

Module Project(Weather Application)

WEATHER

	NL	USA	TR
	CITY	PROVINCE	POPULATION
16	DORDRECHT	Zuid-Holland	119146
17	'S-HERTOGENBOSCH	Noord-Brabant	111025
18	DELFT	Zuid-Holland	103322
19	LEEWARDEN	Friesland	93765
20	HELMOND	Noord-Brabant	92979
21	ALKMAAR	Noord-Holland	91035
22	DEVENTER	Overijssel	81545
23	PURMEREND	Noord-Holland	81420
24	SCHIEDAM	Zuid-Holland	79393
25	ZAANDAM	Noord-Holland	78705
26	VLAARDINGEN	Zuid-Holland	74124
27	GOUDA	Zuid-Holland	73936
28	HOORN	Noord-Holland	73769
29	ALMELO	Overijssel	73108
30	ASSEN	Drenthe	69011
31	OSS	Noord-Brabant	58550

TOTAL :183

CITY

WEATHER

City


DELFT

Province

Zuid-Holland

Population

103322



9°C

Broken clouds

Delft,NL

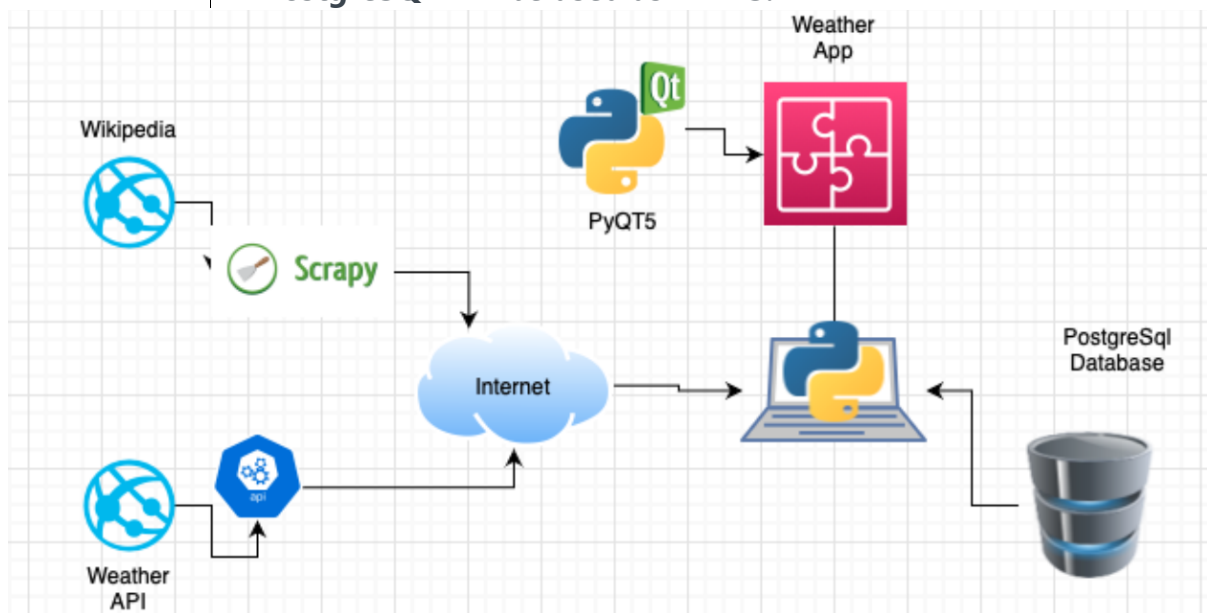
QUIT

General Info

This project will be a Weather Application with a graphical User interface. When the program starts, it should ask to select the country (Netherlands, Turkey or USA). According to the selected country, the provinces should be listed based on the population. User will be able to see the name of the province they chose, the state they are in, the population, weather (as an icon), temperature. With the City search option in the program, it should be able to show the city information and weather conditions.

Tools:

- Object Oriented Programming (OOP) and Graphical User Interface (GUI) will be used in the project.
- PyQt5 will be used as GUI
- Scrapy will be used as Web Scrapping Tool.
- HTTP-Request and API will be used.
- **PostgreSQL will be used as DBMS.**



- **Each team will have 1 mentor.**
- **GitHub will be used in the project.**
- **There will be a 30 minutes meeting with teammates every day.**
- **The content of the daily meeting is generally as follows:**
 1. What each person did
 2. The general direction in the project
 3. Task sharing until tomorrow
 4. A meeting will be held with the mentor on the specified dates

Each person in the team will tell about the part he did to the mentor in the meeting. After each meeting, the mentor will make an assessment of whether each team member is working or not. After the project is completed, an online project presentation will be made.

Meeting Schedule

1. Online Kick-off Meeting - 23/05/2022
2. Online Mentor Meeting - 26/05/2022
3. Class Work (Online Work) - 28/05/2022
4. Online Mentor Meeting - 31/05/2022
5. Online Final Presentation - 02/06/2022

Steps

Suggestion:

- Step 1 can be done together in the group.
- Step 2, 3, and 4 can be done in parallel. Group members can share tasks.

Step 1:

- Design GUI for Weather App
 - Consider Web Scrapping Data Visualisation
 - Consider Web API Data Visualisation
- **UML Design (Making Plan)**
 - You can use this tool to draw → <https://app.diagrams.net/>
 - Use Case Diagram
 - Class Diagram
- Design ERD for the current version of the Program. Add DB for the current version of the Program according to the ERD design. All information should be ordered and stored in DB. No more file usage.

Step 2:

- Scrapy will be used extracting the data you need from Wikipedia web site.

https://nl.wikipedia.org/wiki/Lijst_van_Nederlandse_plaatsen_met_stadsrechten

https://en.wikipedia.org/wiki/List_of_United_States_cities_by_population

[https://tr.wikipedia.org/wiki/T%C3%BCrkiye%27deki_illerin_n%C3%BCfuslar%C4%B1_\(2020\)](https://tr.wikipedia.org/wiki/T%C3%BCrkiye%27deki_illerin_n%C3%BCfuslar%C4%B1_(2020))

City, state and population information is drawn from the website addresses with Scrapy.

The name of the selected City will be displayed in the program.

The region or state of the selected City will be shown in the program.

The population of the selected City will be displayed in the program.

All information should be ordered and stored in DB

Step 3:

- - HTTP-Request and API will be used to pull real-time weather information from the website.
 - Weather information of the selected cities is taken from <https://openweathermap.org/api> site.(You can choose other web sites)
 - The Temperature of the selected City will be displayed in the Program.
 - The Weather of the selected City will be displayed in the program with Icons.
 - The icons and how to use the icons are explained in detail on the site given below,

<https://openweathermap.org/weather-conditions> .

All information should be ordered and stored in DB

Step 4:

Program Main page will contain the following components.

- Countries
- Selected Country, Cities, Regions, Populations ordered By Population
- City Search Bar
- Selected City Name,
- Selected City Region,
- Selected City Population
- Selected City Temperature (Celsius)
- Selected City Weather Condition Icon

Step 5:

Final presentation

GitHub Usage Requirements (Optional)

<ul style="list-style-type: none">• Each team will have a GitHub repository and each team member will be added as a collaborator.

<ul style="list-style-type: none">• All tasks should be created as an issue on the issues page.• Each team member will get assigned issues.
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<ul style="list-style-type: none">• Master will be protected. Branches and pull requests will be used for development.
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