img src="static/res/car.jpg" alt="">
        <div class="text">
          <span class="text-1">Just One More Car <br> I Promise</span>
        </div>
      </div>
    </div>

    <div class="container">
      <div class="forms">
        <div class="form-content">
          <div class="login-form">
            <div class="title">Car Price Prediction</div>
            <form name="form1" method="post" action="#" accept-charset="utf-8">
              <div class="input-boxes">

                <div class="col-md-10 form-group" style="text-align: center">
                  <label><b>Enter the Registration Year:</b> </label><br>
                  <input required type="number" min="1900" class="form-control"
id="reg_year" name="reg_year" placeholder="Enter the Registration Year ">
                </div>

                <div class="col-md-10 form-group" style="text-align: center">
                  <label><b>Select the Registration Month:</b> </label><br>
                  <select required class="selectpicker form-control" id="reg_month"
name="reg_month" >
                    {% for month in months %}
                    <option value="{{ month }}">{{ month }}</option>
                    {% endfor %}
                  </select>
                </div>

                <div class="col-md-10 form-group" style="text-align: center">
                  <label><b>Enter the Power of Car in PS:</b> </label><br>
                  <input required type="number" min="0" class="form-control"
id="car_power" name="car_power" placeholder="Enter the Power of Car in PS ">
                </div>

                <div class="col-md-10 form-group" style="text-align: center">
                  <label><b>Enter the Number of Kilometres that the car has
travelled:</b> </label><br>
                  <input required type="number" min="0" class="form-control"
id="kilo_driven" name="kilo_driven" placeholder="Enter the kilometres driven ">
                </div>
```

```
                    <div class="col-md-10 form-group" style="text-align: center">
                      <label><b>Select the Gear Box Type:</b> </label><br>
                      <input type="radio" id="gt_id1" name="gear_type" value="manual"
checked> Manual  
                      <input type="radio" id="gt_id2" name="gear_type" value="automatic" >
Automatic  
                      <input type="radio" id="gt_id3" name="gear_type" value="not-
declared" > Not Declared
                    </div>

                    <div class="col-md-10 form-group" style="text-align: center">
                      <label><b>Your Car is damaged or repaired:</b> </label><br>
                      <input type="radio" id="dr_id1" name="car_condition" value="Yes" >
Yes  
                      <input type="radio" id="dr_id2" name="car_condition" value="No"
checked> No  
                      <input type="radio" id="dr_id3" name="car_condition" value="not-
declared" > Not Declared
                    </div>

                    <div class="col-md-10 form-group" style="text-align: center">
                      <label><b>Select the Model Type:</b> </label><br>
                      <select required class="selectpicker form-control" id="model"
name="model" required="1">
                        {% for model in models %}
                        <option value="{{ model }}">{{ model }}</option>
                        {% endfor %}
                      </select>
                    </div>

                    <div class="col-md-10 form-group" style="text-align: center">
                      <label><b>Select the Brand of the Car:</b> </label><br>
                      <select required class="selectpicker form-control" id="brand"
name="brand" required="1">
                        {% for brand in brands %}
                        <option value="{{ brand }}">{{ brand }}</option>
                        {% endfor %}
                      </select>
                    </div>

                    <div class="col-md-10 form-group" style="text-align: center">
                      <label><b>Select the Fuel Type of Car:</b> </label><br>
                      <select required class="selectpicker form-control" id="fuel_type"
name="fuel_type" required="1">
                        {% for fuel_type in fuel_types %}
                        <option value="{{ fuel_type }}">{{ fuel_type }}</option>
                        {% endfor %}
```

```
                    </select>
                  </div>

                  <div class="col-md-10 form-group" style="text-align: center">
                    <label><b>Select the Vehicle Type of Car:</b> </label><br>
                    <select required class="selectpicker form-control" id="veh_type"
name="veh_type" required="1">
                      {% for veh_type in vehicle_types %}
                      <option value="{{ veh_type }}">{{ veh_type }}</option>
                      {% endfor %}
                    </select>
                  </div>

                  <div class="col-md-10 form-group" style="text-align: center">
                    <button class="btn btn-primary form-control"
onclick="send_data()">Predict Price</button>
                  </div>
                  <div class="text sign-up-text">
                    <br> Go to HomePage :
                    <a href="{{url_for('index')}}">Click Here..</a>
                  </div>
                </div>
              </form>
              <br>

