

Experiment No 8 - Document Database

WriteUp :

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ADBMS Experiment 8

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Batch : C'32

Subject : ADBMS

Date of Performance : 02/11/2023

Date of Submission : 30/11/2023

Aim : Data handling using JSON

Theory :

JSON (JavaScript Object Notation) is a lightweight data interchange format that's easy for humans to read & write.

It is easy for machines to parse & generate

It's widely used for transmitting data between a server & a web application

It is language independent & can be used with modern programming languages

It is self describing

All popular programming languages have support for JSON data

JSON syntax (js)

```
let student = {  
    "name": "Kaireena",  
    "age": 19,  
    "college": DJ,  
    "subject": ['ADBMS', 'AI', 'DMW', 'POA', 'Python', 'PBC']  
}
```

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"enrolledFacultonals": true

↳ Thus, we can say

JSON is language

Conclusion: Thus, we understood & implemented JSON
concept & its different data objectives, usecase.

More, refer attached file for more

↳ Attached file is handwritten notes (from T.) for E.
↳ It has all the notes & examples of implemented JSON
concept & its different data objectives, usecase.
↳ It also has some notes on XML & its differences from JSON.
↳ It also has some notes on JSON API & its differences from REST API.
↳ It also has some notes on JSON Schema & its differences from JSON.
↳ It also has some notes on JSON Pointer & its differences from JSON.
↳ It also has some notes on JSON Patch & its differences from JSON.
↳ It also has some notes on JSON Merge Patch & its differences from JSON.
↳ It also has some notes on JSON Pointer & its differences from JSON.
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↳ Attached file is handwritten notes (from T.) for M.

↳ It has all the notes & examples of implemented JSON
concept & its different data objectives, usecase.

↳ It also has some notes on XML & its differences from JSON.

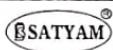
↳ It also has some notes on JSON API & its differences from REST API.

↳ It also has some notes on JSON Schema & its differences from JSON.

↳ It also has some notes on JSON Pointer & its differences from JSON.

↳ It also has some notes on JSON Patch & its differences from JSON.

↳ It also has some notes on JSON Merge Patch & its differences from JSON.



Code / Screenshots :

Screenshot 1: Visual Studio Code showing the code for `displaydata.html`. The code uses JavaScript to fetch a JSON file named `2022_JUNE.json` and log its contents to the console.

```

<!DOCTYPE html>
<html>
<body>
    <h1>Data Handling using JSON</h1>
    <button onclick="func()">Show Details</button>
    <script>
        function Func() {
            var data_loc;
            fetch("./2022_JUNE.json")
                .then((res) => {
                    return res.json();
                })
                .then((data) =>
                    console.log(data)
                );
        }
    </script>
</body>
</html>

