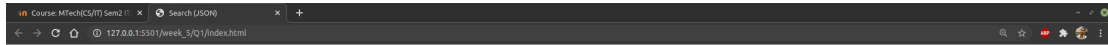


IT LAB II – Week 5

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MTech IT
20MCMB08

Question 1

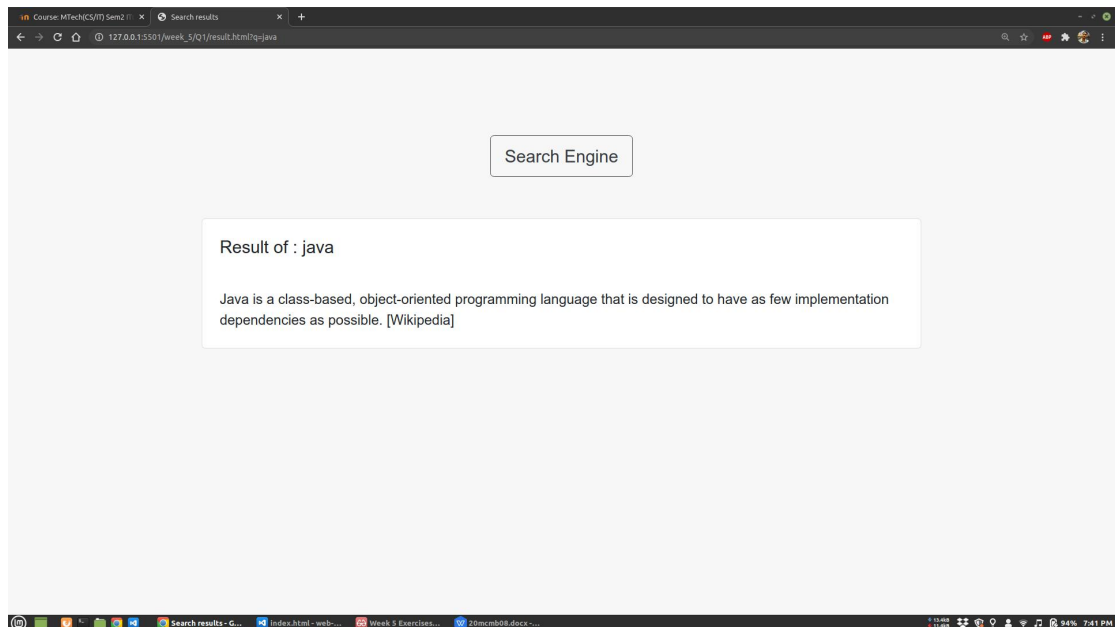
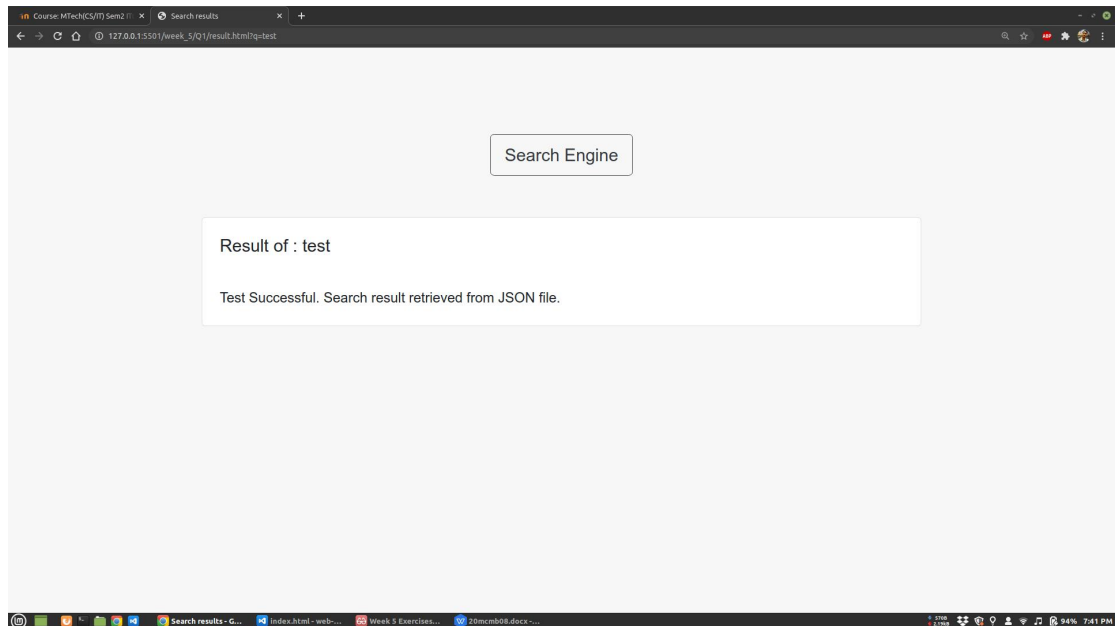


