JSON COURSE

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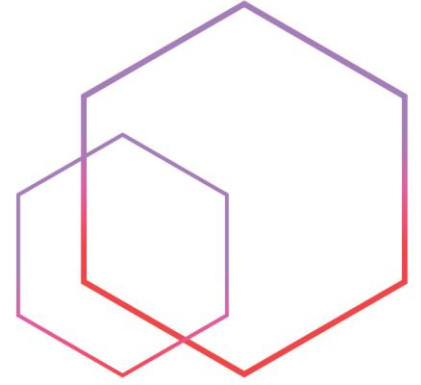
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JSON is a format for storing and transporting data.

JSON is often used when data is sent from a server to a web page.

Important Notes:

- JSON stands for JavaScript Object Notation
- JSON is a lightweight data-interchange format
- JSON is language-independent
- JSON can help us store data on the front-end

Example:

```
{
"students":[
  {"firstName":"Or", "lastName":"Haziza"},
  {"firstName":"Yonatan", "lastName":"Benezra"},
  {"firstName":"Max", "lastName":"Malka"}
]
}
```

As you can see in the above example, JSON is very similar to a JS object. There are several rules that must be followed:

- Data is in name/value pairs
- Data is separated by commas
- **Every text is entered with Double quotes**
- Curly braces hold objects
- Square brackets hold arrays

JSON Objects

JSON objects are written inside curly braces.

Just like in JavaScript, objects can contain multiple name/value pairs:
{"firstName":"Or", "lastName":"Haziza"}

JSON Arrays

JSON arrays are written inside square brackets.
Just like in JavaScript, an array can contain objects:

```
"students":[
   {"firstName":"Or", "lastName":"Haziza"},
   {"firstName":"Yonatan", "lastName":"Benezra"},
   {"firstName":"Max", "lastName":"Malka"}
]
```

In the example above, the object "students" is an array.
It contains three objects.
Each object is a record of a student (with a first name and a last name).

Converting a JSON Text to a JavaScript Object

A common use of JSON is to read data from a web server and display the data in a web page.
For simplicity, this can be demonstrated using a string as input.

First, create a JavaScript string containing JSON syntax:

```
let text = '{ "employees" : [' +
'{ "firstName":"Or" , "lastName":"Haziza" },' +
'{ "firstName":"Yonatan" , "lastName":"Benezra" },' +
'{ "firstName":"Max" , "lastName":"Malka" } ]}';
```

Then, use the JavaScript built-in function.

```
JSON.parse()
```

To convert the string into a JavaScript object:

```
const obj = JSON.parse(text);
```

Finally, use the new JavaScript object in your page.