C# Technical Test

Prepared for: Candidates

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C# TECHNICAL TEST

The intent of the associated application is to prompt the user to enter a location, and then using that location query a public API to download the weather info and store it to disk every couple of seconds.

The most immediate issue with the code currently is that the data is not written immediately to file once it has been downloaded.

A copy of the test project is provided in the attached zip file that comes with this document.

Documentation related to the API utilised in this test can be found here (https://www.metaweather.com/api/)

CODING CHALLENGES

1. As a starting point you are required to fix the program so that it correctly writes the data as intended.
2. Update the program so that it accepts either a location name, or lat / long co-ordinates and then consequently uses the correct API URL depending on what is entered:
    - https://www.metaweather.com/api/location/search/?query=london
    - https://www.metaweather.com/api/location/search/?lattlong=50.068,-5.316
3. Refactor and fix the code to improve the overall project. There is a lot of opportunities to show your skill and knowledge in undertaking these improvements. *(This test application has intentionally been written in a poor manner to provide you with opportunities to show your knowledge and skill in producing clean, optimised, high quality code).*

APPLICATION CODE

```
static void Main(string[] args)
    {
        Console.WriteLine("Enter location:");
        var location = Console.ReadLine();
        System.Net.Http.HttpClient client = new System.Net.Http.HttpClient();
        var response = client.GetAsync("https://www.metaweather.com/api/location/search/?query=" + location).Result;
        var streamReader = new StreamReader(response.Content.ReadAsStreamAsync().Result);
        var content = streamReader.ReadToEnd();
        var id = content.Split("woeid\":")[1].Split(",")[0];
        while (true)
        {
            System.Net.Http.HttpClient client2 = new System.Net.Http.HttpClient();
            var response2 = client2.GetAsync("https://www.metaweather.com/api/location/" + id ).Result;
            var streamReader2 = new StreamReader(response2.Content.ReadAsStreamAsync().Result);
            var data = streamReader2.ReadToEnd();
            var weatherInfo = JsonSerializer.Deserialize< WeatherInfo >(data);
            Console.WriteLine(location + " max temp: " + weatherInfo.consolidated_weather[0].max_temp + " min temp: " + weatherInfo.consolidated_weather[0].min_temp);
            var streamWriter = new StreamWriter("weather" + location + DateTimeOffset.Now.ToUnixTimeSeconds() + ".json");
            streamWriter.Write(JsonSerializer.Serialize(weatherInfo));
            System.Threading.Thread.Sleep(2000);
        }
    }
```