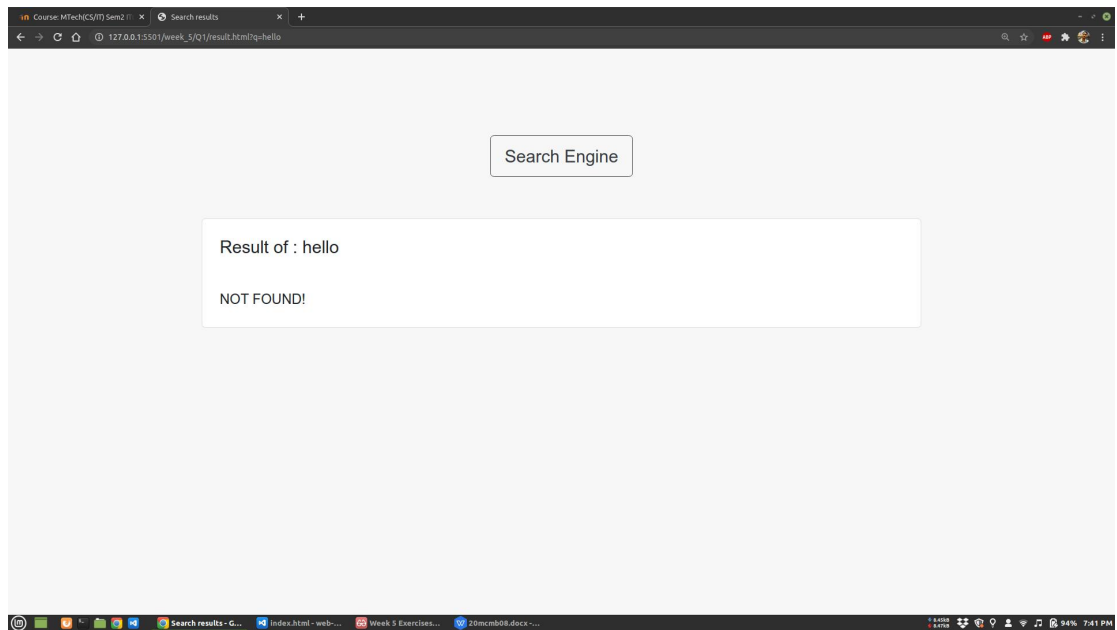
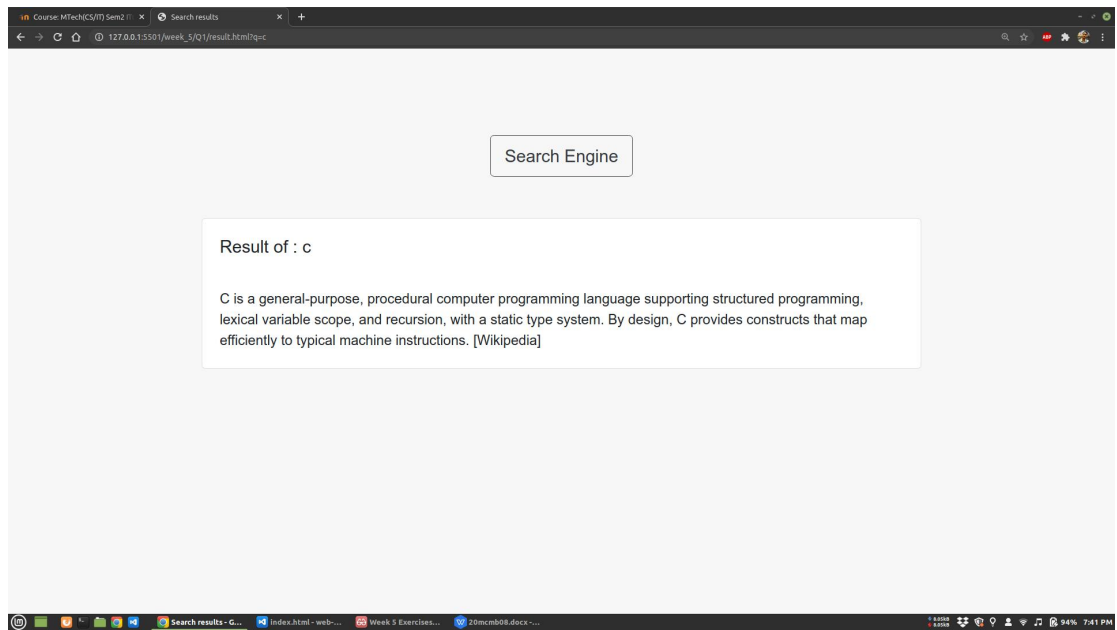
Search Engine

