

# **PEMROGRAMAN WEB DINAMIS**

## **Ajax**



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**TAHUN 2020**

# **JOB SHEET 11 PEMROGRAMAN WEB DINAMIS**

## **AJAX**

### **I. Tujuan Instruksional Khusus**

1. Mahasiswa dapat menerapkan Ajax pada website

### **II. Landasan Teori**

AJAX stands for Asynchronous JavaScript and XML. AJAX is a new technique for creating better, faster, and more interactive web applications with the help of XML, HTML, CSS, and Java Script. Ajax uses XHTML for content, CSS for presentation, along with Document Object Model and JavaScript for dynamic content display. Conventional web applications transmit information to and from the sever using synchronous requests. It means you fill out a form, hit submit, and get directed to a new page with new information from the server.

With AJAX, when you hit submit, JavaScript will make a request to the server, interpret the results, and update the current screen. In the purest sense, the user would never know that anything was even transmitted to the server. XML is commonly used as the format for receiving server data, although any format, including plain text, can be used. AJAX is a web browser technology independent of web server software. A user can continue to use the application while the client program requests information from the server in the background. Intuitive and natural user interaction. Clicking is not required, mouse movement is a sufficient event trigger. Data-driven as opposed to page-driven.

#### **AJAX is Based on Open Standards**

AJAX is based on the following open standards :

- Browser-based presentation using HTML and Cascading Style Sheets (CSS).
- Data is stored in XML format and fetched from the server.
- Behind-the-scenes data fetches using XMLHttpRequest objects in the browser.
- JavaScript to make everything happen.

### **III. Peralatan yang Digunakan**

1. PC
2. Peramban web : Internet Explorer, Firefox, Google Chrome, Opera atau Safari

3. Aplikasi server local : XAMPP
4. Aplikasi text editor : Visual Studio Code

#### IV. Langkah Kerja

##### 4. 1. Latihan Mengubah Konten

1. Buatlah file di notepad bernama ajax\_info.txt kemudian simpan pada folder yang sama dengan program. Isi file dengan tulisan = “Belajar Ajax Menyenangkan”
2. Buat kode seperti di bawah sehingga menghasilkan seperti gambar di bawahnya :



## The XMLHttpRequest Object

Change Content

3. Hidupkan komputer
4. Buat folder di C:\xampp\htdocs\, lalu buatlah file dengan nama mengubah\_konten.html
5. Ketikkan barisan kode PHP berikut

```
C: > xampp > htdocs > job_sheet > AJAX > <> mengubah_konten.html > ...
1  <html lang="en">
2  <head>
3      <meta charset="UTF-8">
4      <meta name="viewport" content="width=device-width, initial-scale=1.0">
5      <meta http-equiv="X-UA-Compatible" content="ie=edge">
6      <title>Document</title>
7  </head>
8  <body>
9      <div id="demo">
10         <h2>The XMLHttpRequest Object</h2>
11         <button type="button" onclick="loadDoc()">Change Content</button>
12     </div>
13
14     <script>
15     function loadDoc() {
16         var xhttp = new XMLHttpRequest();
17         xhttp.onreadystatechange = function() {
18             if (this.readyState == 4 && this.status == 200) {
19                 document.getElementById("demo").innerHTML =
20                 this.responseText;
21             }
22         };
23         xhttp.open("GET", "ajax_info.txt", true);
24         xhttp.send();
25     }
26     </script>
27 </body>
28 </html>
```

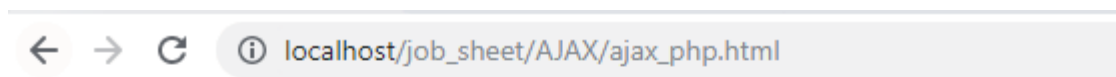
6. Buka file di peramban web
7. Simpan tampilan peramban web dengan menekan Alt+PrtScn

### The XMLHttpRequest Object

Change Content

#### 4. 2. Latihan Ajax dengan PHP

1. Buat kode seperti di bawah sehingga menghasilkan seperti gambar di bawahnya :



## The XMLHttpRequest Object

Start typing a name in the input field below:

Suggestions:

First name:

