

Faculty of Engineering  
System & Computer Engineering  
Department



AL-Azhar University

**Project name:**

## **Web Application of weather around world**

Project Team

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# Introduction

## Project Motivation

Having an up to date information about the weather helps us to take well-read decisions. These weather apps constantly update the forecasts for a day or hour or sometimes for even a minute. These can be simply termed as the compact weather devices, as they do not only tell about the temperature of that specific region instead they can describe the accurate time of the sunrise and sunset, the time of the rainfall, humidity levels, etc .

## Problem :

Some people face problems with weather and need to know outside temperature to avoid a bad effect of weather

## Advantages of proposed System

- Time saving by fast search
- Increased convenience
- Affordable
- Portable

## SYSTEM ANALYSIS

System analysis is carried out to achieve mainly two aims:

1-To have a clear understanding of the system , this will help in the design of the system.

2- Analyzing the system will bring about identifying the requirements and hence knowing how to work on the project.

## Project Software & Hardware Requirements :

Requirements which are needed are given briefly :

### **Hardware Requirements:**

- 1- Processor – At least 2.0 GHZ .
- 2-RAM – At least 2GB

### **Software Requirements:**

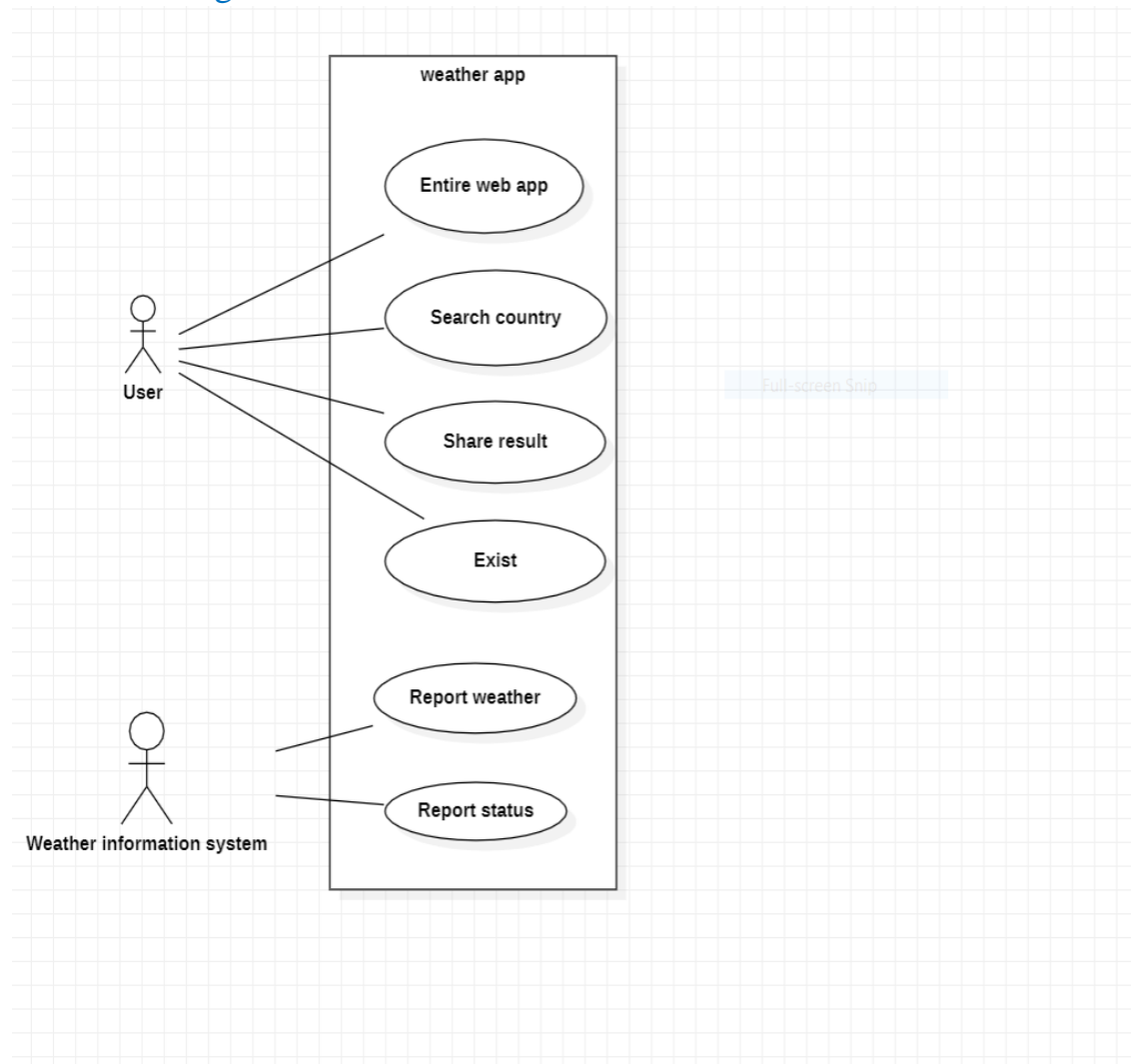
- 1-Operating System – Windows .
- 2-Front End – HTML5, CSS3, JS ,Angular and API to build the user interface.
- 3-Editor Tools – Visual Studio Code,
- 4-Graphics Tools – Online logo designer .
- 5-Web Browser – Google Chrome, Firefox, or any compatible update browser

