

JSON

Overview

The JavaScript JSON is an acronym for **JavaScript Object Notation**. It provides a format for storing and transporting data. It is a lightweight, human-readable collection of data that can be accessed logically.

- It generates and stores the data from user input.
 - It can transport the data from the server to the client, client to server, and server to server.
 - It can also build and verifying the data.
- ❖ JSON is often used when data is sent from a server to a web page.

JSON Object Example

The **{ (curly brace)** represents the JSON object.

```
{  
  "student": {  
    "name": "Sam",  
    "fees": 56000,  
    "institution": "Coding Ninjas"  
  }  
}
```

JSON Array Example

The **[(square bracket)** represents the JSON array. A JSON array can have values and objects.

```
[  
  {"name":"Sam", "email":"Sam@gmail.com"},  
  {"name":"Yash", "email":"Yash@gmail.com"}  
]
```

JSON Syntax Rules

- Data is in name/value pairs
- Data is separated by commas
- Curly braces hold objects
- Square brackets hold arrays

Purpose of using JSON

The JSON format is syntactically similar to the JavaScript objects. Because of this, a JavaScript program can **easily convert JSON data into JavaScript objects**.

Since the format is text only, JSON data can easily be sent between computers and used by any programming language.

Methods	Description
JSON.parse()	This method takes a JSON string and converts it into a JavaScript object.
JSON.stringify()	This method converts a JavaScript Object to a JSON string.

JSON.parse()

JSON is used to **exchange data to/from a web server**.

When receiving data from a web server, the data is always a string.

Data is parsed with JSON.parse(), and the data becomes a JavaScript object.

Syntax : JSON.parse(text) ;

Example :

```
var text = ' { "name": "Sam", "fees": 56000, "institution": "Coding Ninjas" } '  
var json = JSON.parse( text ) ;  
  
json.name ; // Returns Sam  
json.fees ; //Returns 56000
```

JSON.stringify()

JavaScript JSON.stringify() method converts a JavaScript Object to a JSON string.

Syntax : `Json.stringify(value) ;`

Example :

```
var obj = {  
    "name": "Sam",  
    "fees": 56000,  
    "institution": "Coding Ninjas"  
}  
  
var json = JSON.stringify( obj ) ;  
console.log(json) ;
```

Output : `{"name":"Sam","fees":56000,"institution":"Coding Ninjas"}`

❖ `json` is now a string and ready to be sent to a server