              <div class="row">
                <div class="col-12" style="text-align: center">
                  <h4><span id="prediction"></span></h4>
                </div>
              </div>
            </div>
          </div>
        </div>
      </div>
    </div>

<script>

    function form_handler(event) {
      event.preventDefault();
    }

    function send_data()
    {


      if(document.forms["form1"]["reg_year"].value!="" &&
```

```
        document.forms["form1"]["car_power"].value!="" &&
document.forms["form1"]["kilo_driven"].value!="")
    {
        document.querySelector('form').addEventListener('submit',form_handler);
        var fd=new FormData(document.querySelector('form'));
        var xhr= new XMLHttpRequest({mozSystem: true});

        xhr.open('POST','/c_predict',true);
        document.getElementById("prediction").innerHTML="Wait! Predicting Price.....";
        xhr.onreadystatechange = function(){
          if(xhr.readyState == XMLHttpRequest.DONE){
            document.getElementById("prediction").innerHTML=""+xhr.responseText;
          }
        };
        xhr.onload= function(){};
        xhr.send(fd);
    }
  }

</script>


<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
    integrity="sha384-
DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
    crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js"
    integrity="sha384-
Q6E9RHvbIyZFJoft+2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo"
    crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/js/bootstrap.min.js"
    integrity="sha384-
OgVRvuATP1z7JjHLkuOU7Xw704+h835Lr+6QL9UvYjZE3Ipu6Tp75j7Bh/kR0JKI"
    crossorigin="anonymous"></script>
</body>
</html>
```

index.html:

```
<html>
  <link rel="stylesheet" href="static/css/cus_home.css">
  <body>
    <section class="showcase">
      <header>
      <h2 class="logo"><br>Online Car Resale Price Prediction</h2>
```

```
        </header>
        <video src="static/res/vidd.mp4" muted loop autoplay></video>
        <div class="overlay"></div>
        <div class="text">
        <h3>With difficult economic conditions </h3>
        <h2> it is likely that sales of second-hand cars will increase</h2>
        <p>In most of the countries, it is common to lease a car rather than buying it
           outright. A lease is a binding contract between a buyer and a
           seller in which the buyer must pay fixed instalments for a pre-
           defined number of months/years to the seller/financer. After
           the lease period is over, the buyer has the possibility to buy the
           car at its residual value, i.e. its expected resale value. Thus, this
           application is of commercial interest to seller/financers to be
           able to predict the residual value of cars with accuracy.
        </p>
        <a href="{{url_for('car_price')}}">Car Resale Price</a>
        </div>
        <ul class="social">
        <li><a href="#"><img src="https://i.ibb.co/x7P24fL/facebook.png"></a></li>
        <li><a href="#"><img src="https://i.ibb.co/Wnxq2Nq/twitter.png"></a></li>
        <li><a href="#"><img src="https://i.ibb.co/ySwtH4B/instagram.png"></a></li>
        </ul>
      </section>
    </body>
</html>
```

css_home.css:

```
*
{
  margin: 0;
  padding: 0;
  box-sizing: border-box;
  font-family: 'Poppins', sans-serif;
}
header
{
  position: absolute;
  top: 0;
  left: 0;
  width: 100%;
  padding: 40px 100px;
  z-index: 1000;
  display: flex;
  justify-content: space-between;
  align-items: center;
```

```
}
header .logo
{
  color: #fff;
  text-transform: uppercase;
  cursor: pointer;
}
.toggle
{
  position: relative;
  width: 60px;
  height: 60px;
  background: url(https://i.ibb.co/HrfVRcx/menu.png);
  background-repeat: no-repeat;
  background-size: 30px;
  background-position: center;
  cursor: pointer;
}
.toggle.active
{
  background: url(https://i.ibb.co/rt3HybH/close.png);
  background-repeat: no-repeat;
  background-size: 25px;
  background-position: center;
  cursor: pointer;
}
.showcase
{
  position: absolute;
  right: 0;
  width: 100%;
  min-height: 100vh;
  padding: 100px;
  display: flex;
  justify-content: space-between;
  align-items: center;
  background: #111;
  transition: 0.5s;
  z-index: 2;
}
.showcase.active
{
  right: 300px;
}

