JSON Explorer: Simplifying Data Analysis and Search

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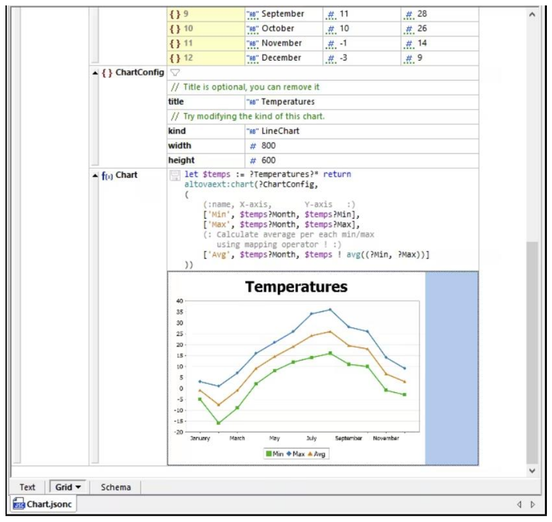
INTRODUCTION

Opening JSON files in Notepad or other text editors doesn't allow for easy and straightforward way to get:

a) count of entries

b) keyword search and count of specified entries



Solution

In this black box figure, the JSON Explorer software is depicted as a single entity with multiple functionalities encapsulated within it. These functionalities include:
JSON File Input/Output: This module handles the loading and saving of JSON files.
Data Analysis: This module provides tools for analyzing JSON data, such as calculating counts of entries, aggregating data, and generating insights.
Search and Filtering: This module enables users to search for specific keywords or entries within the JSON data and filter the results based on various criteria.
User Interface: The software also includes a user interface component that allows users to interact with the functionality provided by the modules.

OBJECTIVES

Data Analysis Efficiency: Simplifying the process of accessing and analyzing JSON files allows users to quickly obtain valuable insights from their data, enhancing productivity and decision-making.

User Experience Improvement: Providing an intuitive tool for working with JSON files improves the user experience, reducing frustration and saving time for individuals who regularly interact with JSON data.

Enhanced Accessibility: Making JSON data more accessible and understandable benefits a wide range of users, including developers, data analysts, researchers, and anyone else who works with JSON files.

Target Audience

Developers: Who frequently work with JSON data in their projects and need efficient tools for data analysis and manipulation.

Data Analysts: Who rely on JSON files for extracting insights and patterns from data and require streamlined methods for exploring and querying JSON data.

Researchers: Who utilize JSON data for various research purposes and can benefit from tools that simplify data exploration and analysis.

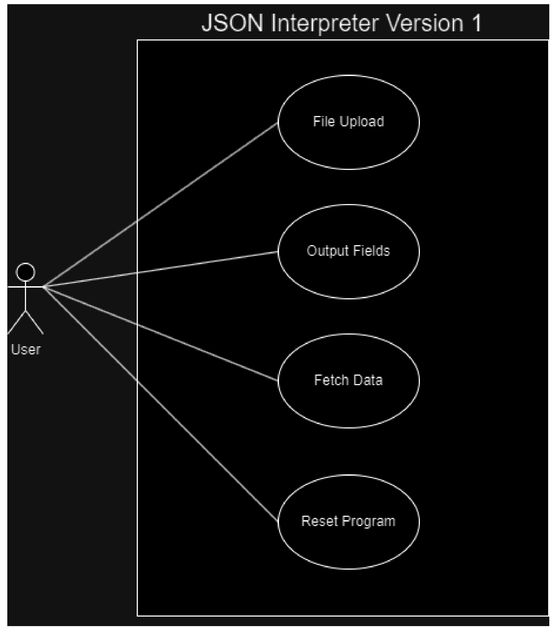
Students: Who are learning about data analysis and JSON data formats and need user-friendly tools for practicing and experimenting with JSON files.

Blackbox figure

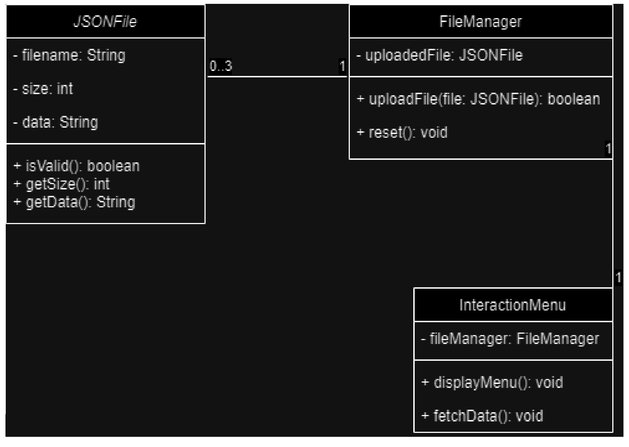
DIAGRAMS

Three diagrams were developed: USE CASE, UML, and Sequence diagram. Each shows the users, classes and interactions in the program.

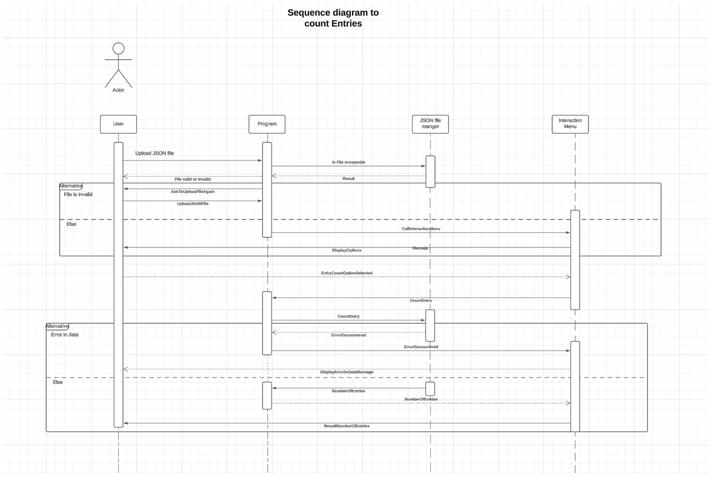
USE CASE DIAGRAM:



UML DIAGRAM:



SEQUENCE DIAGRAM:



Conclusions

Technologies used:

- Lucid chart
- Power Point
- Eclipse
- JUNIT

Next Steps:

Develop a new functionality that will interpret the JSON file and then output it to either a csv or text file for increased readability

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