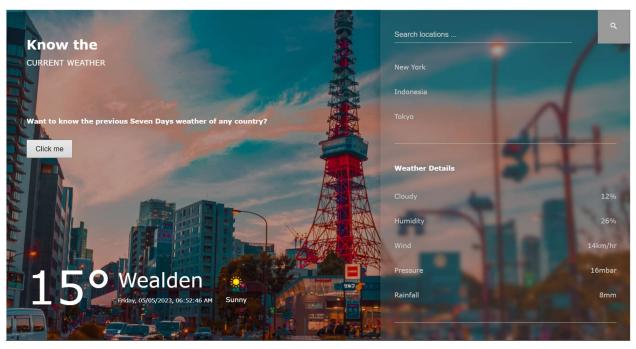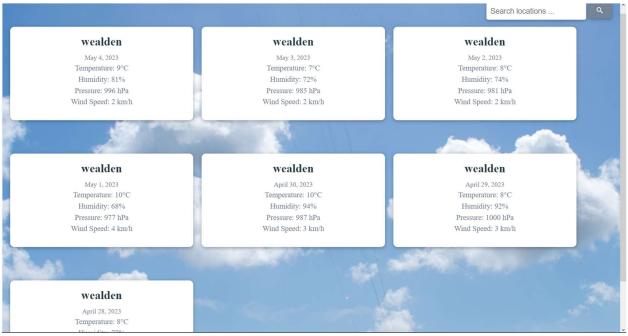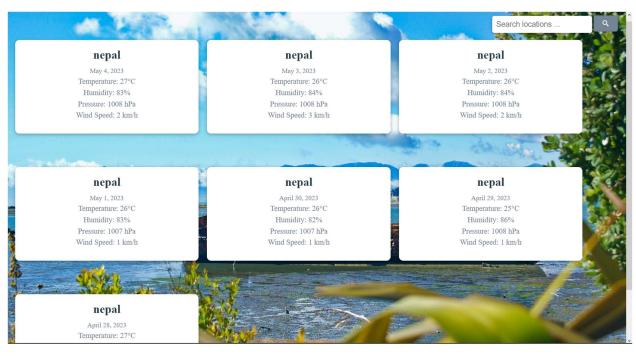Name: Shrisha Tuladhar

Student ID: 2332330

Output:
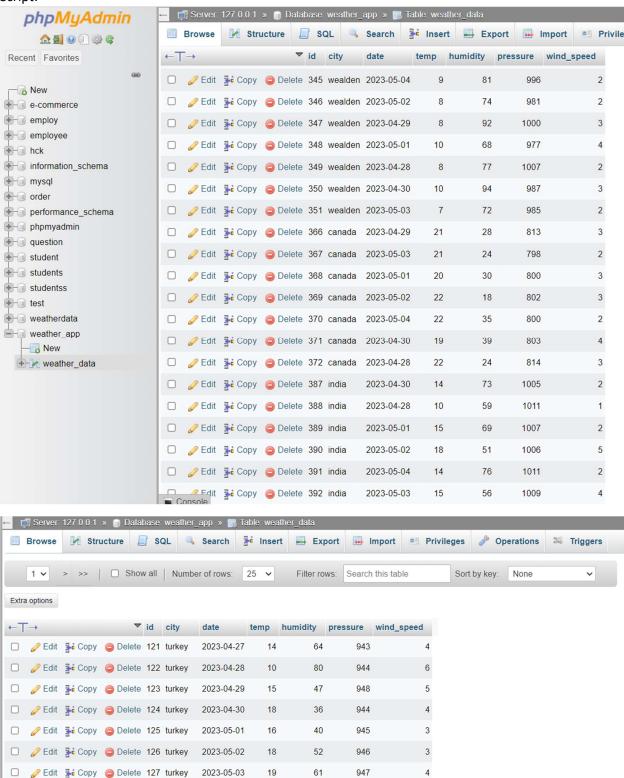
nepal

May 4, 2023
Temperature: 27°C
Humidity: 83%
Pressure: 1008 hPa
Wind Speed: 2 km/h

nepal

May 3, 2023
Temperature: 26°C
Humidity: 84%
Pressure: 1008 hPa
Wind Speed: 3 km/h

nepal

May 2, 2023
Temperature: 26°C
Humidity: 84%
Pressure: 1008 hPa
Wind Speed: 2 km/h