.showcase video
{
```

```
  position: absolute;
  top: 0;
  left: 0;
  width: 100%;
  height: 100%;
  object-fit: cover;
  opacity: 0.8;
}
.overlay
{
  position: absolute;
  top: 0;
  left: 0;
  width: 100%;
  height: 100%;
  background: #03a9f4;
  mix-blend-mode: overlay;
}
.text
{
  position: relative;
  z-index: 10;
}

.text h2
{
  font-size: 2em;
  font-weight: 800;
  color: #fff;
  line-height: 1em;
  text-transform: uppercase;
}
.text h3
{
  font-size: 2.8em;
  font-weight: 700;
  color: #fff;
  line-height: 1em;
  text-transform: uppercase;
}
.text p
{
  font-size: 1.1em;
  color: #fff;
  margin: 20px 0;
  font-weight: 400;
  max-width: 700px;
```

```
}
.text a
{
  display: inline-block;
  font-size: 1em;
  background: #fff;
  padding: 10px 30px;
  text-transform: uppercase;
  text-decoration: none;
  font-weight: 500;
  margin-top: 10px;
  color: #111;
  letter-spacing: 2px;
  transition: 0.2s;
}
.text a:hover
{
  background-color: red;
  letter-spacing: 6px;
  color: #fff;
  font-weight: bold;
}
.social
{
  position: absolute;
  z-index: 10;
  bottom: 20px;
  display: flex;
  justify-content: center;
  align-items: center;
}
.social li
{
  list-style: none;
}
.social li a
{
  display: inline-block;
  margin-right: 20px;
  filter: invert(1);
  transform: scale(0.5);
  transition: 0.5s;
}
.social li a:hover
{
  transform: scale(0.5) translateY(-15px);
}
```

```css
.menu
{
  position: absolute;
  top: 0;
  right: 0;
  background-color: hsl(0, 0%, 0%);
  width: 300px;
  height: 100%;
  display: flex;
  justify-content: center;
  align-items: center;
}
.menu ul
{
  position: relative;
}
.menu ul li
{
  list-style: none;
  margin-top: 1em;
}
.menu ul li a
{
  text-decoration: none;
  font-size: 24px;
  color:rgb(255, 255, 255);
}
.menu ul li a:hover
{
  color:chocolate;
}

@media (max-width: 991px)
{
  .showcase,
  .showcase header
  {
    padding: 40px;
  }
  .text h2
  {
    font-size: 3em;
  }
  .text h3
  {
    font-size: 2em;
```

```
  }
}
```

style.css:

```
.{
    margin: 0;
    padding : 0;
    box-sizing: border-box;
}

.bg-dark{
    background-color: #75767B;
}

.mt-50{
    margin-top: 50px;
}

/* Google Font Link */

@import
url('https://fonts.googleapis.com/css2?family=Poppins:wght@200;300;400;500;600;700&display=swap');
* {
    margin: 0;
    padding: 0;
    box-sizing: border-box;
    font-family: "Poppins", sans-serif;
}

.showcase {
    position: absolute;
    right: 0;
    width: 100%;
    min-height: 100vh;
    padding: 100px;
    display: flex;
    justify-content: space-between;
    align-items: center;
    background: #111;
    transition: 0.5s;
    z-index: 2;
}

.showcase.active {
    right: 300px;
```

```
}

.showcase video {
    position: absolute;
    top: 0;
    left: 0;
    width: 100%;
    height: 100%;
    object-fit: cover;
    opacity: 0.8;
}

@media (max-width: 991px) {
    .showcase,
    .showcase header {
        padding: 40px;
    }
    .text h2 {
        font-size: 3em;
    }
    .text h3 {
        font-size: 2em;
    }
}

header .logo {
    color: #fff;
    text-transform: uppercase;
    cursor: pointer;
}

body {
    min-height: 100vh;
    display: flex;
    align-items: center;
    justify-content: center;
    background: #140824;
    padding: 30px;
}

.container {
    position: relative;
    max-width: 850px;
    width: 100%;
    background: #fff;
    padding: 40px 30px;
    box-shadow: 0 5px 10px rgba(0, 0, 0, 0.2);
```

```
    perspective: 2700px;
}

.container .cover {
    position: absolute;
    top: 0;
    left: 50%;
    height: 100%;
    width: 50%;
    z-index: 98;
    transition: all 1s ease;
    transform-origin: left;
    transform-style: preserve-3d;
}

