JSON

INTRODUCTION

JSON or JavaScript Object Notation is a lightweight text-based open standard designed for human-readable data interchange. Conventions used by JSON are known to programmers, which include C, C++, Java, Python, Perl, etc.

- JSON stands for JavaScript Object Notation.
- It was designed for human-readable data interchange.
- It has been extended from the JavaScript scripting language.
- The filename extension is .json.
- Internet Media type is application/json.
- The Uniform Type Identifier is public.json.

USES OF JSON

- It is used while writing JavaScript based applications that includes browser extensions and websites.
- JSON format is used for serializing and transmitting structured data over network connection.
- It is primarily used to transmit data between a server and web applications.
- Web services and APIs use JSON format to provide public data.
- It can be used with modern programming languages.

BENEFITS OF JSON

- JSON is easy to read and write.
- It is a lightweight text-based interchange format.
- JSON is language independent.

SYNTAX OF JSON

JSON syntax is basically considered as a subset of JavaScript syntax; it includes the following:

- Data is represented in name/value pairs.
- Curly braces hold objects and each name is followed by ':'(colon), the name/value pairs are separated by , (comma).
- Square brackets hold arrays and values are separated by ,(comma).

A SIMPLE EXAMPLE

```
{
        "book": [
        {
                "id":"01",
                "language": "Java",
                "edition": "third",
                "author": "Herbert Schildt"
        },
        {
                "id":"07",
                "language": "C++",
                "edition": "second"
                "author": "E.Balagurusamy"
        }]
}
```

DATA STRUCTURES FOR JSON

JSON supports the following two data structures:

- Collection of name/value pairs: This Data Structure is supported by different programming languages.
- Ordered list of values: It includes array, list, vector or sequence etc.

DATA TYPES

JSON format supports the following data types:

Type	Description
Number	double- precision floating-point format in JavaScript
String	double-quoted Unicode with backslash escaping
Boolean	true or false
Array	an ordered sequence of values
Value	it can be a string, a number, true or false, null etc
Object	an unordered collection of key:value pairs
Whitespace	can be used between any pair of tokens
null	empty

REFERENCE

https://www.tutorialspoint.com/json/json_tutorial.pdf