JSON

JAVASCRIPT

JavaScript JSON

JSON stands for Javascript Object Notation. JSON is a text-based data format that is used to store and transfer data.

- JSON is a lightweight data interchange format

- JSON is language independent

- In JSON, the data are in key/value pairs separated by a comma , .

```
// JSON syntax
{
    "name": "Imtiyaz",
    "age": 21,
    "gender": "male",

}
```

JSON Data

JSON data is written as name/value pairs, just like JavaScript object properties.

The key and values are written in double quotes separated by a colon : .

```
// JSON data
"name": "imtiyaz"
```

JSON Object

The JSON object is written inside curly braces{ }.

JSON objects can contain multiple key/value pairs.

```
// JSON object
{ "name": "Imtiyaz", "age": 21 }
```

Accessing JSON Data

You can access JSON data using the dot notation.

You can also use square bracket syntax [] to access JSON data.

For example :

```javascript
// JSON object
const data = {
    "name": "Imtiyaz",
    "age": 21,
    "hobby": {
       "reading" : true,
       "gaming" : false,
       "sport" : "cricket"
    },
    "class" : ["JavaScript", "HTML", "CSS"]
}

// accessing JSON object
console.log(data.name); // Imtiyaz
console.log(data["name"]); // Imtiyaz
console.log(data.hobby);
// { gaming: false, reading: true, sport: "cricket"}

console.log(data.hobby.sport); // cricket
console.log(data.class[1]); // HTML
```

JSON to Object

You can convert JSON data to a JavaScript object using the built-in JSON.parse() function. For example,

```javascript
// json object
const jsonData = '{ "name": "Imtiyaz", "age": 21 }';

// converting to JavaScript object
const obj = JSON.parse(jsonData);

// accessing the data
console.log(obj.name); // Imtiyaz
```

Object to JSON

You can also convert JavaScript objects to JSON format using the JavaScript built-in JSON.stringify() function.
For example,

```javascript
// JavaScript object
const jsonData = { "name": "Imtiyaz", "age": 21 };

// converting to JSON
const obj = JSON.stringify(jsonData);

// accessing the data
console.log(obj); // "{"name":"Imtiyaz","age":21}"
```

Object Vs JSON

JSON	JavaScript Object
The key in key/value pair should be in double quotes.	The key in key/value pair can be without double quotes.
JSON cannot contain functions.	JavaScript objects can contain functions.
JSON can be created and used by other programming languages.	JavaScript objects can only be used in JavaScript.

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