.container #flip:checked~.cover {
    transform: rotateY(-180deg);
}

.container .cover .front,
.container .cover .back {
    position: absolute;
    top: 0;
    left: 0;
    height: 100%;
    width: 100%;
}

.cover .back {
    transform: rotateY(180deg);
    backface-visibility: hidden;
}

.container .cover::before,
.container .cover::after {
    content: '';
    position: absolute;
    height: 100%;
    width: 100%;
    background: #1b0736;
    opacity: 0.5;
    z-index: 12;
}

.container .cover::after {
    opacity: 0.3;
    transform: rotateY(180deg);
```

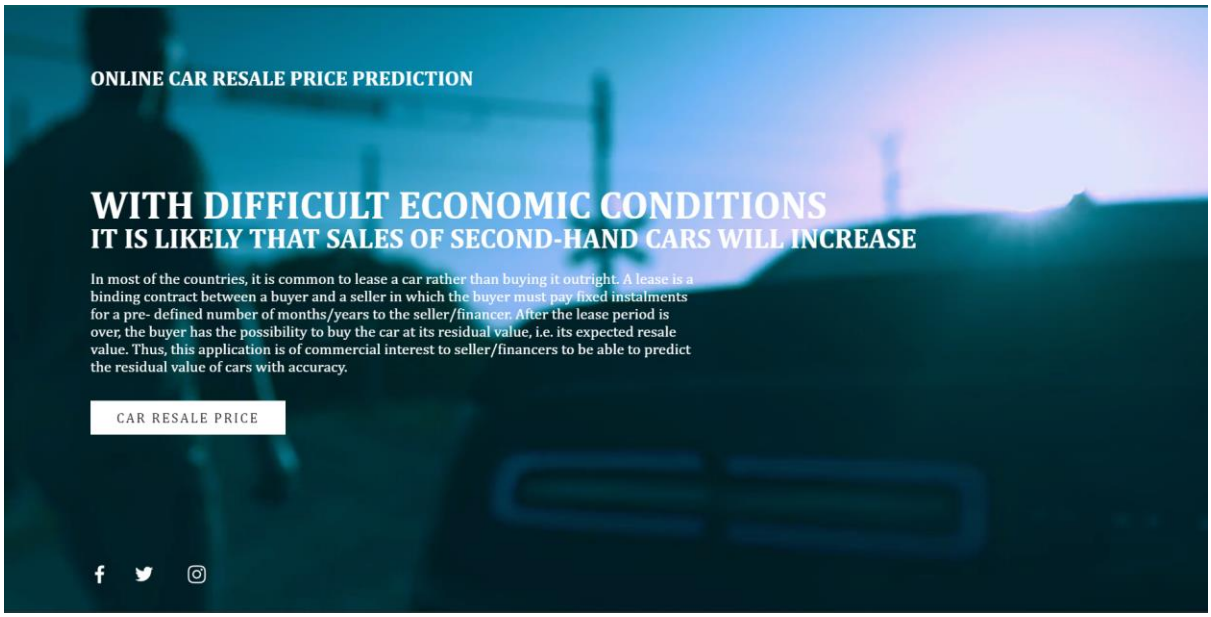
```
    backface-visibility: hidden;
}

.container .cover img {
    position: absolute;
    height: 100%;
    width: 100%;
    object-fit: cover;
    z-index: 10;
}

.container .cover .text {
    position: absolute;
    z-index: 130;
    height: 100%;
    width: 100%;
    display: flex;
    flex-direction: column;
    align-items: center;
    justify-content: center;
}

.cover .text .text-1,
.cover .text .text-2 {
    font-size: 26px;
    font-weight: 600;
    color: #fff;
    text-align: center;
}

