

FINAL SOURCE CODE

index.html

```
<!DOCTYPE html>

<html>

  <head>

    <meta charset="UTF-8">

    <title>Rainfall prediction</title>

    <style>

      .body{

        font-family: Verdana, Geneva, Tahoma, sans-serif;

      }

      h1{

        font-size: 60px;

      }

      h2{

        font-size: 40px;

      }

      label,hr{

        font-weight: bold;

      }

    </style>

  </head>

  <body background="https://wallpaperaccess.com/full/701614.jpg" text="black">

    <div class="login">

      <center><h1>Rainfall Prediction</h1></center>

      <h2>Please enter the following details</h2><hr><br>

      <!-- Main Input For Receiving Query to our ML -->

      <form action="{ { url_for('predict') } }" method="post">

        </style></head>

        <label for="Location">Location:</label>
```


<!--MAXIMUM TEMPERATURE-->

<!--RAINFALL-->

<!--WINDGUSTSPEED-->

```
<input type="number" name="WindGustSpeed" id="WindGustSpeed"
placeholder="WindGustSpeed">
```

<!--WINDSPEED9am-->

<!--WINDSPEED3pm-->

```
<input type="number" name="WindSpeed3pm" id="WindSpeed3pm"
placeholder="WindSpeed3pm">
```

<!--HUMIDITY9AM-->

<!--HUMIDITY3PM-->

[illegible][illegible]

```
<input type="number" name="Temp9am" id="Temp9am" placeholder="Temp9am">
<br><br>
```

[illegible][illegible]

```
<label for="raintoday">RainToday:</label>  
<select id="raintoday" name="raintoday">  
    <option value=1>Yes</option>  
    <option value=2>No</option>  
</select>  
  
&nbsp;&nbsp;&nbsp;&nbsp;
```

<label for="WindGustDir">WindGustDir:</label>

```
<select id="WindGustDir" name="WindGustDir">
```

<option value=14>W<option> <option value=15>WNW<option>

<option value=0>WSW<option>

<option value=7>NE<option> <option value=13>NNW<option>

<option value=10>N<option>

<option value=2>NNE</option>

<option value=1>SW<option>

<option value=6>ENE</option>

<option value=11>SSE</option>

<option value=12>S<option>

<option value=9>NW</option>

$$\langle \text{option value}=3 \rangle \text{SE} \langle \text{option} \rangle$$

<option value=8>ESE</option>

<option value=5>E<option> <option value=4>SSW<option>

<label for="WindDir9am">WindDir9am:</label>

<select id="WindDir9am" name="WindDir9am">

<option value=14>W<option> <option value=15>WNW<option>

<option value=0>WSW<option>

<option value=7>NE<option> <option value=13>NNW<option>

<option value=10>N<option>

<option value=2>NNE<option>

<option value=1>SW<option>

<option value=6>ENE</option>

<option value=11>SSE</option>

<option value=12>S<option>

<option value=9>NW</option>

$$\langle \text{option value} = 3 \rangle \text{SE} \langle \text{option} \rangle$$

```
<option value=8>ESE</option>  
    <option value=5>E</option> <option value=4>SSW</option>  
</select>     
  
<label for="WindDir3pm">WindDir3pm:</label>  
<select id="WindDir3pm" name="WindDir3pm">  
    <option value=14>W</option> <option value=15>WNW</option>  
    <option value=0>WSW</option>  
    <option value=7>NE</option> <option value=13>NNW</option>  
    <option value=10>N</option>  
    <option value=2>NNE</option>  
    <option value=1>SW</option>  
    <option value=6>ENE</option>  
    <option value=11>SSE</option>  
    <option value=12>S</option>  
    <option value=9>NW</option>  
    <option value=3>SE</option>  
    <option value=8>ESE</option>  
    <option value=5>E</option> <option value=4>SSW</option>  
</select>     
  
<br>  
<br><br>  
    <button type="submit" class="btn btn-primary btn-block btn-large"  
style="height:30px;width:200px">Predict</button>  
  
</form>  
  
<br>  
  
{ { prediction_text } }  
  
<br>  
  
<br>
```

```