# System Design

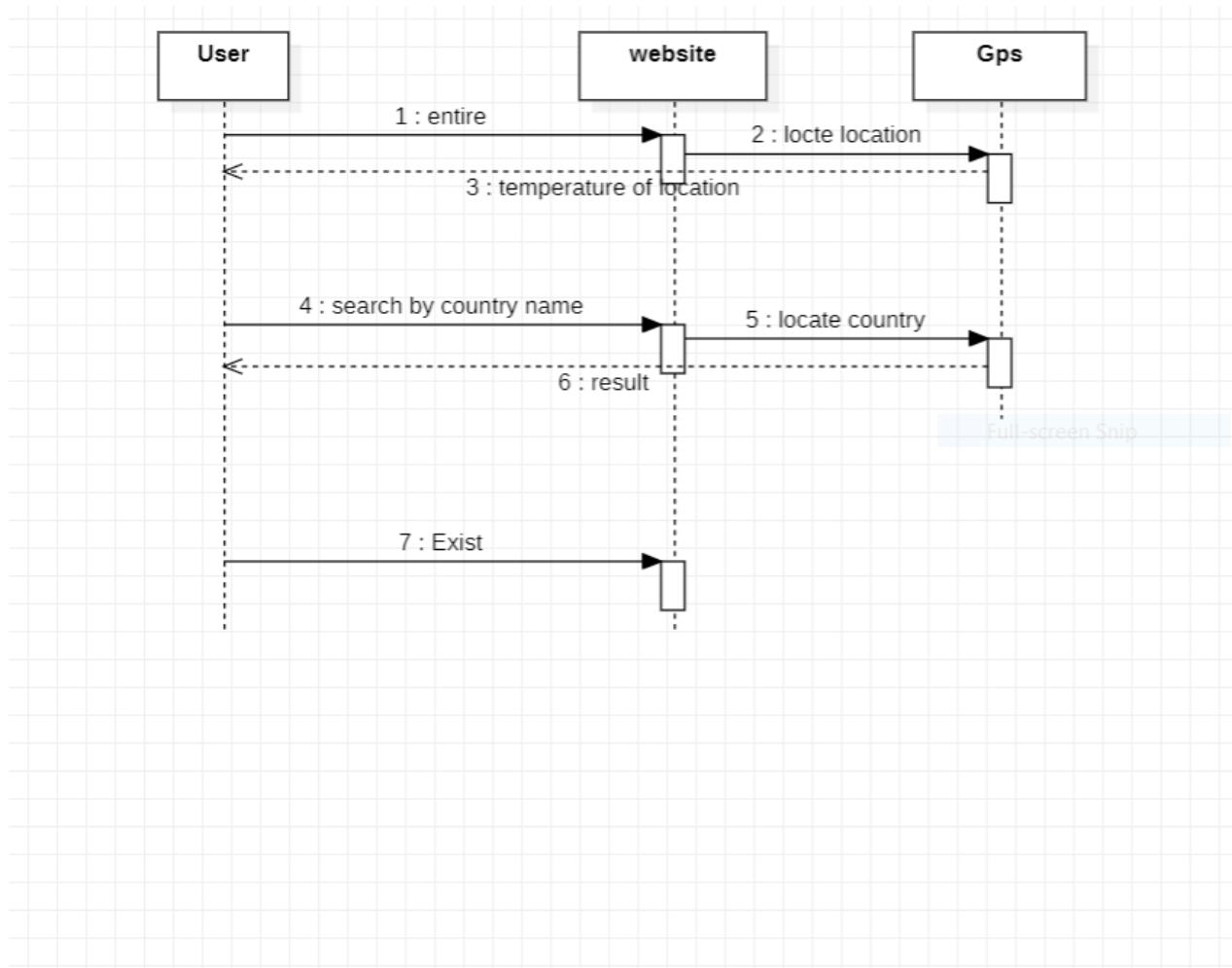
## Case study

- 1-User entire to Web APP which linked with GPS and show temperature according his location
- 2-Temperature of today ,tomorrow and after tomorrow  
The high and low temperature of them Show in the website after entering country name .
- 3- we can download this website as an mobile application in android and IOS operating systems .