nepal

May 1, 2023
Temperature: 26°C
Humidity: 83%
Pressure: 1007 hPa
Wind Speed: 1 km/h

nepal

April 30, 2023
Temperature: 26°C
Humidity: 82%
Pressure: 1007 hPa
Wind Speed: 1 km/h

nepal

April 29, 2023
Temperature: 25°C
Humidity: 86%
Pressure: 1008 hPa
Wind Speed: 1 km/h

nepal

April 28, 2023
Temperature: 27°C

japan

May 4, 2023
Temperature: 6°C
Humidity: 81%
Pressure: 976 hPa
Wind Speed: 3 km/h

japan

May 3, 2023
Temperature: 4°C
Humidity: 85%
Pressure: 964 hPa
Wind Speed: 3 km/h

japan

May 2, 2023
Temperature: 5°C
Humidity: 82%
Pressure: 960 hPa
Wind Speed: 3 km/h

japan

May 1, 2023
Temperature: 6°C
Humidity: 80%
Pressure: 958 hPa
Wind Speed: 5 km/h

japan

April 30, 2023
Temperature: 9°C
Humidity: 98%
Pressure: 964 hPa
Wind Speed: 5 km/h

japan

April 29, 2023
Temperature: 7°C
Humidity: 98%
Pressure: 976 hPa
Wind Speed: 6 km/h

japan

April 28, 2023
Temperature: 7°C
Humidity: 87%

Script:

phpMyAdmin

Recent | Favorites

- New
- e-commerce
- employ
- employee
- hck
- information_schema
- mysql
- order
- performance_schema
- phpmyadmin
- question
- student
- students
- studentss
- test
- weatherdata
- weather_app
  - New
  - weather_data

Console

Server: 127.0.0.1 » Database: weather_app » Table: weather_data

Browse | Structure | SQL | Search | Insert | Export | Import | Privile

				id	city	date	temp	humidity	pressure	wind_speed
☐	Edit	Copy	Delete	345	wealden	2023-05-04	9	81	996	2
☐	Edit	Copy	Delete	346	wealden	2023-05-02	8	74	981	2
☐	Edit	Copy	Delete	347	wealden	2023-04-29	8	92	1000	3
☐	Edit	Copy	Delete	348	wealden	2023-05-01	10	68	977	4
☐	Edit	Copy	Delete	349	wealden	2023-04-28	8	77	1007	2
☐	Edit	Copy	Delete	350	wealden	2023-04-30	10	94	987	3
☐	Edit	Copy	Delete	351	wealden	2023-05-03	7	72	985	2
☐	Edit	Copy	Delete	366	canada	2023-04-29	21	28	813	3
☐	Edit	Copy	Delete	367	canada	2023-05-03	21	24	798	2
☐	Edit	Copy	Delete	368	canada	2023-05-01	20	30	800	3
☐	Edit	Copy	Delete	369	canada	2023-05-02	22	18	802	3
☐	Edit	Copy	Delete	370	canada	2023-05-04	22	35	800	2
☐	Edit	Copy	Delete	371	canada	2023-04-30	19	39	803	4
☐	Edit	Copy	Delete	372	canada	2023-04-28	22	24	814	3
☐	Edit	Copy	Delete	387	india	2023-04-30	14	73	1005	2
☐	Edit	Copy	Delete	388	india	2023-04-28	10	59	1011	1
☐	Edit	Copy	Delete	389	india	2023-05-01	15	69	1007	2
☐	Edit	Copy	Delete	390	india	2023-05-02	18	51	1006	5
☐	Edit	Copy	Delete	391	india	2023-05-04	14	76	1011	2
☐	Edit	Copy	Delete	392	india	2023-05-03	15	56	1009	4

Server: 127.0.0.1 » Database: weather_app » Table: weather_data

Browse | Structure | SQL | Search | Insert | Export | Import | Privileges | Operations | Triggers

| 1 ⌄ | > | >> | ☐ Show all | Number of rows: | 25 ⌄ | Filter rows: | Search this table | Sort by key: | None ⌄ |

