PYTHON TFL API JOURNEY PLANNER USER GUIDE

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Installation

1) Install the necessary dependencies:
    - Make sure you have Python 3 (or similar) installed on your machine.
    - Install the 'requests' library by running the command 'pip install requests' in the command prompt. If that does not work, then try 'py -m pip install requests'.
2) Open the Python file using the IDLE IDE, or any IDE you prefer.
3) In the IDLE shell (or equivalent), run the program by clicking on the "Run" button in the toolbar or pressing F5 on your keyboard.
4) If you are running the program using the .exe file then the program will run in a command line interface, meaning that you can skip the first three steps.

Running the Application

5) The program will display a welcome message and prompt you to select an option:
    - Enter '1' to check the status of the London Underground (Tube).
    - Enter '2' to check the status of London's roads.
    - Enter '3' to plan a route using Transport for London's API.
6) If you choose option 1 or 2, the program will display a list of available lines or roads, respectively. Enter the number corresponding to the line or road you wish to check.
7) The program will display the status of the selected line or road.
8) If you choose option 3, the program will prompt you to enter your start and end locations. Enter the location in the format 'start location > end location' (e.g., 'Baker Street > Victoria'). A number will be displayed next to the station name so input the number instead of the name.
9) The program will display the planned route, including any necessary changes and estimated travel times.
10) Press Enter to return to the main menu.

Potential Questions

1) What does the program do?

The program contains three functions called tubeCheck(), roadCheck(), and travelRoute(), where the first two functions check the status of the tube line and the roads in London. The travelRoute() function displays all stations and asks the user for a start and end destination input, which then plans a journey showing the steps and the estimated time.

2) What is the purpose of the 'enumerate' function in Python?

The 'enumerate' function is used to iterate over a sequence and keep track of the index of the current item. It returns a tuple of the index and the item, which can be useful for certain types of operations, such as when you want to modify the original sequence in place.

3) What is the purpose of the 'try' and 'except' keywords in Python?

The 'try' and 'except' keywords are used to handle exceptions in Python. Code that may raise an exception is enclosed in a try block, and any exceptions that are raised are caught and handled by the except block. This can help prevent your program from crashing due to unhandled exceptions and can allow you to handle specific types of exceptions.

4) What is an API and how does it work?

An API (Application Programming Interface) is a set of protocols and tools for building software applications. It allows different software applications to communicate with each other, enabling them to exchange data and functionality. APIs can be used to retrieve information from a remote server, such as weather data or transit information, and integrate it into another application.

Conclusion

In summary, this user guide provides step-by-step instructions for installing and running the program. The program allows the user to check the status of London's transport network and plan a route using Transport for London's API. With this program, users can easily access important information about London's transport system, making it a valuable tool for commuters and travellers alike.