## Use Case Diagram



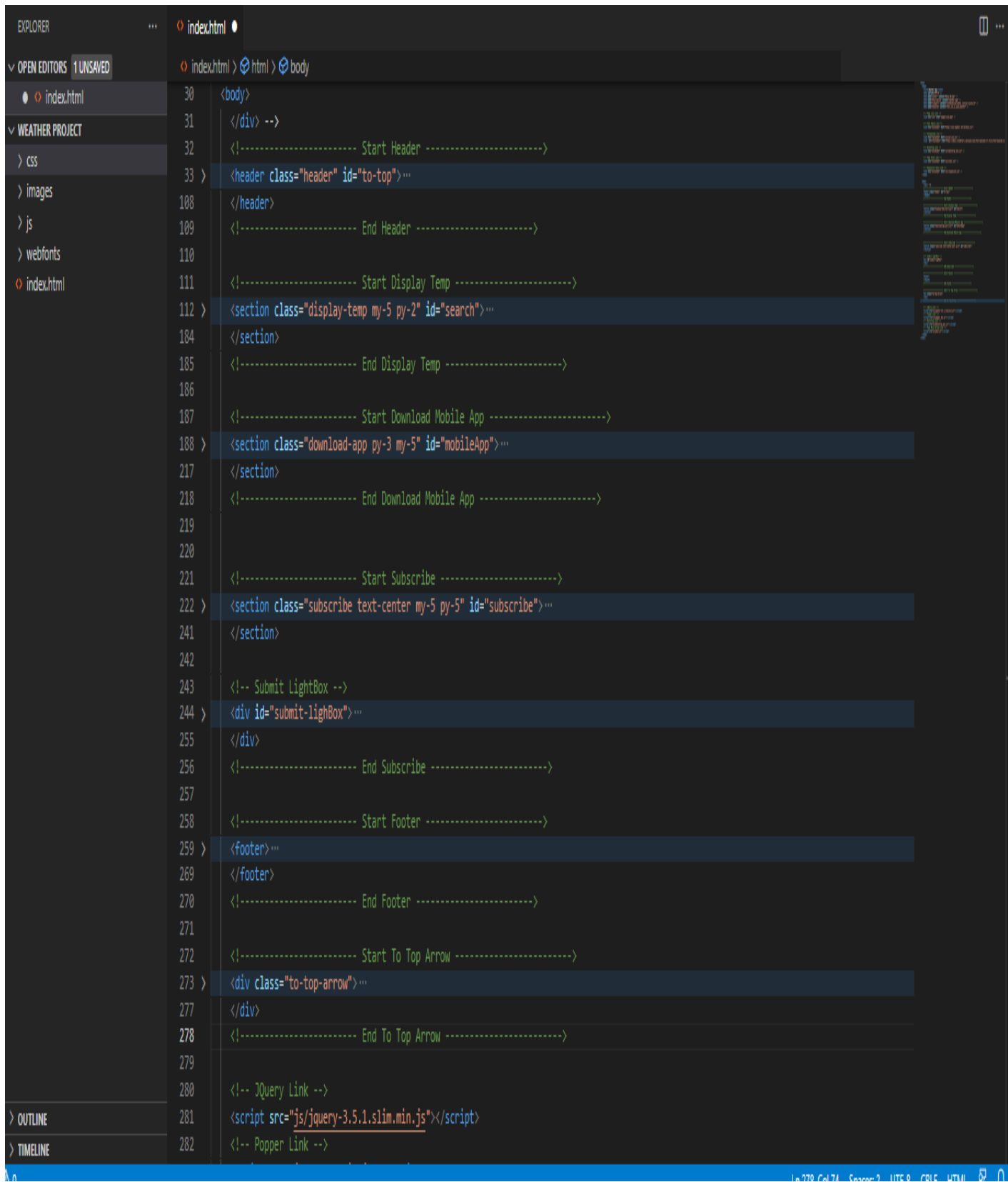
## 4.4 Sequence Diagram



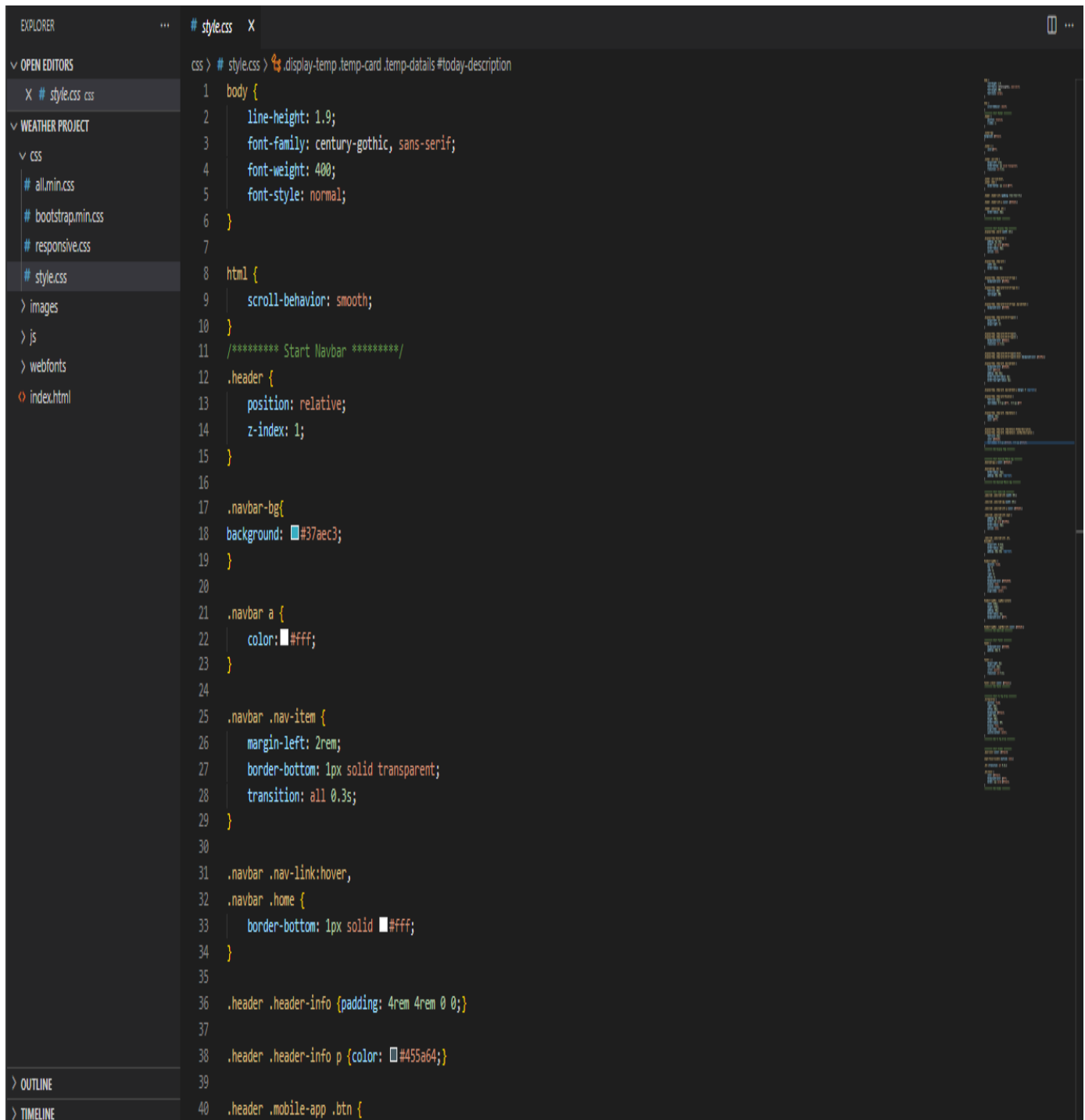
# System Implementation

## 1-HTML Code :

```
1 <html>
2 <head>
3   <title>Weather App</title>
4   <meta charset="UTF-8" />
5   <meta name="author" content="Menna El-adl" />
6   <meta name="description" content="weather app" />
7   <meta name="viewport" content="width=device-width, initial-scale=1.0" />
8   <meta name="keywords" content="html,css,js,ajax,weather" />
9
10  <!-- Page icon Link -->
11  <link rel="icon" href="images/icon.png" />
12
13  <!-- Font Family Link -->
14  <link rel="stylesheet" href="https://use.typekit.net/ooV2wCW.css">
15
16  <!-- Fontawesome Link -->
17  <link rel="stylesheet" href="css/all.min.css" />
18  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css" />
19
20  <!-- Bootstrap Link -->
21  <link rel="stylesheet" href="css/bootstrap.min.css" />
22
23  <!-- Page Style Link -->
24  <link rel="stylesheet" href="css/style.css" />
25
26  <!-- Responsive Style Link -->
27  <link rel="stylesheet" href="css/responsive.css" />