2. Hidupkan komputer
3. Buat folder di C:\xampp\htdocs\, lalu buatlah file dengan nama ajax\_php.html

4. Ketikkan barisan kode HTML berikut

```
C: > xampp > htdocs > job_sheet > AJAX > <> ajax_php.html > ...
1  <html lang="en">
2  <head>
3      <meta charset="UTF-8">
4      <meta name="viewport" content="width=device-width, initial-scale=1.0">
5      <meta http-equiv="X-UA-Compatible" content="ie=edge">
6      <title>Document</title>
7  </head>
8  <body>
9      <h2>The XMLHttpRequest Object</h2>
10     <h3>Start typing a name in the input field below:</h3>
11     <p>Suggestions: <span id="txtHint"></span></p>
12     <p>First name: <input type="text" id="txt1" onkeyup="showHint(this.value)"></p>
13     <script>
14         function showHint(str) {
15             var xhttp;
16             if (str.length == 0) {
17                 document.getElementById("txtHint").innerHTML = "";
18                 return;
19             }
20             xhttp = new XMLHttpRequest();
21             xhttp.onreadystatechange = function() {
22                 if (this.readyState == 4 && this.status == 200) {
23                     document.getElementById("txtHint").innerHTML = this.responseText;
24                 }
25             };
26             xhttp.open("GET", "gethint.php?q="+str, true);
27             xhttp.send();
28         }
29     </script>
30 </body>
31 </html>
```

5. Buatlah file PHP seperti berikut :

C: > xampp > htdocs > job\_sheet > AJAX > 🐞 gethint.php

```
1  ❏?php
2  // Array with names
3  $a[] = "Anna";
4  $a[] = "Brittany";
5  $a[] = "Cinderella";
6  $a[] = "Diana";
7  $a[] = "Eva";
8  $a[] = "Fiona";
9  $a[] = "Gunda";
10 $a[] = "Hege";
11 $a[] = "Inga";
12 $a[] = "Johanna";
13 $a[] = "Kitty";
14 $a[] = "Linda";
15 $a[] = "Nina";
16 $a[] = "Ophelia";
17 $a[] = "Petunia";
18 $a[] = "Amanda";
19 $a[] = "Raquel";
20 $a[] = "Cindy";
21 $a[] = "Doris";
22 $a[] = "Eve";
23 $a[] = "Evita";
24 $a[] = "Sunniva";
25 $a[] = "Tove";
26 $a[] = "Unni";
27 $a[] = "Violet";
28 $a[] = "Liza";
29 $a[] = "Elizabeth";
30 $a[] = "Ellen";
31 $a[] = "Wenche";
32 $a[] = "Vicky";
```

```

33 // get the q parameter from URL
34 $q = $_REQUEST["q"];
35 $hint = "";
36 // lookup all hints from array if $q is different from ""
37 if ($q != "") {
38     $q = strtolower($q);
39     $len=strlen($q);
40     foreach($a as $name) {
41         if (strstr($q, substr($name, 0, $len))) {
42             if ($hint == "") {
43                 $hint = $name;
44             } else {
45                 $hint .= ", $name";
46             }
47         }
48     }
49 }
50 // Output "no suggestion" if no hint was found or output correct values
51 echo $hint == "" ? "no suggestion" : $hint;
52 ?>

```

6. Buka file di peramban web
7. Simpan tampilan peramban web dengan menekan Alt+PrtScn

### The XMLHttpRequest Object

Start typing a name in the input field below:

First name:

#### 4. 3. Latihan Ajax dengan XML

1. Buat kode seperti di bawah sehingga menghasilkan seperti gambar di bawahnya :

← → ↻ ⓘ localhost/job\_sheet/AJAX/ajax\_xml.html

### The XMLHttpRequest Object

Get my CD collection

2. Hidupkan komputer
3. Buat folder di C:\xampp\htdocs\, lalu buatlah file dengan nama ajax\_xml.html
4. Ketikkan barisan kode HTML berikut



```

C: > xampp >htdocs > job_sheet > AJAX > < ajax_xml.html > < html > < body > < script > < myFunction
1  <!DOCTYPE html>
2  <html>
3  <style>
4  table,th,td {
5      border : 1px solid black;
6      border-collapse: collapse;
7  }
8  th,td {
9      padding: 5px;
10 }
11 </style>
12 <body>
13 <h2>The XMLHttpRequest Object</h2>
14 <button type="button" onclick="loadDoc()">Get my CD collection</button>
15 <br><br>
16 <table id="demo"></table>
17 <script>
18 function loadDoc() {
19     var xhttp = new XMLHttpRequest();
20     xhttp.onreadystatechange = function() {
21         if (this.readyState == 4 && this.status == 200) {
22             myFunction(this);
23         }
24     };
25     xhttp.open("GET", "cd_catalog.xml", true);
26     xhttp.send();
27 }
28 function myFunction(xml) {
29     var i;
30     var xmlDoc = xml.responseXML;
31     var table="<tr><th>Artist</th><th>Title</th></tr>";
32     var x = xmlDoc.getElementsByTagName("CD");

```

```

33     for (i = 0; i <x.length; i++) {
34         table += "<tr><td>" +
35             x[i].getElementsByTagName("ARTIST")[0].childNodes[0].nodeValue +
36             "</td><td>" +
37             x[i].getElementsByTagName("TITLE")[0].childNodes[0].nodeValue +
38             "</td></tr>";
39     }
40     document.getElementById("demo").innerHTML = table;
41 }
42 </script>
43 </body>
44 </html>

