Documentation - JSON to SQL Data Importer

This C# program facilitates the import of JSON data into an SQL database table.

Overview

This program reads JSON data from a specified file and imports it into a designated SQL database table.

Prerequisites

- **Dependencies:** Ensure Newtonsoft.Json library is installed.
- **SQL Server:** A SQL Server instance is required to store the data.
- **JSON File:** Prepare a valid JSON file containing data in the expected format.

Usage

1. **JSON File Preparation:**
    - Create a JSON file containing data with fields matching the properties in the `Root` class.
    - Save the JSON file at the specified path (`jsonFilePath`).
2. **Configuration:**
    - Ensure the SQL connection string (`myConnectionString`) in the `app.config` file is correctly set to the target SQL Server.
3. **Execution:**
    - Run the program.
    - The program will read the JSON file, deserialize its content, and attempt to insert it into the specified SQL table.

Program Flow

1. **JSON Reading and Deserialization:**
    - Reads the JSON content from the specified file path.
    - Deserializes the JSON content into a list of `Root` objects.
2. **SQL Database Insertion:**
    - Establishes a connection to the SQL database.
    - Iterates through each `Root` object from the deserialized list.
    - Constructs an SQL `INSERT` query to insert data into the designated SQL table.
    - Executes the SQL command to insert each item's data into the database.

3. **Error Handling:**
    - Provides detailed error messages for various exceptions during JSON deserialization or SQL insertion.
    - If an exception occurs, it will log the specific error and continue processing other records.
4. **Cleanup:**
    - Deletes the original JSON file after successful data import.

Important Notes

- Ensure the JSON file's structure aligns with the `Root` class properties for successful deserialization.
- Review and update the SQL connection string (`myConnectionString`) and table name (`tableName`) based on your database configuration.

Troubleshooting

- **SQL Connection Issues:** Verify the correctness of the SQL connection string.
- **JSON Content Validation:** Ensure the JSON file is correctly formatted and contains valid data.

Code Documentation

- `Root` Class: Represents the structure of the JSON data.
- `Main` Method: Handles the JSON file reading, SQL data insertion, and error handling.

Conclusion

This program offers a straightforward method to import JSON data into an SQL database table, providing detailed error logs for troubleshooting.