28 </head>
29
30 <body>
31
32   <!-- <div class="sm-bg">
33
```



## 2-CSS Code:



The image shows a screenshot of the Visual Studio Code editor. The Explorer panel on the left shows the project structure: 'WEATHER PROJECT' with subfolders 'css' and 'images', and files 'all.min.css', 'bootstrap.min.css', 'responsive.css', 'style.css', 'index.html', 'js', and 'webfonts'. The 'style.css' file is selected and open in the main editor. The code in the editor is as follows:

```
css > # style.css > .display-temp .temp-card .temp-details #today-description
1  body {
2      line-height: 1.9;
3      font-family: century-gothic, sans-serif;
4      font-weight: 400;
5      font-style: normal;
6  }
7
8  html {
9      scroll-behavior: smooth;
10 }
11 /***** Start Navbar *****/
12 .header {
13     position: relative;
14     z-index: 1;
15 }
16
17 .navbar-bg{
18     background: #37aec3;
19 }
20
21 .navbar a {
22     color: #fff;
23 }
24
25 .navbar .nav-item {
26     margin-left: 2rem;
27     border-bottom: 1px solid transparent;
28     transition: all 0.3s;
29 }
30
31 .navbar .nav-link:hover,
32 .navbar .home {
33     border-bottom: 1px solid #fff;
34 }
35
36 .header .header-info {padding: 4rem 4rem 0 0;}
37
38 .header .header-info p {color: #455a64;}
39
40 .header .mobile-app .btn {
```



```
css > # responsive.css > ...
1  /* Small Screen */
2  @media (max-width: 768px) {
3      .navbar .navbar-brand img {
4          width: 40px !important;
5          height: 40px !important;
6      }
7  }
8
9  /* Small to Medium Screen */
10 @media (max-width: 991px)
11 {
12     .sm-bg {
13         height: 20px;
14         background-color: #37aec3 ;
15     }
16
17     /* Header */
18     p,
19     .btn {font-size: 14px;}
20
21     .header,
22     .navbar a {
23         padding: 0 !important;
24     }
25
26     .navbar {
27         padding: 5px 0 !important;
28     }
29
30     .navbar .navbar-nav {
31         background-color: #fff;
32         border-radius: 7px;
33         padding: 15px 0;
34         box-shadow: 0 0 5px #ccc;
35     }
36
37
38     .navbar .nav-item,
39     .navbar .active {
40         border-radius: 20px;
```

