DOCUMENTATION

Prueba Técnica

Components/dbHandler.py

This is a Python code that defines a “dbManager” class to connect to and manipulate a PostgreSQL database.

The dbManager class has three methods:

- __init__(self) initializes the class and sets the url attribute by parsing the database URL from the environment variable covid19_database.

- connect(self) connects to the database using the psycopg2 library and the parsed database URL, and prints a message if the connection is successful. If the connection fails, it prints an error message and the exception that occurred.

- makeQuery(self, query) inserts data into the covid19 table of the connected database. The query parameter should be a list of tuples, where each tuple contains data to be inserted into the table. If the insertion is successful, the method commits the changes to the database and closes the cursor. If an error occurs, it prints the exception that occurred.

- disconnect(self) disconnects from the database and prints a message if the disconnection is successful. If the disconnection fails, it prints an error message and the exception that occurred.

main.py

This is a Python code that retrieves COVID-19 vaccination data from a web service and inserts it into a PostgreSQL database using the dbManager class defined in Components/dbHandler.py.

The fetchURL function takes a URL as input and uses urlopen to retrieve the data from the URL. It then returns the data as a JSON object using the json.loads function.

The extractData function extracts the data corresponding to the first dose of the vaccine and organizes it into a dictionary where the keys are tuples of (date, comarca) and the values are the number of vaccinations for that date and comarca. It then converts this dictionary into a list of tuples where each tuple contains (date, comarca, count).

The main function creates an instance of the dbManager class and connects to the database. It then checks if there is a command-line argument specifying a different URL to fetch data from, and inserts the data into the database using the makeQuery method of the dbManager class.