

CSE 681 – Software Modeling and Analysis

Project 1

Web Communication

Learning Objective

Understand how to make a low level model document

Description

JSON stands for JavaScript Object Notation and is a commonly used text-based data exchange format. Most modern web APIs exchange their data with client using this format. In this project, you are going to create your own JSON processing library that will support parsing, generating, and querying JSON objects. The json file *team49ers_season2020.json* in the class files is an example json file. For this assignment put together the OOP code to parse the JSON data.

Functional Requirements

1. Shall support parsing a given json file or a json string and transform them into an object representation.
2. Shall support printing a JSON object in a user-friendly manner to the console or a file.
3. Shall support generating a new JSON object and adding to an existing object to create a more complex object hierarchy.
4. Shall support querying a given JSON object to retrieve the value associated with the query string.

Non-Functional Requirements

1. Shall be implemented in C# or another OOP language
2. Your system shall be robust and seamlessly handle any unexpected inputs.
3. Your system design should be flexible and clean utilizing OOD principles.
4. Your system should be maintainable by providing adequately detailed module operations and maintenance history as well as function prologue.
5. Your system should be designed with reusability in mind by utilizing modular and cohesive units.
6. Your system should be readable by providing appropriate annotations/indentations and methods that are no longer than 50 lines of code.

Submission

Your submission should include:

1. Show the model of your classes using a design paradigm (UML, flow chart, etc.)
2. Zip up and submit the structure of your program in Project 1