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PROJECT A4 - WEATHER APPLICATION REPORT

Firstly; I selected C# programming language for using, because it has high level of integration with Win32 UI and you can easily add and drop components for UI. Project divided into 4 sections

- Main Section

- Core Section

- Requesters Section

- Images Section

Main Section contains user interfaces of the project in other words Windows.Forms. Core Section contains Constants class which contains request links for Wunderground API in addition to this Core Section contains JSON response replacement classes where we can set the responses in C# way. These modules are distinct modules from each other (e.g. CurrentWeatherData gets current weather data as a JSON response. HistoryData is used for Date To Date Comparison and SunMoonData is response for Sun Status and Moon Stage data). Requesters Section contains downloader class DataGetter which is downloading response from requested API calls and it helps to downloading the images. Images Section contains moon stage images, sunrise and sunset images and application setup icons.

I used static types for API call urls to reach all over the application. Also for including the JSON parser in the project I used NuGET packaging system. I used .NET framework 4.5 also for publishing the setup package easily.

My first problem that encountered is the replacement of the JSON data when I got from the internet, because some fields have exactly the same name between JSON and keywords namespace collisions raised up. I changed the name of the response fields and i used the necessary parts of the whole responses. Second problem is in date-to-date comparison; When I want to get the dates from calendar component it responds me via integer. But I need a format like "04" for 4th month not just "4" so I adapted it to behave like that and my API calls are much more reliable. Third is if the history is too old I got nothing as a JSON response on behalf of that problem I throw an exception if the response is not reliable.

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