```

```

```

```
<br>
```

```
<br>
```

```

```

```
</div>
```

```
</body> </html>
```

login.html

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>LOGIN</title>
```

```
<link rel="stylesheet" type="text/css" href="style.css">
```

```
<link rel="icon" href="images.jpg" type="image/icon type">
```

```
</head>
```

```
<body>
```

```
<div class="loginbox">
```

```

```

```
<h1>Login Here</h1>
```

```
<form name="form1" method="POST" enctype="multipart/form-data">
```

```
<p>Username</p>
```

```
<input type="text" name="username" placeholder="Enter Username">
```

```
<p>Password</p>
```

```
<input type="password" name="pass" placeholder="Enter Password">
```

```
<input type="submit" onClick="myFunction()"/>
```

```
</form>
```

```
<script>
```

```
function validation()
{
var id=document.f1.user.value;
var ps=document.f1.pass.value;
if(id.length=="" && ps.length=="") {
alert("User Name and Password fields are empty");
return false;
}
else
{
if(id.length=="") {
alert("User Name is empty");
return false;
}
if (ps.length=="") {
alert("Password field is empty");
return false;
}
}
}
}
}
</script>
</div>
</body>
</html>
```

signup.html

```
<!DOCTYPE html>
<html>
<head>
<title>SignUp</title>
```



```

<link rel="stylesheet" type="text/css" href="style.css">
<link rel="icon" href="images.jpg" type="image/icon type">
</head>
<body>
<div class="sign-up-form">
<h1>SignUp Now</h1>
<form method="post" enctype="multipart/form-data" action="index.php" >
<input type="email" class="input-box" name="email" placeholder="Your Email">
<input type="text" class="input-box" name="username" placeholder="Your
UserName">
<input type="password" class="input-box" name="password" placeholder="Your
Password">
<p><span><input type="checkbox"></span> I agree to the terms of service</p>
<button type="button" class="signup-btn"><a
href="index.html">SignUp</a></button>
<hr>
<p class="or">OR</p>
<p>Already have an account?<a href="login.html">Login</a></p>
</form>
</div>
</body>
</html>

```

in.html

```

<html>
<body>
<?php
include('connection.php');
$username = $_POST['username'];
$password = $_POST['pass'];
//to prevent from mysql injection

```

```

$username = stripslashes($username);
$password = stripslashes($password);
$username = mysqli_real_escape_string($con, $username);
$password = mysqli_real_escape_string($con, $password);
$sql = "select *from reg where username = '$username' and
password = '$password'";
$result = mysqli_query($con, $sql);
$row = mysqli_fetch_array($result, MYSQLI_ASSOC);
$count = mysqli_num_rows($result);
if($count == 1)
{
print "<h1>Login successful.</h1>";
}
else
{
print "<h1>Login failed. Invalid username or password.</h1>";
}
?>
</body>
</html>

```

chance.html

```

<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Rainfall prediction</title>
</head>
<body
background="https://wnavprd.blob.core.windows.net/images/guide/chri

```

```
s-seufert-cape-cod-rain-beach-1400-110-1.jpg" text="black">
<div class="login">
<center><h1>chances of rain today.</h1></center>
</body>
</html>
```

nochance.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Rainfall prediction</title>
</head>
<body>
background="https://cdn.tourradar.com/s3/tour/1500x800/139566_d97b
af8c.jpg" text="black">
<div class="login">
<center><h1>No chances of rain today, enjoy your
outing.</h1></center>
</body>
</html>
```

server.py

```
#from crypt import methods
from pyexpat import features, model
import numpy as np
import pickle
#import joblib
#import matplotlib
#import matplotlib.pyplot as plt
```

```

#import time

import pandas

#import os

from flask import Flask, request, jsonify, render_template, redirect,
url_for

# Declare a Flask app

app = Flask(__name__,template_folder='template')

model = pickle.load(open("rainfall.pkl",'rb'))

scale = pickle.load(open("scale.pkl",'rb'))

@app.route('/chance/',methods=['GET', 'POST'])

def chance():

return render_template("chance.html")

@app.route('/nochance/',methods=['GET', 'POST'])

def nochance():

return render_template("noChance.html")

@app.route('/predict',methods=["POST","GET"])

def predict():

res = " "

# If a form is submitted

if request.method == "POST":

input_feature=[x for x in request.form.values() ]

features_values=[np.array(input_feature)]

names =

[['Location','MinTemp','MaxTemp','Rainfall','WindGustSpeed',

'WindSpeed9am','WindSpeed3pm','Humidity9am','Humadity3pm',

'Pressure9pm','Pressure3am','Temp9pm','Temp3pm','RainyToday',

'WindGustDir','WindDir9pm','WindDir3pm']]

data = pandas.DataFrame(features_values,columns=names)

data = scale.fit_transform(data)

data = pandas.DataFrame(data,columns=names)

```

```
#Get prediction
prediction = model.predict(data)
else:
prediction = ""
if prediction == 1:
return redirect(url_for('chance'))
elif prediction == 0:
return redirect(url_for('nochance'))
return render_template("index.html", output = res)
#Running the app
if __name__ == "__main__":
app.run(debug = True,host='0.0.0.0',port=80)
```

GitHub link: <https://github.com/IBM-EPBL/IBM-Project-7148-1658848463>