Extra options

				id	city	date	temp	humidity	pressure	wind_speed
☐	Edit	Copy	Delete	121	turkey	2023-04-27	14	64	943	4
☐	Edit	Copy	Delete	122	turkey	2023-04-28	10	80	944	6
☐	Edit	Copy	Delete	123	turkey	2023-04-29	15	47	948	5
☐	Edit	Copy	Delete	124	turkey	2023-04-30	18	36	944	4
☐	Edit	Copy	Delete	125	turkey	2023-05-01	16	40	945	3
☐	Edit	Copy	Delete	126	turkey	2023-05-02	18	52	946	3
☐	Edit	Copy	Delete	127	turkey	2023-05-03	19	61	947	4

☐	🖊 Edit	⧉ Copy	⊝ Delete	472	wealden	2023-05-02	8	74	981	2
☐	🖊 Edit	⧉ Copy	⊝ Delete	473	wealden	2023-04-29	8	92	1000	3
☐	🖊 Edit	⧉ Copy	⊝ Delete	474	wealden	2023-05-01	10	68	977	4
☐	🖊 Edit	⧉ Copy	⊝ Delete	475	wealden	2023-04-28	8	77	1007	2
☐	🖊 Edit	⧉ Copy	⊝ Delete	476	wealden	2023-04-30	10	94	987	3
☐	🖊 Edit	⧉ Copy	⊝ Delete	477	wealden	2023-05-03	7	72	985	2

Structure:

Server: 127.0.0.1 » Database: weather_app » Table: weather_data

Browse | Structure | SQL | Search | Insert | Export | Import | Privileges | Operations | Triggers

Table structure | Relation view

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action		
☐	1	id 🔑	int(11)			No	None		AUTO_INCREMENT	🖊 Change	⊝ Drop	More
☐	2	city	varchar(255)	utf8mb4_general_ci		No	None			🖊 Change	⊝ Drop	More
☐	3	date	date			No	None			🖊 Change	⊝ Drop	More
☐	4	temp	float			No	None			🖊 Change	⊝ Drop	More
☐	5	humidity	float			No	None			🖊 Change	⊝ Drop	More
☐	6	pressure	float			No	None			🖊 Change	⊝ Drop	More
☐	7	wind_speed	float			No	None			🖊 Change	⊝ Drop	More

⬆ ☐ Check all   With selected: 🗔 Browse   🖊 Change   ⊝ Drop   🔑 Primary   U Unique   Index   S Spatial   T Fulltext

🖨 Print Propose table structure 💡 Move columns Normalize

UML diagrams

```
●
│
▼
┌─────────────────────────┐
│ Click on button to check the │
│   past 7 days weather    │
└─────────────────────────┘
           │
           ▼
┌─────────────────────────────────┐
│ Get weather data for default city (Wealden) │
└─────────────────────────────────┘
           │
           ▼
┌─────────────────────────────────┐
│     Search for another city     │
└─────────────────────────────────┘
           │
           ▼
        ◇ Is $city ="Wealden"? ◇
   yes  /                  \  No
```

Is $city ="Wealden"?

yes

No

┌─────────────────────────────┐
│ Retrieve data from weather_data │
│ table for the past 7 days for │
│   Wealden   │
└─────────────────────────────┘

┌─────────────────────────┐
│   Make API request for   │
│   historical weather   │
│   data for $city   │
└─────────────────────────┘

┌─────────────────────┐
│ Decode the JSON   │
│   response   │
└─────────────────────┘

┌─────────────────────────┐
│ Loop through each weather │
│   data and insert it into │
│   weather_data   │
└─────────────────────────┘

┌─────────────────────┐
│   Close data   │
│   connection   │
└─────────────────────┘

┌─────────────────────┐
│ Return data for $city │
└─────────────────────┘

●

```
                        :API              :Database            :PHP

  Actor

  │ Request weather data for the past 7 days │                    │
  ├───────────────────────────────────────►┐│                    │
  │                                         ││                    │
  │                         Verify API key  ││                    │
  │                                     ┌───┘│                    │
  │                                     └───►││                    │
  │                                         ││                    │
  │                        Fetch weather data│                    │
  │                                     ┌───┘│                    │
  │                                     └───►││                    │
  │                                         ││                    │
  │        Return weather data              ││                    │
  │◄─────────────────────────────────────── │                    │
┌─────┐                                                       ┌───┐ Available
│ Alt │        Request to search for weather data             │   │
└─────┴────────────────────────────────────────────────────►┐└───┘
  │                                         │                 │
  │                    Execute SQL query to retrieve weather data
  │                                        ┌┤◄────────────────┘
  │                                        ││
  │                                        ││
  │                                        ││
  │      Display weather data for  searched city                │
  │◄────────────────────────────────────────────────────────────
  │                                        ││  Return weather data│
  │     Store weather data for the past 7 days┤─ ─ ─ ─ ─ ─ ─ ─ ─►│
  ├───────────────────────────────────────►││
  │                                        ││
  │                                        ││  Store weather data in the database
  │                                    ┌───┘│
  │                                    └───►││
  │                                        ││
  │       Confirmation message             ││
  │◄ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ──│
  │       Display the weather data to the user
  │◄ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ──│

┌──────┐
│ Else │
└──────┘
  │                                        ││
  │                                        ││  Location not available
  │                                    ┌───┘│
  │       No results found             └───►││
  │◄ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ──│
  │                                         │
```