```

5. Buatlah file XML seperti berikut :

```
C: > xampp > htdocs > job_sheet > AJAX > cd_catalog.xml
```

```
1  <CATALOG>
2  <CD>
3  <TITLE>Empire Burlesque</TITLE>
4  <ARTIST>Bob Dylan</ARTIST>
5  <COUNTRY>USA</COUNTRY>
6  <COMPANY>Columbia</COMPANY>
7  <PRICE>10.90</PRICE>
8  <YEAR>1985</YEAR>
9  </CD>
10 <CD>
11 <TITLE>Hide your heart</TITLE>
12 <ARTIST>Bonnie Tyler</ARTIST>
13 <COUNTRY>UK</COUNTRY>
14 <COMPANY>CBS Records</COMPANY>
15 <PRICE>9.90</PRICE>
16 <YEAR>1988</YEAR>
17 </CD>
18 <CD>
19 <TITLE>Greatest Hits</TITLE>
20 <ARTIST>Dolly Parton</ARTIST>
21 <COUNTRY>USA</COUNTRY>
22 <COMPANY>RCA</COMPANY>
23 <PRICE>9.90</PRICE>
24 <YEAR>1982</YEAR>
25 </CD>
26 <CD>
27 <TITLE>Still got the blues</TITLE>
28 <ARTIST>Gary Moore</ARTIST>
29 <COUNTRY>UK</COUNTRY>
30 <COMPANY>Virgin records</COMPANY>
31 <PRICE>10.20</PRICE>
32 <YEAR>1990</YEAR>
```

C: > xampp > htdocs > job\_sheet > AJAX > cd\_catalog.xml

```
33 </CD>
34 <CD>
35 <TITLE>Eros</TITLE>
36 <ARTIST>Eros Ramazzotti</ARTIST>
37 <COUNTRY>EU</COUNTRY>
38 <COMPANY>BMG</COMPANY>
39 <PRICE>9.90</PRICE>
40 <YEAR>1997</YEAR>
41 </CD>
42 <CD>
43 <TITLE>One night only</TITLE>
44 <ARTIST>Bee Gees</ARTIST>
45 <COUNTRY>UK</COUNTRY>
46 <COMPANY>Polydor</COMPANY>
47 <PRICE>10.90</PRICE>
48 <YEAR>1998</YEAR>
49 </CD>
50 <CD>
51 <TITLE>Sylvias Mother</TITLE>
52 <ARTIST>Dr.Hook</ARTIST>
53 <COUNTRY>UK</COUNTRY>
54 <COMPANY>CBS</COMPANY>
55 <PRICE>8.10</PRICE>
56 <YEAR>1973</YEAR>
57 </CD>
58 <CD>
59 <TITLE>Maggie May</TITLE>
60 <ARTIST>Rod Stewart</ARTIST>
61 <COUNTRY>UK</COUNTRY>
62 <COMPANY>Pickwick</COMPANY>
63 <PRICE>8.50</PRICE>
64 <YEAR>1990</YEAR>
```

```
65 </CD>
66 <CD>
67 <TITLE>Romanza</TITLE>
68 <ARTIST>Andrea Bocelli</ARTIST>
69 <COUNTRY>EU</COUNTRY>
70 <COMPANY>Polydor</COMPANY>
71 <PRICE>10.80</PRICE>
72 <YEAR>1996</YEAR>
73 </CD>
74 <CD>
75 <TITLE>When a man loves a woman</TITLE>
76 <ARTIST>Percy Sledge</ARTIST>
77 <COUNTRY>USA</COUNTRY>
78 <COMPANY>Atlantic</COMPANY>
79 <PRICE>8.70</PRICE>
80 <YEAR>1987</YEAR>
81 </CD>
82 <CD>
83 <TITLE>Black angel</TITLE>
84 <ARTIST>Savage Rose</ARTIST>
85 <COUNTRY>EU</COUNTRY>
86 <COMPANY>Mega</COMPANY>
87 <PRICE>10.90</PRICE>
88 <YEAR>1995</YEAR>
89 </CD>
90 <CD>
91 <TITLE>1999 Grammy Nominees</TITLE>
92 <ARTIST>Many</ARTIST>
93 <COUNTRY>USA</COUNTRY>
94 <COMPANY>Grammy</COMPANY>
95 <PRICE>10.20</PRICE>
96 <YEAR>1999</YEAR>
```