### 3-JavaScript Code & API

- The link of weatherapi page that we are used  
<https://www.weatherapi.com/>
- The api we are used  
`https://api.weatherapi.com/v1/forecast.json?key=848e4c9efef048e494f100521210205&q=${currentCity}&days=3&aqi=no&alerts=n`

```
js > JS main.js > ...
1 //Today's Card Variables:
2 let today = document.getElementById("today"),
3     todayDate = document.getElementById("today-date"),
4     cityLocation = document.getElementById("location"),
5     todayDegree = document.getElementById("today-degree"),
6     todayIcon = document.getElementById("today-icon"),
7     description = document.getElementById("today-description"),
8     humidity = document.getElementById("humidity"),
9     wind = document.getElementById("wind"),
10    compass = document.getElementById("compass"),
11    searchBar = document.getElementById("search-bar"),
12    currentCity = "Cairo",
13    apiResponse,
14    responseData,
15    date = new Date(),
16    weekDays = ['Sunday', 'Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday'],
17    monthName = ['Jan', 'Feb', 'March', 'April', 'May', 'June', 'July', 'Aug', 'Sept', 'Oct', 'Nov', 'Dec'];
18
19 //Next Days Variables:
20 let nextDay = document.getElementsByClassName("nextDay"),
21     afterNextDay = document.getElementsByClassName("afterNextDay"),
22     nextDate = document.getElementsByClassName("nextDate"),
23     nextDayIcon = document.getElementsByClassName("nextDay-icon"),
24     maxDegree = document.getElementsByClassName("max-degree"),
25     minDegree = document.getElementsByClassName("min-degree"),
26     nextDayDescription = document.getElementsByClassName("nextDay-description");
27
28
29 //Get Data from API:
30 async function getWeatherData() {
31     apiResponse = await fetch("https://api.weatherapi.com/v1/forecast.json?key=848e4c9efef048e494f100521210205&q=${currentCity}&days=3&aqi=no&alerts=n");
32     responseData = await apiResponse.json();
33     console.log(responseData);
34     displayTodayWeather();
35     displayNextDaysWeather();
36 };
37
38 //Display Today's Data:
39 function displayTodayWeather() {
40
```

```
js > JS main.js > ...
```

```
37
38 //Display Today's Data:
39 function displayTodayWeather() {
40
41     let dateApi = responseData.forecast.forecastday[0].date;
42     let date_components = dateApi.split("-");
43     let current_day = date_components[2];
44
45     today.innerHTML = weekDays[date.getDay()];
46     todayDate.innerText = `${current_day} ${monthName[date.getMonth()]}`;
47     cityLocation.innerHTML = responseData.location.name;
48     todayDegree.innerHTML = Math.round(responseData.current.temp_c);
49     todayIcon.setAttribute("src", `https:${responseData.current.condition.icon}`);
50     description.innerHTML = responseData.current.condition.text;
51     humidity.innerHTML = responseData.current.humidity;
52     wind.innerHTML = responseData.current.wind_kph;
53     compass.innerText = responseData.current.wind_dir
54 };
55
56 //Next Day - Name Function;
57 function getNextDays(nextDateApi) {
58
59     let d = new Date(nextDateApi);
60     return d && weekDays[d.getDay()];
61 };
62
63 //Next Day - Month Function;
64 function getNextDayMonth(nextDateApi) {
65
66     let m = new Date(nextDateApi);
67     return m && monthName[m.getMonth()];
68 };
69
70 //Display Next Days Data:
71 function displayNextDaysWeather() {
72     for(let i = 0; i < nextDay.length; i++)
73     {
74         let nextDateApi = responseData.forecast.forecastday[i+1].date;
75         let nextDate_components = nextDateApi.split("-");
76         let next_day = nextDate_components[2];
```

Test :

Weather App

file:///C:/Users/asus/Desktop/Weather%20Project/index.html

Search City...