User

FrontEnd Component

- HTML
- CSS
- JavaScript

Web App

PHP

Database server

SQL

Weather API

Component
Open weather API

Component
Weatherbit API

Code for php:

Index(2332330).php

index(2332330).php

```php
1   <!DOCTYPE html>
2   <html>
3   <head>
4     <title>Weather Forecast</title>
5     <link rel="stylesheet" href="https://unpkg.com/boxicons@latest/css/boxicons.min.css">
6   <style>
7
8       body {
9           background-image: url('https://source.unsplash.com/1600x900/?bluesky');
10          background-size: cover;
11        }
12
13        .card {
14    box-shadow: 0 2px 8px rgba(0, 0, 0, 0.3);
15    transition: 0.3s;
16    width: 30%;
17    margin: 10px;
18    border-radius: 10px;
19    background-color: #ffffff;
20    display: inline-block;
21    vertical-align: top;
22    text-align: center;
23    margin-top: 70px;
24  }
25
26
27  .card:hover {
28    box-shadow: 0 4px 16px rgba(0, 0, 0, 0.3);
29    transform: translateY(-5px);
30  }
31
32  .container {
33    padding: 20px;
34  }
35
36  .city {
37    font-size: 28px;
38    font-weight: bold;
39    margin-bottom: 10px;
```

```
40        color: #263A47;
41      }
42
43      .weather-data {
44        margin-bottom: 10px;
45      }
46
47      .weather-data p {
48        margin: 0;
49        font-size: 18px;
50        color: #728495;
51        line-height: 1.5;
52      }
53
54      .date {
55        font-size: 16px;
56        color: #728495;
57        line-height: 1.5;
58      }
59
60      .card-row {
61        margin-bottom: 30px;
62        overflow: auto;
63        white-space: nowrap;
64      }
65
66      .search-box {
67        position: absolute;
68        top: 20px;
69        right: 20px;
70
71      }
72
73      label {
74        font-size: 20px;
75        color: #333;
76      }
77
78      input[type="text"] {
```

index(2332330).php U ●   shrisha2332330.php U   ShrishaTuladhar_2332330(doc).pdf   JS ShrishaTuladhar_2332330.js M   <> ShrishaTuladhar_23

index(2332330).php

```php
78    input[type="text"] {
79      padding: 10px;
80      font-size: 18px;
81      border: none;
82      border-radius: 5px;
83      box-shadow: 0 2px 8px rgba(0, 0, 0, 0.3);
84    }
85
86    button[type="submit"] {
87      padding: 10px 20px;
88      background-color: #728495;
89      color: white;
90      border: none;
91      border-radius: 5px;
92      font-size: 18px;
93      box-shadow: 0 2px 8px rgba(0, 0, 0, 0.3);
94      cursor: pointer;
95    }
96    button[type="submit"]:hover {
97      background-color: #263A47;
98    }
99    </style>
100   </head>
101   <body>
102   <div class="search-box">
103   <form id="locationInput" action="shrisha2332330.php" method="post">
104            <input type="text" class="search" placeholder="Search locations ..." name="searchQuery" id="searchQuery"/>
105            <button type="submit" class="submit" name="search">
106                <i class='bx bx-search-alt-2'></i>
107            </button>
108        </form>
109   </div>
110   <!--php-->
111   <?php
112   include 'shrisha2332330.php';
113   ?>
114   </body>
115   </html>
116
```