```

Screenshot 2: Visual Studio Code showing the JSON data from `2022_JUNE.json`. The data contains two entries for timeline objects, each with details about place visits, location, duration, and confidence levels.

```

[{"placeVisit": {
    "location": {
        "latitudeE7": 191737250,
        "longitudeE7": 728695168,
        "placeId": "ChIJ_wve3zsRa78RefzEyWo",
        "address": "Western Express Highway Goregaon East, Oberoi Garden City, Yashodham, Goregaon, Mumbai, Maharashtra 400063, India",
        "name": "Oberoi Mall",
        "sourceInfo": {
            "deviceTag": 912782204
        },
        "locationConfidence": 94.65083,
        "calibratedProbability": 90.334625
    },
    "duration": {
        "startTimestamp": "2022-06-03T13:37:10.241Z",
        "endTimestamp": "2022-06-03T16:26:34.630Z"
    },
    "placeConfidence": "HIGH_CONFIDENCE",
    "childVisits": [
        {
            "location": {
                "latitudeE7": 191737554,
                "longitudeE7": 728688371,
                "placeId": "ChIJ05LUSal35zsR9477VfDwMGo",
                "address": "General Arun Kumar Vaidya Marg Shop R1, Third Floor, Oberoi Mall, Western Express Hwy, next to PVR Cinema, next to Ya
                "name": "Goregaon Social",
                "sourceInfo": {
                    "deviceTag": 912782204
                },
                "locationConfidence": 59.23612,
                "calibratedProbability": 54.241043
            },
            "duration": {
                "startTimestamp": "2022-06-03T13:53:08.028Z",
                "endTimestamp": "2022-06-03T14:02:35.766Z"
            },
            "placeConfidence": "MEDIUM_CONFIDENCE",
        }
    ]
}, {"placeVisit": {
    "location": {
        "latitudeE7": 191737250,
        "longitudeE7": 728695168,
        "placeId": "ChIJ_wve3zsRa78RefzEyWo",
        "address": "Western Express Highway Goregaon East, Oberoi Garden City, Yashodham, Goregaon, Mumbai, Maharashtra 400063, India",
        "name": "Oberoi Mall",
        "sourceInfo": {
            "deviceTag": 912782204
        },
        "locationConfidence": 94.65083,
        "calibratedProbability": 90.334625
    },
    "duration": {
        "startTimestamp": "2022-06-03T13:37:10.241Z",
        "endTimestamp": "2022-06-03T16:26:34.630Z"
    },
    "placeConfidence": "HIGH_CONFIDENCE",
    "childVisits": [
        {
            "location": {
                "latitudeE7": 191737554,
                "longitudeE7": 728688371,
                "placeId": "ChIJ05LUSal35zsR9477VfDwMGo",
                "address": "General Arun Kumar Vaidya Marg Shop R1, Third Floor, Oberoi Mall, Western Express Hwy, next to PVR Cinema, next to Ya
                "name": "Goregaon Social",
                "sourceInfo": {
                    "deviceTag": 912782204
                },
                "locationConfidence": 59.23612,
                "calibratedProbability": 54.241043
            },
            "duration": {
                "startTimestamp": "2022-06-03T13:53:08.028Z",
                "endTimestamp": "2022-06-03T14:02:35.766Z"
            },
            "placeConfidence": "MEDIUM_CONFIDENCE",
        }
    ]
}]

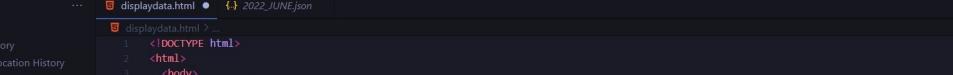
```

Screenshot 3: Visual Studio Code showing the code for `displaydata.html`. This version of the code uses the `data` timelineObjects[0]` syntax to access the first item in the array returned by the JSON data.

```

<!DOCTYPE html>
<html>
<body>
    <h1>Data Handling using JSON</h1>
    <button onclick="func()">Show Details</button>
    <script>
        function Func() {
            var data_loc;
            fetch("./2022_JUNE.json")
                .then((res) => {
                    return res.json();
                })
                .then((data) =>
                    console.log(
                        data.timelineObjects[0]
                    );
                );
        }
    </script>
</body>
</html>