C: > xampp > htdocs > job\_sheet > AJAX > cd\_catalog.xml

```
96  <YEAR>1999</YEAR>
97  </CD>
98  <CD>
99  <TITLE>For the good times</TITLE>
100 <ARTIST>Kenny Rogers</ARTIST>
101 <COUNTRY>UK</COUNTRY>
102 <COMPANY>Mucik Master</COMPANY>
103 <PRICE>8.70</PRICE>
104 <YEAR>1995</YEAR>
105 </CD>
106 <CD>
107 <TITLE>Big Willie style</TITLE>
108 <ARTIST>Will Smith</ARTIST>
109 <COUNTRY>USA</COUNTRY>
110 <COMPANY>Columbia</COMPANY>
111 <PRICE>9.90</PRICE>
112 <YEAR>1997</YEAR>
113 </CD>
114 <CD>
115 <TITLE>Tupelo Honey</TITLE>
116 <ARTIST>Van Morrison</ARTIST>
117 <COUNTRY>UK</COUNTRY>
118 <COMPANY>Polydor</COMPANY>
119 <PRICE>8.20</PRICE>
120 <YEAR>1971</YEAR>
121 </CD>
122 <CD>
123 <TITLE>Soulsville</TITLE>
124 <ARTIST>Jorn Hoel</ARTIST>
125 <COUNTRY>Norway</COUNTRY>
126 <COMPANY>WEA</COMPANY>
127 <PRICE>7.90</PRICE>
```

```
128 <YEAR>1996</YEAR>
129 </CD>
130 <CD>
131 <TITLE>The very best of</TITLE>
132 <ARTIST>Cat Stevens</ARTIST>
133 <COUNTRY>UK</COUNTRY>
134 <COMPANY>Island</COMPANY>
135 <PRICE>8.90</PRICE>
136 <YEAR>1990</YEAR>
137 </CD>
138 <CD>
139 <TITLE>Stop</TITLE>
140 <ARTIST>Sam Brown</ARTIST>
141 <COUNTRY>UK</COUNTRY>
142 <COMPANY>A and M</COMPANY>
143 <PRICE>8.90</PRICE>
144 <YEAR>1988</YEAR>
145 </CD>
146 <CD>
147 <TITLE>Bridge of Spies</TITLE>
148 <ARTIST>T'Pau</ARTIST>
149 <COUNTRY>UK</COUNTRY>
150 <COMPANY>Siren</COMPANY>
151 <PRICE>7.90</PRICE>
152 <YEAR>1987</YEAR>
153 </CD>
154 <CD>
155 <TITLE>Private Dancer</TITLE>
156 <ARTIST>Tina Turner</ARTIST>
157 <COUNTRY>UK</COUNTRY>
158 <COMPANY>Capitol</COMPANY>
159 <PRICE>8.90</PRICE>
```

C: > xampp > htdocs > job\_sheet > AJAX > cd\_catalog.xml

```
160 <YEAR>1983</YEAR>
161 </CD>
162 <CD>
163 <TITLE>Midt om natten</TITLE>
164 <ARTIST>Kim Larsen</ARTIST>
165 <COUNTRY>EU</COUNTRY>
166 <COMPANY>Medley</COMPANY>
167 <PRICE>7.80</PRICE>
168 <YEAR>1983</YEAR>
169 </CD>
170 <CD>
171 <TITLE>Pavarotti Gala Concert</TITLE>
172 <ARTIST>Luciano Pavarotti</ARTIST>
173 <COUNTRY>UK</COUNTRY>
174 <COMPANY>DECCA</COMPANY>
175 <PRICE>9.90</PRICE>
176 <YEAR>1991</YEAR>
177 </CD>
178 <CD>
179 <TITLE>The dock of the bay</TITLE>
180 <ARTIST>Otis Redding</ARTIST>
181 <COUNTRY>USA</COUNTRY>
182 <COMPANY>Stax Records</COMPANY>
183 <PRICE>7.90</PRICE>
184 <YEAR>1968</YEAR>
185 </CD>
186 <CD>
187 <TITLE>Picture book</TITLE>
188 <ARTIST>Simply Red</ARTIST>
189 <COUNTRY>EU</COUNTRY>
190 <COMPANY>Elektra</COMPANY>
191 <PRICE>7.20</PRICE>
```

```
192 <YEAR>1985</YEAR>
193 </CD>
194 <CD>
195 <TITLE>Red</TITLE>
196 <ARTIST>The Communards</ARTIST>
197 <COUNTRY>UK</COUNTRY>
198 <COMPANY>London</COMPANY>
199 <PRICE>7.80</PRICE>
200 <YEAR>1987</YEAR>
201 </CD>
202 <CD>
203 <TITLE>Unchain my heart</TITLE>
204 <ARTIST>Joe Cocker</ARTIST>
205 <COUNTRY>USA</COUNTRY>
206 <COMPANY>EMI</COMPANY>
207 <PRICE>8.20</PRICE>
208 <YEAR>1987</YEAR>
209 </CD>
210 </CATALOG>
```

