

Final Assignment Documentation

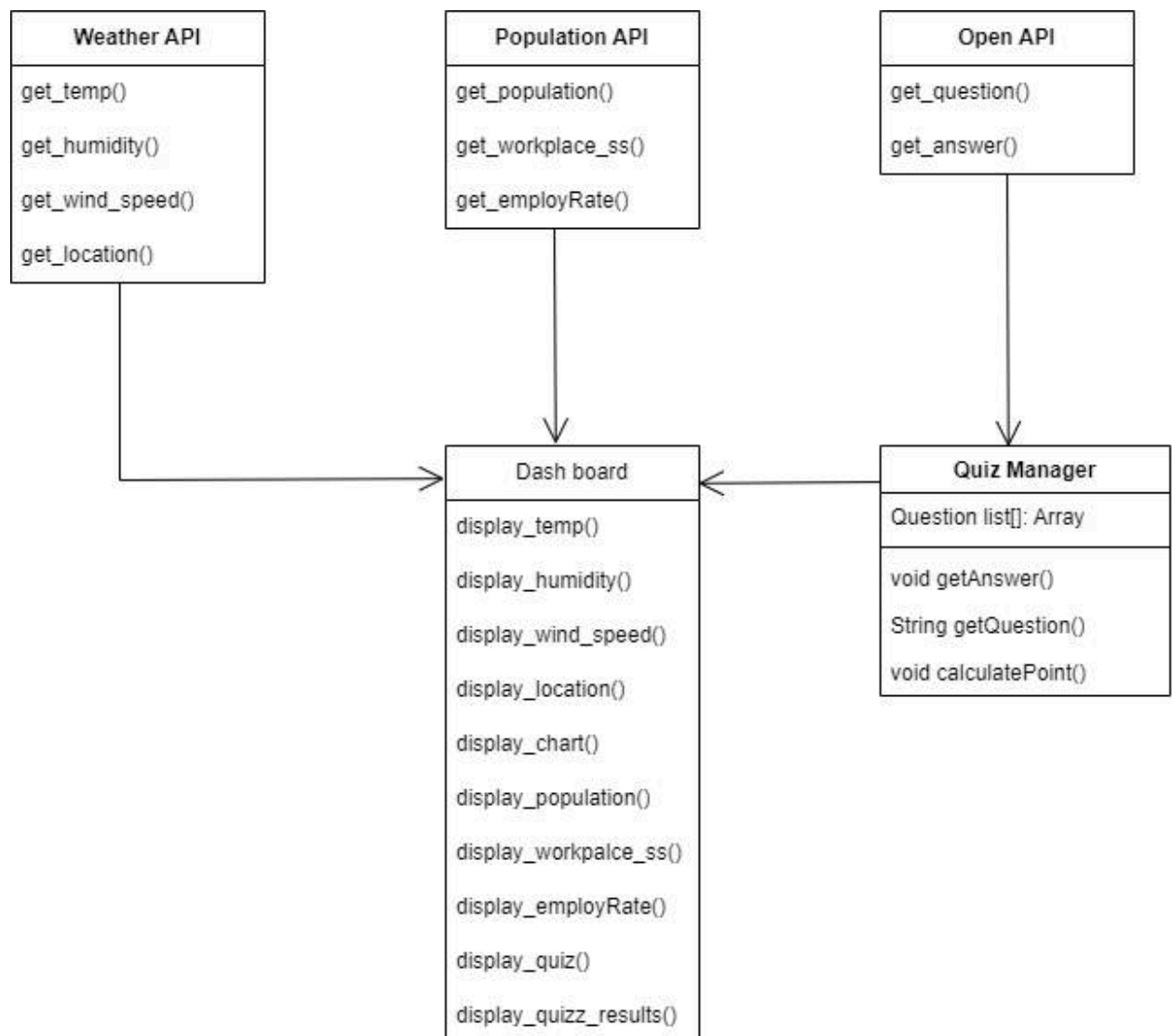
Group vi en

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Assignment video demo: https://www.youtube.com/watch?v=t5iiVh-_24I

1. Class diagram



2. Division of labor

- Quan Nguyen: Fetched and displayed municipal data and statistics using Statistics Finland's API.
- Khanh Kieu: Generated and displayed quizzes using OpenAI's API.

3. Installation instructions:

- Download Codebase:
 - Access the repository link provided and download the codebase.
- Replace API Key:
 - Please navigate to the file named Frag_Quiz.java, line 46, and fill in the blank space at the commented line of code with the API key listed below.

```
44
45  ✓ public class Frag_Quiz extends Fragment {
46      final String token = " "; // Add the provided API Key in here
47      final MediaType JSON = MediaType.parse("application/json; charset=utf-8");
```

- The secret API key is :
“sk-proj-8zLiOsuRD6Xd8akVSjZnT3BlbkFJa9AupD3AihG6Eav9Athj”
- Setup Android Studio:
 - Install Android Studio if not already installed.
 - Import the downloaded codebase into Android Studio.
- Run Application:
 - Connect a device or use an emulator.
 - Build and run the application in Android Studio.
 - When you first run the app, if on the main page, you see nothing (photo 1). Please click on the “Pause (Stop) button”, and then re-run the app again. If you see this main page (with some locations)(photo 2), you are at the right place.