Shrisha2332330.php

shrisha2332330.php

```php
<?php
// Database configuration
$hostname = "localhost"; // MySQL server hostname
$username = "root"; // MySQL username
$password = ""; // MySQL password
$dbname = "weather_app"; // MySQL database name

// Create a new MySQL connection
$conn = new mysqli($hostname, $username, $password, $dbname);

// Check if the MySQL connection was successful
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// Function to retrieve weather data for a city using the Weatherbit API and store it in the database
function getWeatherDatas($city, $api_key, $conn) {
    // Check if the MySQL connection is valid
    if (!$conn) {
        die("Connection failed: " . mysqli_connect_error());
    }

    // Delete any existing weather data for the searched city
    $stmt = $conn->prepare("DELETE FROM weather_data WHERE city = ?");
    $stmt->bind_param("s", $city);
    $stmt->execute();

    // Define the start and end dates for the API request (7 days ago until today)
    $start_date = date("Y-m-d", strtotime("-7 days"));
    $end_date = date("Y-m-d");

    // Construct the API request URL using the provided city and API key
    $url = "https://api.weatherbit.io/v2.0/history/daily?city=" . $city . "&start_date=".$start_date."&end_date=".$end_date."&key=".$api_key;

    // Use cURL to make the API request
    $ch = curl_init();
    curl_setopt($ch, CURLOPT_URL, $url);
    curl_setopt($ch, CURLOPT_RETURNTRANSFER, true);
    $result = curl_exec($ch);
```

```php
41      // Check if the API request was successful
42      if ($result === false) {
43        die("Curl error: " . curl_error($ch));
44      }
45
46      // Parse the JSON response from the API into a PHP array
47      $data = json_decode($result, true);
48
49      // Prepare a MySQL statement to insert the weather data into the database
50      $stmt = $conn->prepare("INSERT INTO weather_data (city, date, temp, humidity, pressure, wind_speed) VALUES (?, ?, ?, ?, ?, ?)");
51
52      // Loop through each day in the API response and insert its weather data into the database
53      foreach ($data["data"] as $day) {
54        $date = $day["datetime"];
55        $temp = $day["temp"];
56        $humidity = $day["rh"];
57        $pressure = $day["pres"];
58        $wind_speed = $day["wind_spd"];
59
60        $stmt->bind_param("ssiiii", $city, $date, $temp, $humidity, $pressure, $wind_speed);
61        $stmt->execute();
62      }
63
64      // Close the MySQL statement and cURL connection
65      $stmt->close();
66      curl_close($ch);
67    }
68
69
70  // Check if a city was submitted via the search form
71  $city = "";
72  if (isset($_POST['search'])) {
73    $city = $_POST['searchQuery'];
74    $api_key = "beab4338ffda4e809d50296a8dab6f7b"; // Weatherbit API key
75
76    // Call the getWeatherData function to retrieve the weather data for the searched city and store it in the database
77    getWeatherDatas($city, $api_key, $conn);
78
79    // Update the $sql query to retrieve data for the searched city instead of Wealden
```

```php
      // Call the getWeatherData function to retrieve the weather data for the searched city and store it in the database
      getWeatherDatas($city, $api_key, $conn);

      // Update the $sql query to retrieve data for the searched city instead of Wealden
      $sql = "SELECT * FROM weather_data WHERE city='" . $city . "' AND date >= DATE(NOW()) - INTERVAL 7 DAY ORDER BY date DESC";
   } else {
      $sql = "SELECT * FROM weather_data WHERE city='Wealden' AND date >= DATE(NOW()) - INTERVAL 7 DAY ORDER BY date DESC";
   }

$result = mysqli_query($conn, $sql);

// Display the weather data on the webpage
if ($result->num_rows > 0) {
   while($row = mysqli_fetch_assoc($result)) {
      echo "<div class='card'>";
      echo "<div class='container'>";
      echo "<div class='city'>" . $row["city"] . "</div>";
      echo "<div class='date'>" . date("F j, Y", strtotime($row["date"])) . "</div>";
      echo "<div class='weather-data'>";
      echo "<p>Temperature: " . $row["temp"] . "°C</p>";
      echo "<p>Humidity: " . $row["humidity"] . "%</p>";
      echo "<p>Pressure: " . $row["pressure"] . " hPa</p>";
      echo "<p>Wind Speed: " . $row["wind_speed"] . " km/h</p>";
      echo "</div>";
      echo "</div>";
      echo "</div>";
   }
} else {
   echo "No results found.";
}


include 'index(2332330).php';
$conn->close();


?>
```