

# JSON

JAVASCRIPT

JS

# 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 :

```
// 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,

```
// 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 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

The key in key/value pair should be in double quotes.

JSON cannot contain functions.

JSON can be created and used by other programming languages.

## JavaScript Object

The key in key/value pair can be without double quotes.

JavaScript objects can contain functions.

JavaScript objects can only be used in JavaScript.

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