```



The screenshot shows the developer tools of a web browser. The left sidebar lists files: 'EXPLORER', 'TAKEOUT', 'Location History', 'Semantic Location History', '2018', '2019', '2020', '2021', '2022', 'Records.json', 'Settings.json', '2022_JUNE.json', and 'displaydata.html'. The right pane shows the code for 'displaydata.html'.

```
<!DOCTYPE html>
<html>
<body>
<h1>Data Handling using JSON</h1>
<button onclick="Func()">Show Details</button>
<script>
function Func() {
    var data_loc;
    fetch("./2022_JUNE.json")
        .then((res) => {
            return res.json();
        })
        .then((data) =>
            console.log(
                data.timelineObjects[1]
            )
        );
}
</script>
</body>
</html>
```

```
localhost:8000/displaydata.html +  
localhost:8000/displaydata.html  
Netflix Watch The Midnigh... How to plot a ROC... GitHub - labrijasaad... Twitter Sentiment A... Twitter Sentiment A... Home - Netflix  
  
Data Handling using JSON  
  
Show Details  
  
[placeVisits: {}]   
+ placeVisit:  
  centerLatE7: 191740471  
  centerLangE7: 728606154  
  childVisits: Array(4)  
    > 0:  
      centerLatE7: 191740018  
      centerLangE7: 728606383  
      duration: {startTimestamp: '2022-06-03T13:53:08.028Z', endTimestamp: '2022-06-03T14:02:35.766Z'}  
      editConfirmationStatus: "NOT_CONFIRMED"  
      location: {latitudeE7: 191737554, longitudeE7: 728608374, placeId: "ChiI05ULsai35zsR9477VfDWNg8", address: "General Arun Kumar Vaidya Marg Shop R1, Third Floor.dham, Goregaon, Mumbai, Maharashtra 400063, India", name: "General Arun Kumar Vaidya Marg Shop R1", locationConfidence: 77}  
      otherCandidateLocations: (8) [{}, {}, {}, {}, {}, {}, {}, {}]  
      placeConfidence: "MEDIUM_CONFIDENCE"  
      placeVisitLevel: 1  
      placeVisitType: "SINGLE_PLACE"  
      visitConfidence: 95  
    > [[Prototype]]: Object  
    > 1: {location: {}, duration: {}, placeConfidence: "MEDIUM_CONFIDENCE", centerLatE7: 191740397, centerLangE7: 728606127, ...}  
    > 2: {location: {}, duration: {}, placeConfidence: "HIGH_CONFIDENCE", centerLatE7: 191740398, centerLangE7: 728606122, ...}  
    > 3: {location: {}, duration: {}, placeConfidence: "MEDIUM_CONFIDENCE", centerLatE7: 191739383, centerLangE7: 728604979, ...}  
    length: 4  
  > [[Prototype]]: Array(0)  
duration: {startTimestamp: '2022-06-03T13:37:10.241Z', endTimestamp: '2022-06-03T16:26:34.630Z'}  
editConfirmationStatus: "NOT_CONFIRMED"  
location: {latitudeE7: 191737258, longitudeE7: 728605168, placeId: "ChiI_____vew35zsRa78RefzEYo", address: "Western Express Highway Goregaon East, Oberoi Gard.dham, Goregaon, Mumbai, Maharashtra 400063, India", name: "Oberoi Garden City", locationConfidence: 95}  
otherCandidateLocations: Array(4)  
  > 0: {latitudeE7: 191738300, longitudeE7: 728592100, placeId: "ChiIjH_hdvGm3zsRXKxrl-YGt9s", address: "Yashodham, Goregaon, Mumbai, Maharashtra 400063, India", name: "Oberoi mall", locationConfidence: 95}  
  > 1: {latitudeE7: 191741554, longitudeE7: 728610179, placeId: "ChiI7T_FqL35zsR5181R8nQwai", address: "Yashodham, Goregaon, Mumbai, Maharashtra 400063, India", name: "Oberoi mall", locationConfidence: 95}  
  > 2: {latitudeE7: 191746396, longitudeE7: 728603579, placeId: "ChiI3H_FqL35zsRN8n3dFR3w1P", address: "Malad, MBH Colony, Dindoshi, Malad East, Mumbai, Maharashtra 400097, India", locationConfidence: 95}  
  > 3: {latitudeE7: 191727759, longitudeE7: 728607137, placeId: "ChiIu-VcVKi35zsRN8yBfCgsto", address: "Oberoi Garden City, International Business Park, Y.dham, Goregaon, Mumbai, Maharashtra 400063, India", locationConfidence: 95}  
  length: 4  
  > [[Prototype]]: Array(0)  
placeConfidence: "HIGH_CONFIDENCE"  
placeVisitLevel: 1  
placeVisitType: "SINGLE_PLACE"  
simplifiedRawPath: {points: Array(14), source: "INFERRED", distanceMeters: 314.0213031589879}  
.....
```