Vessel Fleet Management Script

This Python script provides a robust framework for managing vessel fleets using the MarineTraffic API. It allows users to perform various operations, such as adding, removing, setting vessels as active or inactive, listing vessels, clearing the fleet, and retrieving fleet IDs.

**Prerequisites**

Before running the script, ensure you have:

* **Python Installed**: The script is compatible with Python 3.x.
* **Required Libraries**: Install the necessary libraries using pip:



**Script Overview**

The script is structured into several key sections, including imports, configuration, functions for fleet management, and user interaction.

**1. Imports**

At the beginning of the script, necessary libraries are imported to facilitate HTTP requests, XML parsing, and data handling:

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**2. API Keys Configuration**

Users must provide their unique API keys for the MarineTraffic API. These keys are used to authenticate requests. Replace the placeholders with your actual API keys:

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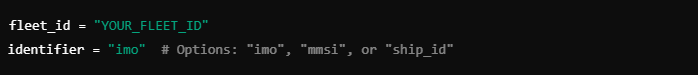
**3. File Path Configuration**

Define the path to your CSV file containing the list of vessel identifiers. Ensure this path is correct and accessible:



**4. Fleet Configuration**

Specify your fleet ID and the identifier type (IMO, MMSI, or Ship ID). Adjust these settings to fit your fleet's needs:



**5. Vessel List**

You can either hardcode vessel identifiers directly in the script or load them from a CSV file. Here’s how you can prepare a vessel list if using the array instead of csv:

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**6. Example CSV Structure**

The CSV file should have a single column of vessel identifiers, matching the selected identifier (e.g., IMO, MMSI, or Ship ID). Here's an example structure:

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**6. Function Definitions**

**6.1 Fetching Vessels in Fleet**

This function retrieves the current vessels in the specified fleet. It uses the MarineTraffic API to get the fleet's data:

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**6.2 Identifying Vessels to Add**

This function checks which vessels from the provided list are not already in the fleet:

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**6.3 Adding Vessels**

This function adds vessels to the fleet using the API:

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**6.4 Removing Vessels**

This function allows users to remove specified vessels from the fleet:

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**6.5 Setting Vessels Active/Inactive**

These functions allow users to toggle the status of vessels:

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**6.6 Listing Vessels**

This function retrieves and displays the current vessels in the fleet:

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**6.7 Clearing the Fleet**

This function removes all vessels from the fleet after user confirmation:

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**6.8 Listing Fleet IDs**

This function retrieves and displays all fleet IDs associated with the user’s account:

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**7. User Interaction**

The main loop of the script prompts the user for an action. Here’s how it looks:

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**8. Running the Script**

1. **Set API Keys**: Ensure that the API keys are set correctly.
2. **Adjust File Paths**: Make sure the path to your CSV file is correct.
3. **Run the Script**: Execute the script in your terminal or IDE.
4. **Follow Prompts**: Interact with the menu to manage your vessel fleet.

**10. Adjusting API Call Rates**

The script has a built-in delay of 5 seconds between API calls to avoid exceeding rate limits. This can be modified by changing the time.sleep(5) calls to a different value if necessary.

**Conclusion**

This script is designed to streamline the management of vessel fleets using the MarineTraffic API. By following this guide, users can customize and extend the functionality to meet their specific needs.