6. Buka file di peramban web
7. Simpan tampilan peramban web dengan menekan Alt+PrtScn

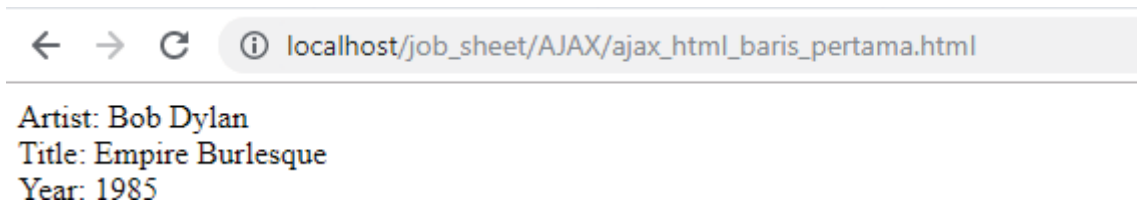
## The XMLHttpRequest Object

Get my CD collection



#### 4. 4. Latihan Ajax dengan XML Menampilkan Data Pertama

1. Buat kode seperti di bawah sehingga menghasilkan seperti gambar di bawahnya :



2. Hidupkan komputer
3. Buat folder di C:\xampp\htdocs\, lalu buatlah file dengan nama ajax\_xml\_baris\_pertama.html
4. Ketikkan barisan kode HTML berikut

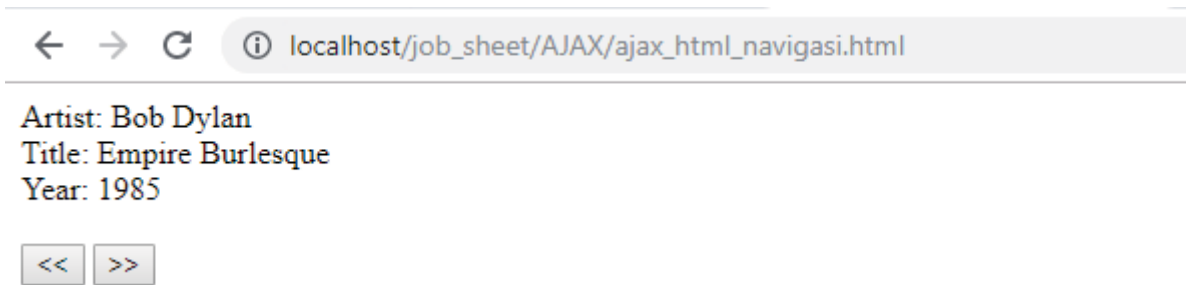
```
C: > xampp > htdocs > job_sheet > AJAX > <> ajax_html_baris_pertama.html > ...
1  <!DOCTYPE html>
2  <html>
3  <body>
4  <div id='showCD'></div>
5  <script>
6      displayCD(0);
7      function displayCD(i) {
8          var xmlhttp = new XMLHttpRequest();
9          xmlhttp.onreadystatechange = function() {
10             if (this.readyState == 4 && this.status == 200) {
11                 myFunction(this, i);
12             }
13         };
14         xmlhttp.open("GET", "cd_catalog.xml", true);
15         xmlhttp.send();
16     }
17     function myFunction(xml, i) {
18         var xmlDoc = xml.responseXML;
19         x = xmlDoc.getElementsByTagName("CD");
20         document.getElementById("showCD").innerHTML =
21             "Artist: " +
22             x[i].getElementsByTagName("ARTIST")[0].childNodes[0].nodeValue +
23             "<br>Title: " +
24             x[i].getElementsByTagName("TITLE")[0].childNodes[0].nodeValue +
25             "<br>Year: " +
26             x[i].getElementsByTagName("YEAR")[0].childNodes[0].nodeValue;
27     }
28 </script>
29 </body>
30 </html>
```