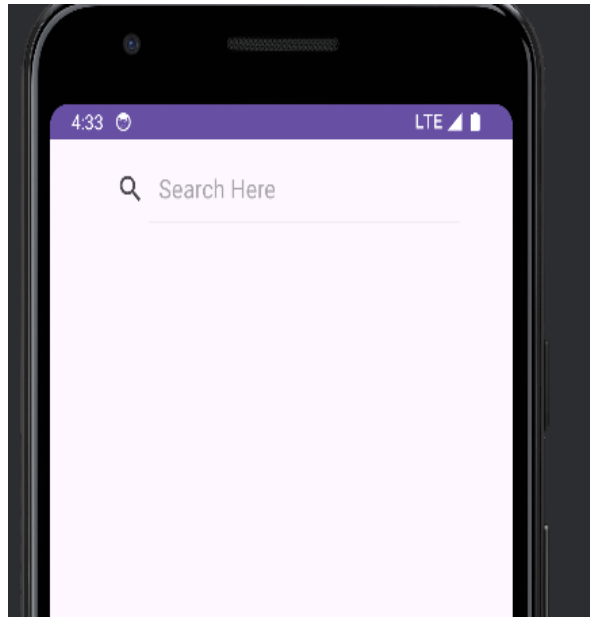


Photo 1: This is not the right main

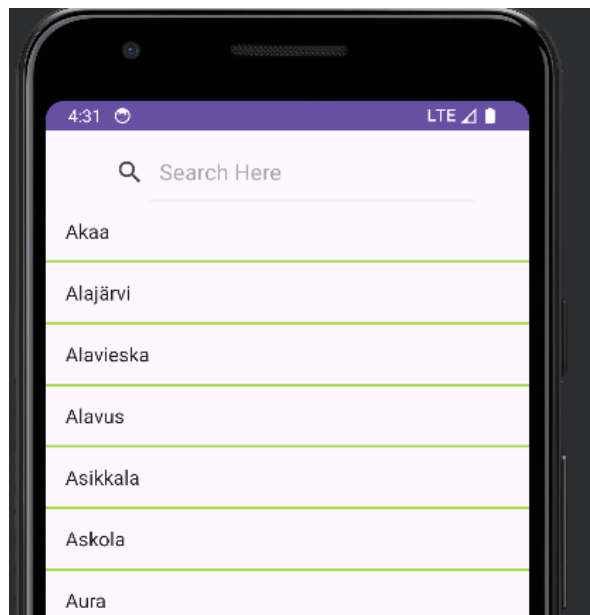


Photo 2: This is the right one

- Please note that, on the quiz page. Please kindly wait for the app to fetch all the data before you operate the app. Otherwise, the app will crash if you do anything during the loading period.

4. Implemented features & Aimed points

Feature	Description	Aimed points
Object-oriented code	The application is coded according to the object-oriented paradigm.	Pass
Code, comments, and related documentation are in English	Application code, comments, and documentation are in English.	Pass
The app works on Android	The application works on Android devices, and it is coded in Android Studio	Pass
The application includes basic functionality	The application covers all the functionality defined earlier in this document. You are displaying information on Finnish municipalities.	Pass
Documentation	<p>With the code, you must also submit the link to documentation (it can be included in the source code repository as a README.md file or PDF)</p> <p>Documentation must include the following things:</p> <ul style="list-style-type: none">• Class diagram (you do not need to include Android classes, such as Activities in the class diagram)• Division of labor between team members (who did what)• Features that were implemented (according to this table here, with the points you are aiming for)• General description of the work	Pass

	<ul style="list-style-type: none"> • Installation instructions (in case you need to do something else than just run the app in Android Studio) 	
Displaying images	Images are used in the application	2
There is more than one data source	In addition to Statistics Finland, the program will fetch data from another API and it's displayed to the user (Google Maps Places API)	3
Quiz	The app will generate ten questions about the data in a municipality with true/false options. The user can answer questions (all questions can be listed in one view or one by one in their view). In the end user is shown the final score and how well they did in the quiz.	4
Fragments	One or more Fragments are used in the Android App	4
Data visualization	The change in population as graphs instead of plain numbers.	5

5. General description of the work:

The "Discover Finland" Android application is a comprehensive tool designed to offer users detailed insights into various aspects of Finland, including population statistics, employment rates, and cultural landmarks. Developed to provide an immersive experience, this application integrates data from multiple sources, presenting users with a holistic understanding of Finland's diverse landscape.

Through the app, users can access real-time population data obtained from the Statistical Finland API, enabling them to stay informed about demographic trends and changes over time. Furthermore, the application displays workplace self-sufficiency and employment rate statistics, offering valuable insights into Finland's economic environment.

One of the key features of the "Discover Finland" app is its utilization of the Google Maps Places API, allowing users to explore captivating images of Finnish cities, landmarks, and points of interest. This curated collection of photos offers users a visual journey through Finland's rich cultural and natural heritage.

In addition to providing data and imagery, the application offers an engaging quiz section powered by OpenAI's API. This quiz enables users to generate and answer questions about various aspects of Finland, including its culture, history, and geography. By engaging with the quiz, users can deepen their understanding of Finland interactively and entertainingly.

Overall, the "Discover Finland" Android application offers a valuable resource for anyone interested in exploring Finland's demographics, economy, and culture, providing a rich and informative experience at their fingertips.