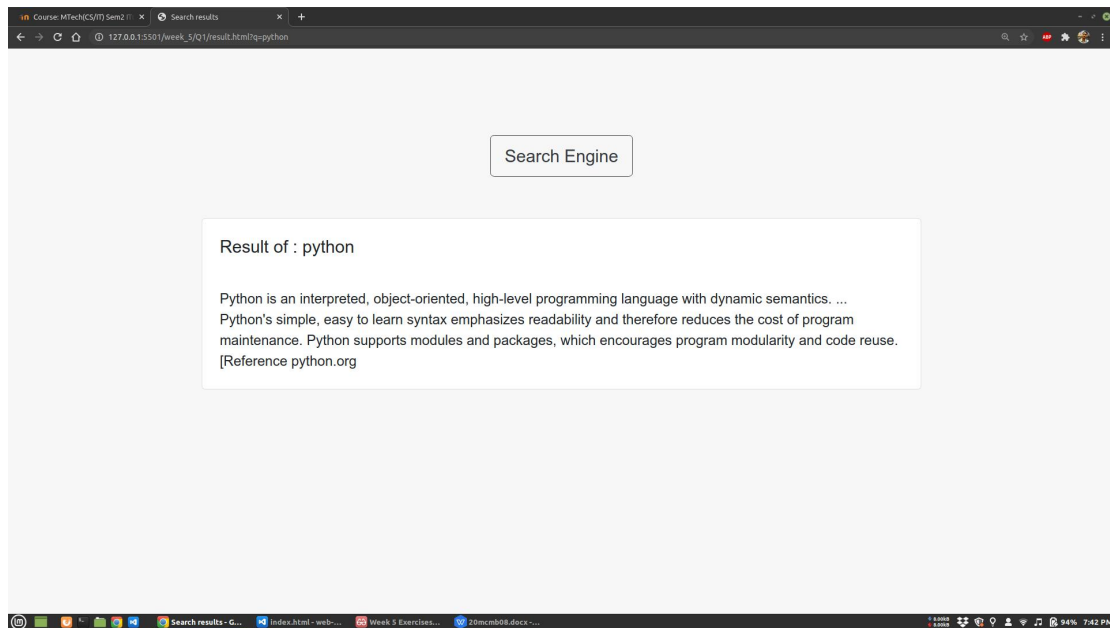


Search Engine









Source Code

data.json

```
{
  "data": [
    {
      "key": "test",
      "details": "Test Successful. Search result retrieved from JSON file."
    },
    {
      "key": "c",
      "details": "C is a general-purpose, procedural computer programming language supporting structured programming, lexical variable scope, and recursion, with a static type system. By design, C provides constructs that map efficiently to typical machine instructions. [Wikipedia]"
    },
    {
      "key": "java",
      "details": "Java is a class-based, object-oriented programming language that is designed to have as few implementation dependencies as possible. [Wikipedia]"
    },
    {
      "key": "js",
      "details": "JavaScript, often abbreviated as JS, is a programming language that conforms to the ECMAScript specification."
    }
  ]
}
```

```

JavaScript is high-level, often just-in-time compiled, and
multi-paradigm. It has curly-bracket syntax, dynamic typing,
prototype-based object-orientation, and first-class
functions.[Reference Wikipedia]"
    },
    {
        "key": "python",
        "details": "Python is an interpreted, object-oriented,
high-level programming language with dynamic semantics. ...
Python's simple, easy to learn syntax emphasizes readability and
therefore reduces the cost of program maintenance. Python supports
modules and packages, which encourages program modularity and code
reuse.[Reference python.org"
    }
]
}

```

index.html

```

<!doctype html>
<html lang="en">

<head>
    <!-- Required meta tags -->
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1">

    <!-- Bootstrap CSS -->
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/
css/bootstrap.min.css" rel="stylesheet"

integrity="sha384-BmbxuPwQa2lc/FVzBcNJ7UAyJxM6wuqIj61tLrc4wSX0
szH/Ev+nYRRuWloflfl" crossorigin="anonymous">

    <title>Search (JSON)</title>

    <!-- Style -->
    <style>
        h1 {
            text-align: center;
        }

        #logo {
            font-size: 50px;