5. Buka file di peramban web
6. Simpan tampilan peramban web dengan menekan Alt+PrtScn

Artist: Bob Dylan  
Title: Empire Burlesque  
Year: 1985

#### 4. 5. Latihan Ajax dengan XML Membuat Navigasi

1. Buat kode seperti di bawah sehingga menghasilkan seperti gambar di bawahnya :



2. Hidupkan komputer
3. Buat folder di C:\xampp\htdocs\, lalu buatlah file dengan nama ajax\_xml\_navigasi.html
4. Ketikkan barisan kode HTML berikut

```
C: > xampp > htdocs > job_sheet > AJAX > ajax_html_navigasi.html > html > body > script > next
1  <!DOCTYPE html>
2  <html>
3  <body>
4  <div id='showCD'></div><br>
5  <input type="button" onclick="previous()" value="<<">
6  <input type="button" onclick="next()" value=">>">
7  <script>
8  var i = 0, len;
9  displayCD(i);
10 function displayCD(i) {
11     var xmlhttp = new XMLHttpRequest();
12     xmlhttp.onreadystatechange = function() {
13         if (this.readyState == 4 && this.status == 200) {
14             myFunction(this, i);
15         }
16     };
17     xmlhttp.open("GET", "cd_catalog.xml", true);
18     xmlhttp.send();
19 }
20 function myFunction(xml, i) {
21     var xmlDoc = xml.responseXML;
22     x = xmlDoc.getElementsByTagName("CD");
23     len = x.length;
24     document.getElementById("showCD").innerHTML =
25     "Artist: " +
26     x[i].getElementsByTagName("ARTIST")[0].childNodes[0].nodeValue +
27     "<br>Title: " +
28     x[i].getElementsByTagName("TITLE")[0].childNodes[0].nodeValue +
29     "<br>Year: " +
30     x[i].getElementsByTagName("YEAR")[0].childNodes[0].nodeValue;
31 }
32 function next() {
```

```

33     if (i < len-1) {
34         i++;
35         displayCD(i);
36     }
37 }
38 function previous() {
39     if (i > 0) {
40         i--;
41         displayCD(i);
42     }
43 }
44 </script>
45 </body>
46 </html>

```

5. Buka file di peramban web
6. Simpan tampilan peramban web dengan menekan Alt+PrtScn

Artist: Bob Dylan  
 Title: Empire Burlesque  
 YEAR: 1985



4. 6. Latihan Ajax dengan XML Menampilkan Informasi
  1. Buat kode seperti di bawah sehingga menghasilkan seperti gambar di bawahnya :

Click on a CD to display album information.

Artist: Bob Dylan  
Title: Empire Burlesque  
Year: 1985

Artist	Title
Bob Dylan	Empire Burlesque
Bonnie Tyler	Hide your heart
Dolly Parton	Greatest Hits
Gary Moore	Still got the blues
Eros Ramazzotti	Eros
Bee Gees	One night only
Dr.Hook	Sylvias Mother
Rod Stewart	Maggie May
Andrea Bocelli	Romanza
Percy Sledge	When a man loves a woman
Savage Rose	Black angel
Many	1999 Grammy Nominees
Kenny Rogers	For the good times
Will Smith	Big Willie style
Van Morrison	Tupelo Honey
Jorn Hoel	Soulsville
Cat Stevens	The very best of

2. Hidupkan komputer
3. Buat folder di C:\xampp\htdocs\, lalu buatlah file dengan nama ajax\_xml\_tampil\_informasi.html
4. Ketikkan barisan kode HTML berikut

```

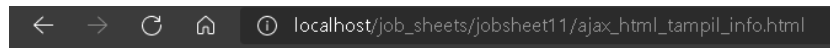
C: > xampp > htdocs > job_sheet > AJAX > ajax_html_tampil_informasi.html > html > body > script > displayCD
1  <!DOCTYPE html>
2  <html>
3  <style>
4      table,th,td {
5          border : 1px solid black;
6          border-collapse: collapse;
7      }
8      th,td {
9          padding: 5px;
10     }
11 </style>
12 <body>
13 <p>Click on a CD to display album information.</p>
14 <p id='showCD'></p>
15 <table id="demo"></table>
16 <script>
17     var x,xmlhttp,xmlDoc
18     xmlhttp = new XMLHttpRequest();
19     xmlhttp.open("GET", "cd_catalog.xml", false);
20     xmlhttp.send();
21     xmlDoc = xmlhttp.responseXML;
22     x = xmlDoc.getElementsByTagName("CD");
23     table="<tr><th>Artist</th><th>Title</th></tr>";
24     for (i = 0; i <x.length; i++) {
25         table += "<tr onclick='displayCD(" + i + ")'><td>";
26         table += x[i].getElementsByTagName("ARTIST")[0].childNodes[0].nodeValue;
27         table += "</td><td>";
28         table += x[i].getElementsByTagName("TITLE")[0].childNodes[0].nodeValue;
29         table += "</td></tr>";
30     }
31     document.getElementById("demo").innerHTML = table;
32     function displayCD(i) {
33         document.getElementById("showCD").innerHTML =
34             "Artist: " +
35             x[i].getElementsByTagName("ARTIST")[0].childNodes[0].nodeValue +
36             "<br>Title: " +
37             x[i].getElementsByTagName("TITLE")[0].childNodes[0].nodeValue +
38             "<br>Year: " +
39             x[i].getElementsByTagName("YEAR")[0].childNodes[0].nodeValue;
40     }
41 </script>
42 </body>
43 </html>

```

5. Buka file di peramban web
6. Simpan tampilan peramban web dengan menekan Alt+PrtScn

## V. Lembar Kerja

### 1. SS

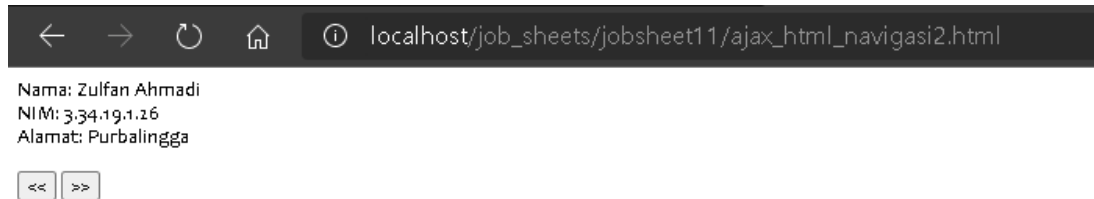


Click on a MHS to display college information.