.cover .text .text-2 {
    font-size: 15px;
    font-weight: 500;
}

.container .forms {
    height: 100%;
    width: 100%;
    background: #fff;
}

.container .form-content {
    display: flex;
    align-items: center;
    justify-content: space-between;
}
```

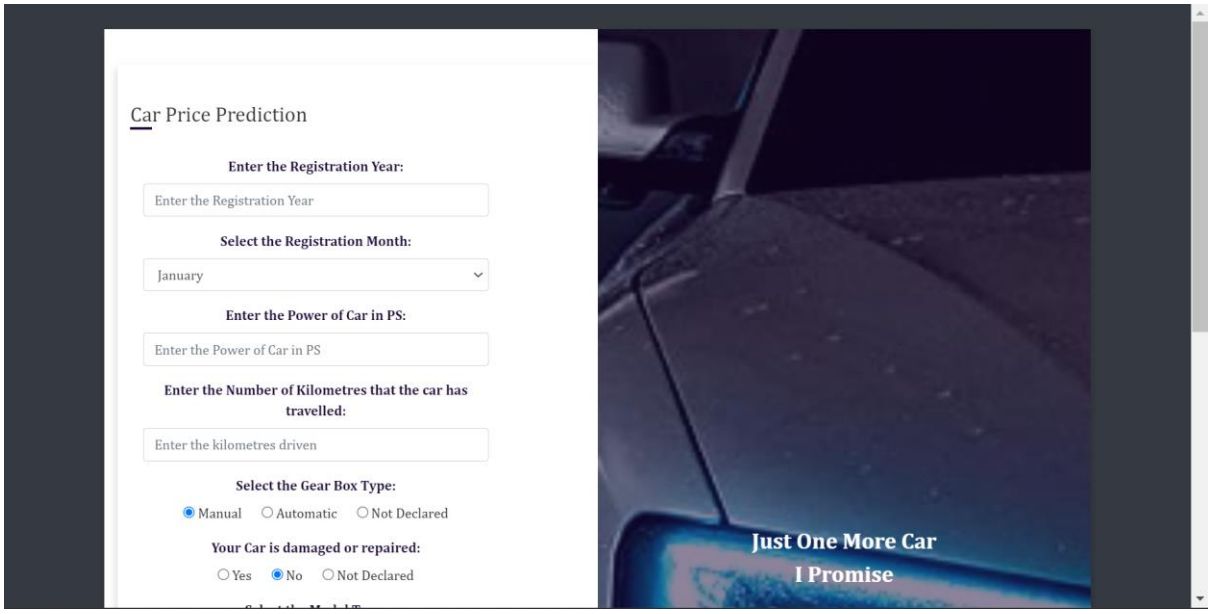
```css
.form-content .login-form,
.form-content .signup-form {
  width: calc(100% / 2 - 25px);
}

.forms .form-content .title {
  position: relative;
  font-size: 24px;
  font-weight: 500;
  color: #333;
}

.forms .form-content .title:before {
  content: '';
  position: absolute;
  left: 0;
  bottom: 0;
  height: 3px;
  width: 25px;
  background: #1b0736;
}

.forms .signup-form .title:before {
  width: 20px;
}

.forms .form-content .input-boxes {
  margin-top: 30px;
}

.forms .form-content .input-box {
  display: flex;
  align-items: center;
  height: 50px;
  width: 100%;
  margin: 10px 0;
  position: relative;
}

.form-content .input-box input {
  height: 100%;
  width: 100%;
  outline: none;
  border: none;
  padding: 0 30px;
  font-size: 16px;
  font-weight: 500;
```

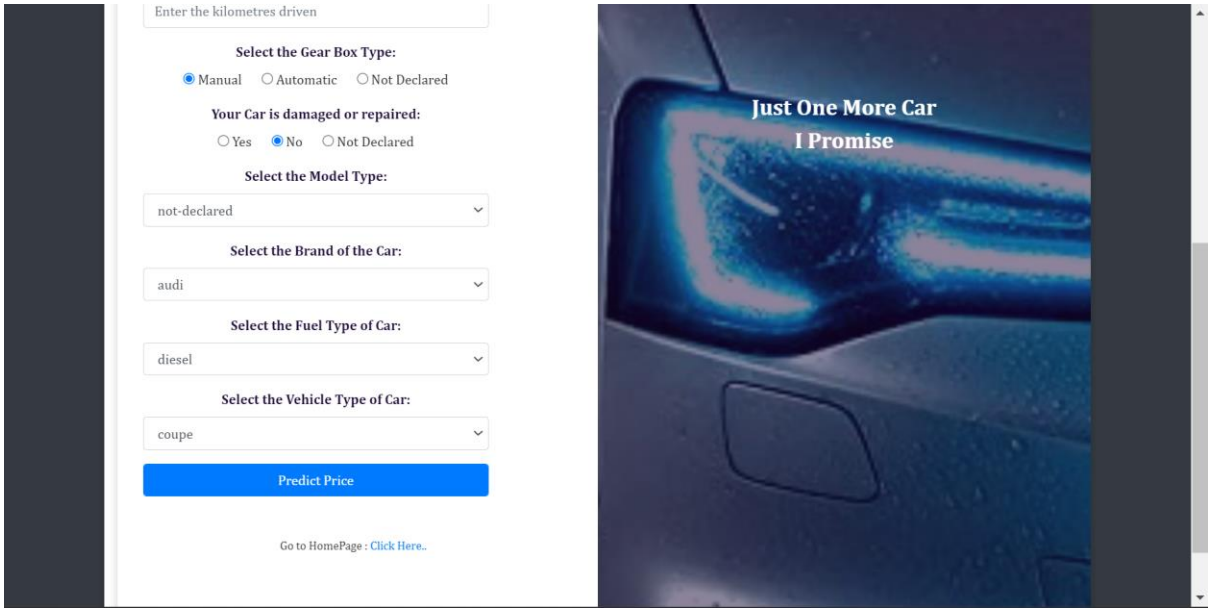
```
    border-bottom: 2px solid rgba(0, 0, 0, 0.2);
    transition: all 0.3s ease;
}