```

```

        padding-top: 200px;
        padding-bottom: 50px;
    }

    #search_bar {
        padding-top: 10px;
        padding-bottom: 10px;
        padding-right: 20px;
        padding-left: 25px;
        font-size: 25px;
        border-radius: 27px;
        box-shadow: 3px 3px 3px #a1a1a1;
    }

    #btn_set {
        margin-top: 45px;
        margin-bottom: 100px;
    }
</style>
</head>

<body>
    <div class="container">

        <!-- Logo: Search engine -->
        <div class="row justify-content-center">
            <div class="col-md-5">
                <h1 id="logo">Search Engine</h1>
            </div>
        </div>

        <!-- Input : Search bar -->
        <div class="row justify-content-center">
            <div class="col-md-8">
                <input class="form-control" type="text"
placeholder="Search here" id="search_bar">
            </div>
        </div>

        <!-- Search button -->
        <div class="row">
            <div class="d-flex justify-content-center"
id="btn_set">
                <div class="col-md-2 col-sm-12 col-xs-12">
                    <button type="button" class="btn btn-light
btn-lg" onclick="search()">Search It</button>
                </div>
                <div class="col-md-2 col-sm-12 col-xs-12">

```

```

        <button type="button" class="btn btn-light
btn-lg">Try Something!</button>
    </div>
</div>
</div>
</div>
</div>

<!-- JavaScript -->
<script>
    // Function to redirect to result page.
    function search() {
        // Taking the search query.
        var searchKey =
document.getElementById('search_bar').value.trim().toLowerCase
();
        // If not empty then redirect to the result page.
        if ('' != searchKey)
            window.location.href = 'result.html?q=' +
searchKey;
    }
</script>
</body>
</html>

```

result.html

```

<!doctype html>
<html lang="en">

<head>
    <!-- Required meta tags -->
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1, shrink-to-fit=no">

    <!-- Bootstrap CSS -->
    <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/boot
strap.min.css"

integrity="sha384-Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFc
JlSAwiGgFAW/dAiS6JXm" crossorigin="anonymous">

    <style>
        body {
            background-color: rgb(247, 247, 247);

```

```

    }
  </style>
  <title>Search results</title>
</head>

<body>
  <div class="container" style="margin-top: 100px;">
    <!-- Button to go back to search page -->
    <div class="d-flex justify-content-center">
      <a href="index.html" class="btn btn-outline-dark
btn-lg">Search Engine</a>
    </div>
    <br><br>

    <!-- Search Result -->
    <div class="d-flex justify-content-center">
      <div class="card w-75">
        <div class="card-body">
          <!-- heading -->
          <h5 class="card-title" id="title"></h5>
          <br>
          <!-- content -->
          <p class="card-text" id="content"></p>
        </div>
      </div>
    </div>
  </div>

  <!-- JavaScript -->
  <script>
    // retrieve ta search query from URL.
    let params = new URLSearchParams(window.location.search);
    const searchKey = params.get('q');
    // Log
    console.log(searchKey);

    // URL of the JSON file.
    const URL = "data.json";
    // Fetch the JSON file.
    fetch('data.json').then(response =>
response.json()).then(jsonResponse => {
      var searchFlag = true;

      // Match
      for (let i = 0; i < jsonResponse.data.length; i++) {
        if (searchKey == jsonResponse.data[i].key) {
          searchFlag = false;
          // Show the details.

```



```
                title.innerHTML = 'Result of : ' +
jsonResponse.data[i].key;
                content.innerHTML =
jsonResponse.data[i].details;
            }
        }

        // Not found in JSON.
        if (searchFlag) {
            console.log('NOT FOUND!');
            title.innerHTML = 'Result of : ' + searchKey;
            content.innerHTML = 'NOT FOUND!';
        }
    })
</script>
</body>
</html>
```

Question 2



Reading JSON with JavaScript

#	Author	Book Title	Price	Publish Date	Description
1	author 1	Book title 1	3000/-	10-01-2000	Long text for description of Book title 1.
2	author 2	Book title 2	583/-	17-11-2000	Long text for description of Book title 2.
3	author 3	Book title 3	95/-	15-02-2000	Long text for description of Book title 3.
4	author 4	Book title 4	595/-	16-12-2000	Long text for description of Book title 4.
5	author 5	Book title 5	599/-	17-11-2000	Long text for description of Book title 5.
6	author 6	Book title 6	455/-	02-09-2000	Long text for description of Book title 6.
7	author 7	Book title 7	495/-	02-11-2000	Long text for description of Book title 7.
8	author 8	Book title 8	499/-	06-12-2000	Long text for description of Book title 8.
9	author 9	Book title 9	695/-	02-11-2000	Long text for description of Book title 9.
10	author 10	Book title 10	365/-	09-12-2000	Long text for description of Book title 10.



