

Documentation

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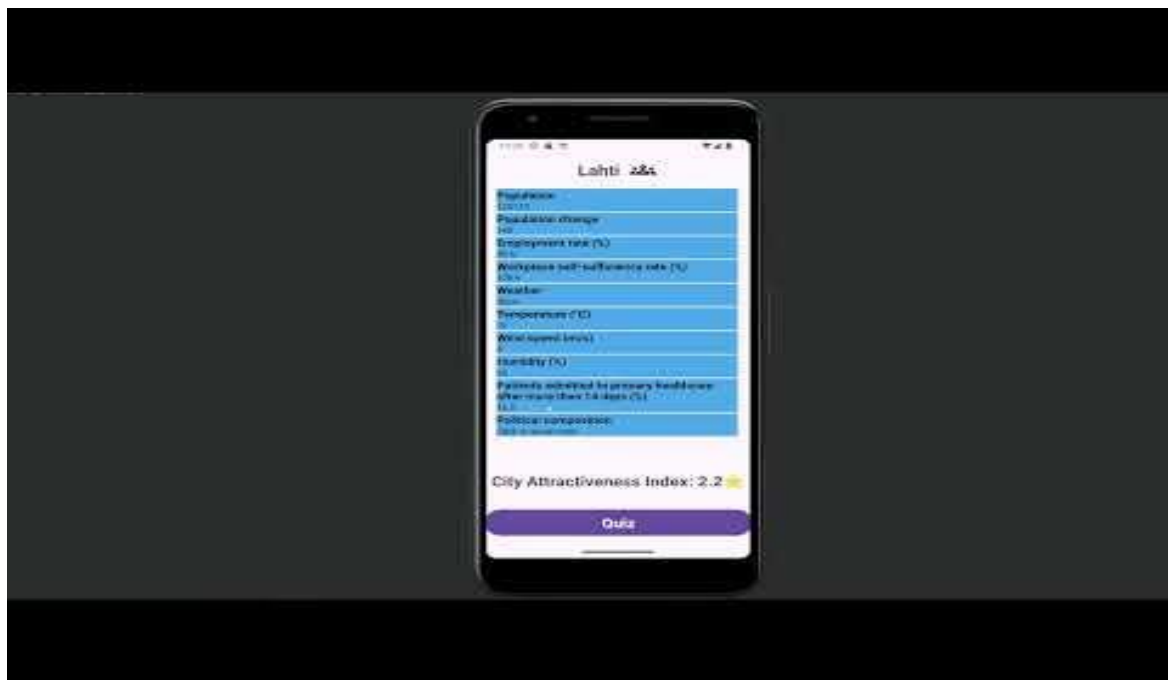
Radu Stoiana – 001423631

Description:

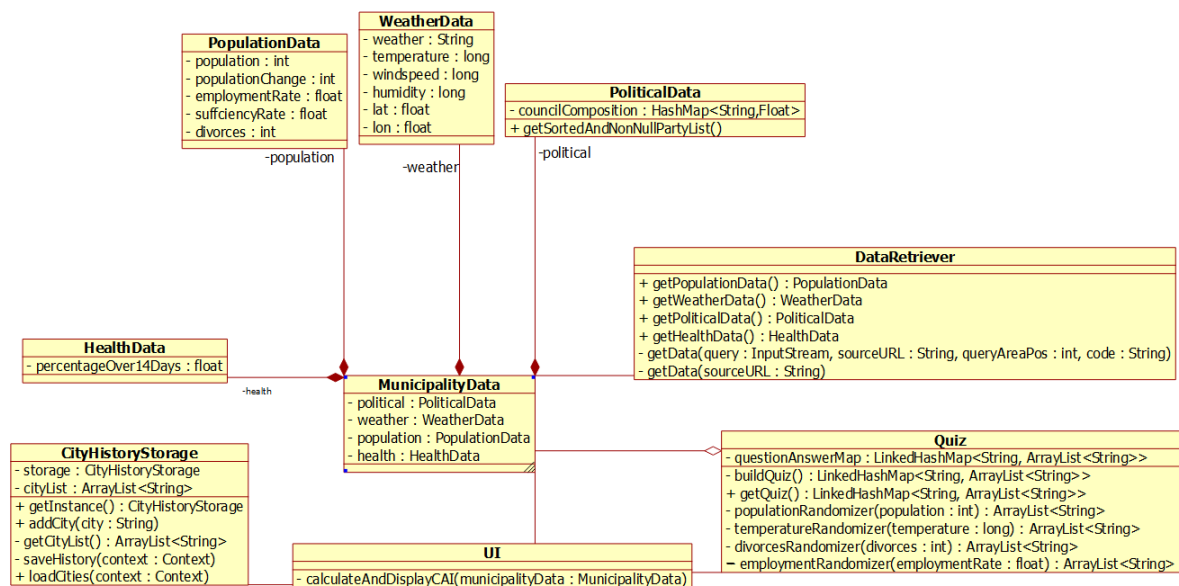
The app we created is meant for people to be able to use as a way to determine the attractiveness of a city for moving or even visiting. It is a convenient way for the user to view data on these cities and to see the City Attractiveness Index (CAI) and make their choice based on that. It has a simple graphical user interface which is easy to use and is visually pleasing. It includes the main screen, the information screen of a chosen city, and the quiz screen. The comparison screen that was originally planned could not be implemented unfortunately due to not getting the comparison to work in a feasible way. The data is implemented from the following API's: Statistics Finland, OpenWeather, and THL.

The repository for the project: <https://github.com/RAdu2005/lut-oop-project/>

Link to video presentation: <https://www.youtube.com/watch?v=-9Sm49S4CUk>



Class diagram:



Division of Labour:

The labour was divided among the two of us in a manner where Radu did most of the work on the app's functionality by working on the implementation of API's to the application and making the backend code for the application to work. Ilika worked on the visual side of things by designing the user interface and working on the method in which we use data to create the city attractiveness index and what data should be used. The video was done by Radu, and documentation was done by Ilika.

Installation instructions:

The app runs on Android Studio and there doesn't need to be other things running at the same time.

Implemented features:

- Mandatory requirements
 - Object-oriented code structure
 - Code, comments and documentation is in English
 - Documentation includes link to repository and other required items
 - App works on Android devices
 - App was developed in Android Studio

- Data is fetched using APIs
 - App shows data on population, population change, employment rate and workplace self-sufficiency
- Additional features
 - RecyclerView is used in displaying search history and city information (3p)
 - Different images are displayed based on the population of the municipality (2p)
 - Second data source, OpenWeather (3p)
 - Third data source, Finnish Institute for Health and Welfare (THL) (2p)
 - Search history displaying last 5 searches in chronological order (2p)
 - Quiz with 4 questions and randomly generated answers (4p)
 - File access; search history is saved in a file and loaded on launch (1p)
 - City Attractiveness Index calculation based on a formula factoring in different data points (1p)
- Total: 10p + 18p = 28p

UI Mockups:

Main screen

City Attractiveness Index

Search...

Search history

City

City

City

Compare



City Attractiveness Index

Search...

Search history

Lahti

Helsinki

Tampere

Vantaa

Oulu

Compare

City info screen

← "City name"

"information"

City score: ~

Quiz



City Attractiveness Index

Lahti

Population: 121,000

Employment rate: 69.6%

workplace self-sufficiency: 105.9%

Over 14 days for healthcare: 16.2%

City Attractiveness index:

?

Quiz

< Quiz

"Question 1:"

~~~~~

~~~~~

~~~~~

"Question 2:"

~~~~~

~~~~~

~~~~~

Next



Quiz screen

City Attractiveness Index

1/5

How many residents does Lahti have?

☐ 123,456

☐ 200,000

☐ 180,000

☐ 121,000

☐ 120,175

Next →

< City Comparison

"City 1"

Search...

"City 2"

Search...

Compare



Comparison

City Attractiveness Index

Choose cities to compare

Search...

Search...

Compare