Nama	Nim
Agung Dwi L	334.19.1.01
Alan Maulana	334.19.1.02
Asraf Aprianto	334.19.1.03
Aulia Nur R	334.19.1.04
Charien Wina P	334.19.1.05
Dheni Windo P	334.19.1.06
Dhimas Wahyu S	334.19.1.07
Fredy Catur A	334.19.1.08
Galang Eka Y	334.19.1.09
Irmatul Azizah	334.19.1.11
Lutfia Ariyati	334.19.1.12
Muhammad Dafi H	334.19.1.13
Muhammad Rizky N	334.19.1.14
Nadila Sasabla R	334.19.1.16
Novita Alya R	334.19.1.17
Rafli Bayu N	334.19.1.18
Rakha Yusan A	334.19.1.19
Rakhma Aksata A	334.19.1.20
Rizki Junianto	334.19.1.21
Rosma Khoirul A	334.19.1.22
Tasya Maharani	334.19.1.23
Taufiq Alim N	334.19.1.24
Winda Rizky Y	334.19.1.25
Zulfan Ahmadi	334.19.1.26

```
job_sheets > jobsheet11 > < ajax_html_tampil_info.html > html
1  <!DOCTYPE html>
2  <html>
3      <style>
4          table,th, td {
5              border: 1px solid black;
6              border-collapse: collapse;
7          }
8          th,td {
9              padding: 5px;
10         }
11     </style>
12     <body>
13         <p>Click on a MHS to display college information.</p>
14         <p id="showMHS"></p>
15         <table id="demo"></table>
16         <script>
17             var x, xmlhttp, xmlDoc
18             xmlhttp = new XMLHttpRequest();
19             xmlhttp.open("GET", "mhs_catalog.xml", false)
20             xmlhttp.send();
21             xmlDoc = xmlhttp.responseXML;
22             x = xmlDoc.getElementsByTagName("MHS");
23             table="<tr><th>Nama</th><th>NIM</th></tr>";
24             for (i=0; i< x.length; i++) {
25                 table += "<tr onclick='displayMHS(" + i + ")'><td>";
26                 table += x[i].getElementsByTagName("NAMA")[0].childNodes[0].nodeValue;
27                 table += "</td><td>";
28                 table += x[i].getElementsByTagName("NIM")[0].childNodes[0].nodeValue;
29                 table += "</td></tr>";
30             }
31             document.getElementById("demo").innerHTML = table;
32             function displayMHS(i) {
33                 document.getElementById("showMHS").innerHTML =
34                     "Nama: " +
35                     x[i].getElementsByTagName("NAMA")[0].childNodes[0].nodeValue +
36                     "<br>NIM: " +
37                     x[i].getElementsByTagName("NIM")[0].childNodes[0].nodeValue +
38                     "<br>Alamat: " +
39                     x[i].getElementsByTagName("ALAMAT")[0].childNodes[0].nodeValue
40             }
41         </script>
42     </body>
43 </html>
```

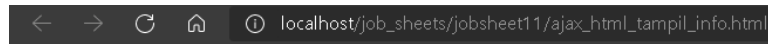
## 2. SS



```
job_sheets > jobsheet11 > <> ajax_html_navigasi2.html > html
1 <!DOCTYPE html>
2 <html>
3 <body>
4 <div id="showMHS"></div><br>
5 <input type="button" onclick="previous()" value="<<">
6 <input type="button" onclick="next()" value=">>">
7 <script>
8     var i = 0, len;
9     displayMHS(i);
10    function displayMHS(i) {
11        var xmlhttp = new XMLHttpRequest();
12        xmlhttp.onreadystatechange = function() {
13            if (this.readyState == 4 && this.status == 200) {
14                myFunction(this, i);
15            }
16        };
17        xmlhttp.open("GET", "mhs_catalog.xml", true);
18        xmlhttp.send();
19        function myFunction(xml, i) {
20            var xmlDoc = xml.responseXML;
21            x = xmlDoc.getElementsByTagName("MHS");
22            len = x.length;
23            document.getElementById("showMHS").innerHTML =
24                "Nama: " +
25                x[i].getElementsByTagName("NAMA")[0].childNodes[0].nodeValue +
26                "<br>NIM: " +
27                x[i].getElementsByTagName("NIM")[0].childNodes[0].nodeValue +
28                "<br>Alamat: " +
29                x[i].getElementsByTagName("ALAMAT")[0].childNodes[0].nodeValue;
30        }
31        function next() {
32            if (i < len-1) {
33                i++;
34                displayMHS(i);
35            }
36        }
37        function previous() {
38            if (i > 0) {
39                i--;
40                displayMHS(i);
41            }
42        }
43    }
44    </script>
45 </body>
46 </html>
```



### 3. SS



Click on a MHS to display college information.