Source Code

books.json

```
{
  "books": [
    {
      "author": "author 1",
      "title": "Book title 1",
      "price": "3000",
      "date": "10-01-2000",
      "description": "Long text for description of Book title
1."
    },
    {
      "author": "author 2",
      "title": "Book title 2",
      "price": "583",
      "date": "17-11-2000",
      "description": "Long text for description of Book title
2."
    },
    {
      "author": "author 3",
```

```
    "title": "Book title 3",
    "price": "95",
    "date": "15-02-2000",
    "description": "Long text for description of Book title
3."
  },
  {
    "author": "author 4",
    "title": "Book title 4",
    "price": "595",
    "date": "16-12-2000",
    "description": "Long text for description of Book title
4."
  },
  {
    "author": "author 5",
    "title": "Book title 5",
    "price": "599",
    "date": "17-11-2000",
    "description": "Long text for description of Book title
5."
  },
  {
    "author": "author 6",
    "title": "Book title 6",
    "price": "455",
    "date": "02-09-2000",
    "description": "Long text for description of Book title
6."
  },
  {
    "author": "author 7",
    "title": "Book title 7",
    "price": "495",
    "date": "02-11-2000",
    "description": "Long text for description of Book title
7."
  },
  {
    "author": "author 8",
    "title": "Book title 8",
    "price": "499",
    "date": "06-12-2000",
    "description": "Long text for description of Book title
8."
  },
  {
    "author": "author 9",
    "title": "Book title 9",
```

```

        "price": "695",
        "date": "02-11-2000",
        "description": "Long text for description of Book title
9."
    },
    {
        "author": "author 10",
        "title": "Book title 10",
        "price": "365",
        "date": "09-12-2000",
        "description": "Long text for description of Book title
10."
    }
]
}

```

index.html

```

<!doctype html>
<html lang="en">

<head>
    <!-- Required meta tags -->
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1, shrink-to-fit=no">

    <!-- Bootstrap CSS -->
    <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/boot
strap.min.css"

integrity="sha384-Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFc
JlSAwiGgFAW/dAiS6JXm" crossorigin="anonymous">
    <style>
        table,
        thead,
        tr,
        tbody,
        th,
        td {
            text-align: center;
        }
    </style>
    <title>JOSN with JS</title>
</head>

```

```

<body>
  <div class="container">
    <!-- Heading -->
    <div style="margin-top: 70px;">
      <h1 class="display-4" style="text-align: center;
padding: 20px;">Reading JSON with JavaScript</h1>
    </div>

    <!-- Table to show XML data -->
    <table class="table table-bordered" id="books">
      <thead class="thead-dark">
        <!-- Headin of the table -->
        <tr>
          <th scope="col">#</th>
          <th scope="col">Author</th>
          <th scope="col">Book Title</th>
          <th scope="col">Price</th>
          <th scope="col">Publish Date</th>
          <th scope="col">Description</th>
        </tr>
      </thead>
      <!-- Body -->
      <tbody></tbody>
    </table>
  </div>

  <!-- JavaScript code -->
  <script>
    // Table from the HTML document.
    let table = document.getElementById('books');
    // URL of the XML file.
    const URL = "books.json";
    // Fetch the XML as text.
    fetch(URL).then(response =>
response.json()).then(jsonData => {
    // Loop through all the book details.
    for (let i = 0; i < jsonData.books.length; i++) {
      // Log
      console.log(i + 1);
      console.log(jsonData.books[i].author);
      console.log(jsonData.books[i].title);
      console.log(jsonData.books[i].price);
      console.log(jsonData.books[i].date);
      console.log(jsonData.books[i].description);

      // New table row.
      let row = `<tr>
        <th>${i + 1}</th>

```

```
        <td>${jsonData.books[i].author}</td>
        <td>${jsonData.books[i].title}</td>
        <td>${jsonData.books[i].price}</td>
        <td>${jsonData.books[i].date}</td>
        <td>${jsonData.books[i].description}</td>
    </tr>`;

    // Append new row in table.
    table.innerHTML += row;
    }
    })
</script>
</body>
</html>
```
