

1) What is AJAX?

AJAX stands for 'Asynchronous Javascript and XML'. It is a technique for creating fast and dynamic web pages.

Here are the main points in AJAX:

- a) Ajax allows web pages to be updated asynchronously by exchanging small amounts of data with the server behind the scenes. This means that the page does not need to be reloaded in order to update its content.
- b) Ajax uses a combination of Javascript and XML to send and receive data from the server. However, it is not limited to just these technologies and can be used with other formats such as JSON.
- c) Ajax requests are made using the XMLHttpRequest object in Javascript, which allows a webpage to communicate with a server without reloading the page.
- d) Ajax is often used to create interactive web applications that make it easier for users to interact with the application and retrieve data without having to refresh the page.
- e) AJAX is widely used in modern web development and is an important part of many popular web applications, such as Google maps and Gmail.

2) XML file

<bookstore>

<book category="Cooking">

<title lang="en"> Everyday Italian </title>

<author> Giada De Laurentiis </author>

<year> 2005 </year>

<price> 30.00 </price>

</book>

<book category="Children">

<title lang="en"> Harry Potter </title>

<author> JK Rowling </author>

<year> 2005 </year>

<price> 29.99 </price>

</book>

<book category="web">

<title lang="en"> Learning XML </title>

<author> Erik T Ray </author>

<year> 2003 </year>

<price> 39.95 </price>

</book>

</bookstore>

~~2.1~~

to retrieve and display the content of this XML file in an HTML page using AJAX.

```
<!DOCTYPE HTML>
```

```
<html>
```

```
<head>
```

```
<script>
```

```
function loadXMLDOC() {
```

```
var xhttp = new XMLHttpRequest();
```

```
xhttp.onreadystatechange = function() {
```

```
if (this.readyState == 4 && this.status == 200) {
```

```
displayXML(this);
```

```
}
```

```
};
```

```
xhttp.open("GET", "books.xml", true);
```

```
xhttp.send();
```

```
}
```

```
function displayXML(xml) {
```

```
var xmldoc = xml.responseXML;
```

```
var bookstore = xmldoc.getElementsByTagName("bookstore")[0];
```

```
var books = bookstore.getElementsByTagName("book");
```

```
var output = "";
```

```
for (var i = 0; i < books.length; i++) {
```

```
var title = books[i].getElementsByTagName("title")[0];
```

```
var author = books[i].getElementsByTagName("author")[0];
```

```
var year = books[i].getElementsByTagName("year")[0];
```

```
var price = books[i].getElementsByTagName("price")[0];
```

```
Output += "<h2>" + title.textContent + "</h2>";
```

```
Output += "<p>Author:" + author.textContent + "</p>";
```

```
output += "<p>Year:" + year.textContent + "</p>";  
output += "<p>Price:" + price.textContent + "</p>";
```

```
}
```

```
document.getElementById("books").innerHTML = output;
```

```
}
```

```
</script>
```

```
</head>
```

```
<body onload = "loadXMLDoc()">
```

```
<div id = "books"> </div>
```

```
</body>
```

```
</html>
```