Sunday	Monday	Tuesday
22 May	23 May	24 May
Cairo		
24°C	35°C	37°C
Clear	Sunny	Sunny
36 % 13 km/h WNW	19°C	20°C

9:03 PM  
5/22/2022

Weather App

Weather App


file:///C:/Users/asus/Desktop/Weather%20Project/index.html

london




Sunday22 May

London


20°C



Sunny

 43 %  20.2 km/h  SSW

Monday23 May




17°C

11°C

Moderate rain

Tuesday24 May




16°C

9°C

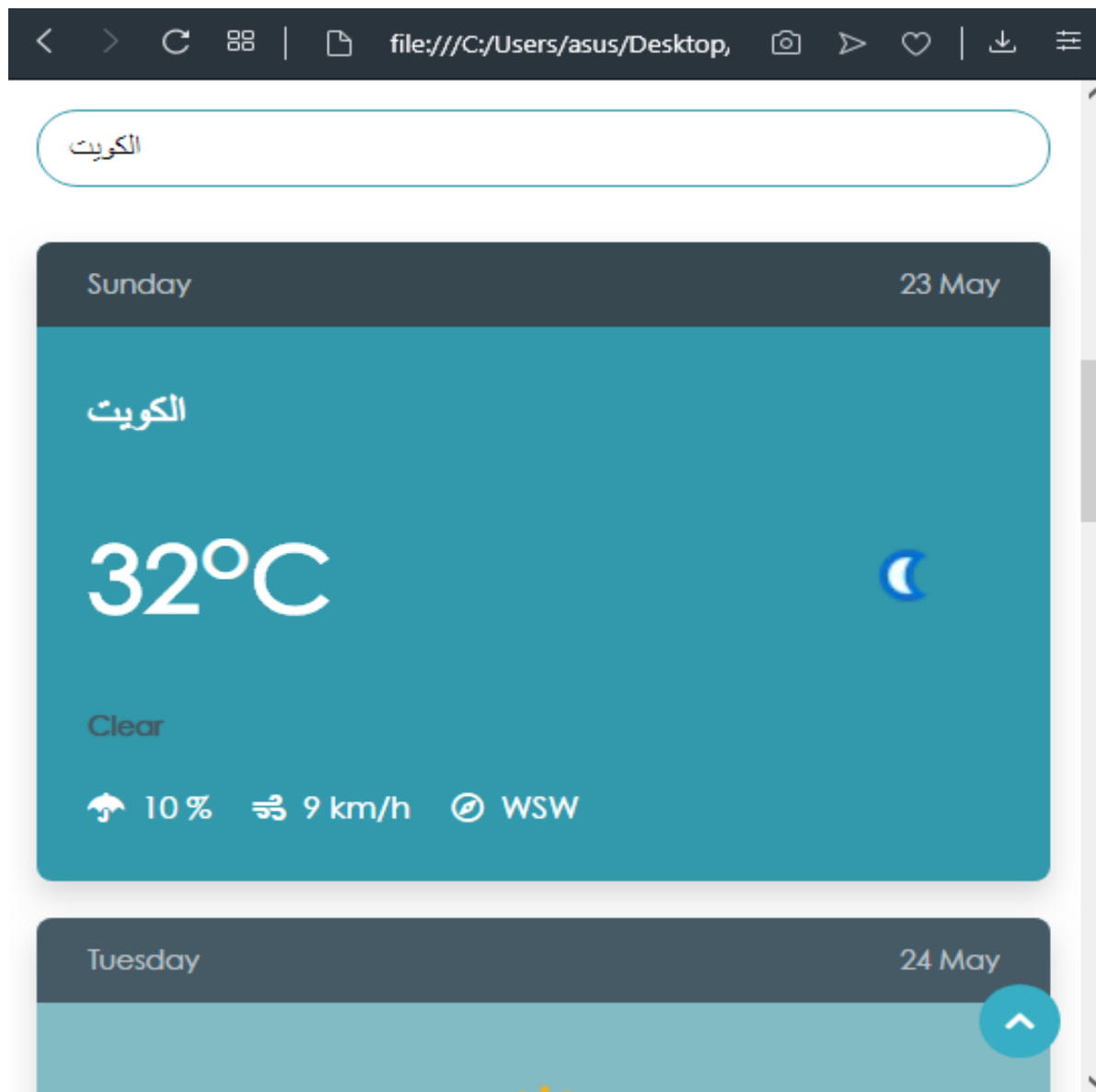
Moderate rain

↑

Type here to search



Desktop 9:05 PM 5/22/2022 ENG



Thank You