Nama: Zulfan Ahmadi  
NIM: 3.34.19.1.26  
Alamat: Purbalingga

Nama	NIM	ALAMAT
Agung Dwi L	3.34.19.1.01	Purbalingga
Alan Maulana	3.34.19.1.02	Pati
Asraf Aprianto	3.34.19.1.03	Bangkinang
Aulia Nur R	3.34.19.1.04	Cilacap
Charien Wina P	3.34.19.1.05	Semarang
Dheni Windo P	3.34.19.1.06	Blora
Dhimas Wahyu S	3.34.19.1.07	Semarang
Fredy Catur A	3.34.19.1.08	Bojonegoro
Galang Eka Y	3.34.19.1.09	Semarang
Irmatul Azizah	3.34.19.1.11	Demak
Lutfia Ariyati	3.34.19.1.12	Semarang
Muhammad Dafi H	3.34.19.1.13	Semarang
Muhammad Rizky N	3.34.19.1.14	Kudus
Nadila Sasabla R	3.34.19.1.16	Semarang
Novita Alya R	3.34.19.1.17	Semarang
Rafli Bayu N	3.34.19.1.18	Semarang
Rakha Yusan A	3.34.19.1.19	Mataram
Rakhma Aksata A	3.34.19.1.20	Wonosobo
Rizki Junianto	3.34.19.1.21	Blora
Rosma Khoirul A	3.34.19.1.22	Semarang
Tasya Maharani	3.34.19.1.23	Semarang
Taufiq Alim N	3.34.19.1.24	Semarang
Winda Rizky Y	3.34.19.1.25	Bandungan
Zulfan Ahmadi	3.34.19.1.26	Purbalingga

```

job_sheets > jobsheet11 > ajax_html_tampil_info.html > html > body > p#showMHS
1  <!DOCTYPE html>
2  <html>
3      <style>
4          table,th,td {
5              border: 1px solid black;
6              border-collapse: collapse;}
7          th,td {
8              padding: 5px;}</style>
9      <body>
10         <p>Click on a MHS to display college information.</p><p id="showMHS"></p><table id="demo"></table>
11         <script>
12             var x, xmlhttp, xmlDoc
13             xmlhttp = new XMLHttpRequest();
14             xmlhttp.open("GET", "mhs_catalog.xml", false)
15             xmlhttp.send();
16             xmlDoc = xmlhttp.responseXML;
17             x = xmlDoc.getElementsByTagName("MHS");
18             table="<tr><th>Nama</th><th>NIM</th><th>ALAMAT</th></tr>";
19             for (i=0; i< x.length; i++) {
20                 table += "<tr onclick='displayMHS(\" + i + \")'><td>";
21                 table += x[i].getElementsByTagName("NAMA")[0].childNodes[0].nodeValue;
22                 table += "</td><td>";
23                 table += x[i].getElementsByTagName("NIM")[0].childNodes[0].nodeValue;
24                 table += "</td><td>";
25                 table += x[i].getElementsByTagName("ALAMAT")[0].childNodes[0].nodeValue;
26                 table += "</td></tr>";}
27             document.getElementById("demo").innerHTML = table;
28             function displayMHS(i) {
29                 document.getElementById("showMHS").innerHTML =
30                 "Nama: " +
31                 x[i].getElementsByTagName("NAMA")[0].childNodes[0].nodeValue +
32                 "<br>NIM: " +
33                 x[i].getElementsByTagName("NIM")[0].childNodes[0].nodeValue +
34                 "<br>Alamat: " +
35                 x[i].getElementsByTagName("ALAMAT")[0].childNodes[0].nodeValue
36             }</script>
37     </body>
38 </html>

```

## **VI. Latihan Soal**

1. Buatlah program yang menampilkan data mahasiswa di kelas yang terdiri dari nama, nim dan alamat dengan menggunakan Ajax dan XML.
2. Buatlah dalam bentuk navigasi.
3. Tampilkan data mahasiswa terakhir.

## **VII. Kesimpulan**

AJAX merupakan singkatan dari **A**synchronous **J**avascript **A**nd **X**ML. AJAX berguna untuk mempersingkat atau mempermudah *user experience* yang didasarkan sesuai kebutuhan pengguna. Selain itu, mengambil data dari server, update tampilan web tanpa harus *reload browser*, dan mengirim data ke server secara *background*.