.form-content .input-box input:focus,
.form-content .input-box input:valid {
    border-color: #1b0736;
}

.form-content .input-box i {
    position: absolute;
    color: #1b0736;
    font-size: 17px;
}

.forms .form-content .text {
    font-size: 14px;
    font-weight: 500;
    color: #333;
}

.forms .form-content .text a {
    text-decoration: none;
}

.forms .form-content .text a:hover {
    text-decoration: underline;
}

.forms .form-content .button {
    color: #fff;
    margin-top: 40px;
}

.forms .form-content .button input {
    color: #fff;
    background: #1b0736;
    border-radius: 6px;
    padding: 0;
    cursor: pointer;
    transition: all 0.4s ease;
}

.forms .form-content .button input:hover {
    background: #1b0736;
}
```

```
.forms .form-content label {
   color: #1b0736;
   cursor: pointer;
}

.forms .form-content label:hover {
   text-decoration: underline;
}

.forms .form-content .login-text,
.forms .form-content .sign-up-text {
   text-align: center;
   margin-top: 25px;
}

.container #flip {
   display: none;
}

@media (max-width: 730px) {
   .container .cover {
      display: none;
   }
   .form-content .login-form,
   .form-content .signup-form {
      width: 100%;
   }
   .form-content .signup-form {
      display: none;
   }
   .container #flip:checked~.forms .signup-form {
      display: block;
   }
   .container #flip:checked~.forms .login-form {
      display: none;
   }
}
```

Test case:


ONLINE CAR RESALE PRICE PREDICTION
WITH DIFFICULT ECONOMIC CONDITIONS
IT IS LIKELY THAT SALES OF SECOND-HAND CARS WILL INCREASE
In most of the countries, it is common to lease a car rather than buying it outright. A lease is a binding contract between a buyer and a seller in which the buyer must pay fixed instalments for a pre- defined number of months/years to the seller/financer. After the lease period is over, the buyer has the possibility to buy the car at its residual value, i.e. its expected resale value. Thus, this application is of commercial interest to seller/financers to be able to predict the residual value of cars with accuracy.
CAR RESALE PRICE


Car Price Prediction
Enter the Registration Year:
Enter the Registration Year
Select the Registration Month:
January
Enter the Power of Car in PS:
Enter the Power of Car in PS
Enter the Number of Kilometres that the car has travelled:
Enter the kilometres driven
Select the Gear Box Type:
Manual
Automatic
Not Declared
Your Car is damaged or repaired:
Yes
No
Not Declared
Just One More Car
I Promise


Enter the kilometres driven
Select the Gear Box Type:
Manual
Automatic
Not Declared
Your Car is damaged or repaired:
Yes
No
Not Declared
Select the Model Type:
not-declared
Select the Brand of the Car:
audi
Select the Fuel Type of Car:
diesel
Select the Vehicle Type of Car:
coupe
Predict Price
Go to HomePage : Click Here..
Just One More Car
I Promise