

## XML

### books.xml

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<library>
```

```
<book>
```

```
<title>The Great Gatsby</title>
```

```
<author>F. Scott Fitzgerald</author>
```

```
<year>1925</year>
```

```
<genre>Fiction</genre>
```

```
</book>
```

```
<book>
```

```
<title>To Kill a Mockingbird</title>
```

```
<author>Harper Lee</author>
```

```
<year>1960</year>
```

```
<genre>Fiction</genre>
```

```
</book>
```

```
<book>
```

```
<title>1984</title>
```

```
<author>George Orwell</author>
```

```
<year>1949</year>
```

```
<genre>Dystopian</genre>
```

```
</book>
```

```
</library>
```

## XmlParser.java

```
package xml;

import org.w3c.dom.*;
import javax.xml.parsers.*;

public class XmlParser {

    public static void main(String[] args) {

        try {

            // Create a new DocumentBuilderFactory and DocumentBuilder
            DocumentBuilderFactory factory = DocumentBuilderFactory.newInstance();
            DocumentBuilder builder = factory.newDocumentBuilder();

            // Parse the XML file
            Document document = builder.parse("D:\\java exercises\\XML\\src\\xml\\books.xml");

            // Normalize the document
            document.getDocumentElement().normalize();

            // Get the root element (library)
            NodeList nodeList = document.getElementsByTagName("book");
```

```
// Loop through each book in the XML document
for (int i = 0; i < nodeList.getLength(); i++) {
    Node node = nodeList.item(i);

    if (node.getNodeType() == Node.ELEMENT_NODE) {
        Element element = (Element) node;

        // Get and print the details of each book
        String title = element.getElementsByTagName("title").item(0).getTextContent();
        String author = element.getElementsByTagName("author").item(0).getTextContent();
        String year = element.getElementsByTagName("year").item(0).getTextContent();
        String genre = element.getElementsByTagName("genre").item(0).getTextContent();

        System.out.println("Title: " + title);
        System.out.println("Author: " + author);
        System.out.println("Year: " + year);
        System.out.println("Genre: " + genre);
        System.out.println("-----");
    }
}

} catch (Exception e) {
    e.printStackTrace();
}
}
```

```
...va employeeDAO.java × Employee.java × main.java × Store.java × XML.java × books.xml × XmlParser.java × index.html ×
Source History
1 package xml;
2 import org.w3c.dom.*;
3 import javax.xml.parsers.*;
4 public class XmlParser {
5     public static void main(String[] args) {
6         try {
7             // Create a new DocumentBuilderFactory and DocumentBuilder
8             DocumentBuilderFactory factory = DocumentBuilderFactory.newInstance();
9             DocumentBuilder builder = factory.newDocumentBuilder();
10
11             // Parse the XML file
12             Document document = builder.parse(uri:"D:\\java exercises\\XML\\src\\xml\\books.xml");
13
14             // Normalize the document
15             document.getDocumentElement().normalize();
16
17             // Get the root element (library)
18             NodeList nodeList = document.getElementsByTagName(tagname:"book");
19
20             // Loop through each book in the XML document
21             for (int i = 0; i < nodeList.getLength(); i++) {
22                 Node node = nodeList.item(index: i);
23
24                 if (node.getNodeType() == Node.ELEMENT_NODE) {
25                     Element element = (Element) node;
26
27                     // Get and print the details of each book
28                     String title = element.getElementsByTagName(name: "title").item(index: 0).getTextContent();
29                     String author = element.getElementsByTagName(name: "author").item(index: 0).getTextContent();
30                     String year = element.getElementsByTagName(name: "year").item(index: 0).getTextContent();
31                     String genre = element.getElementsByTagName(name: "genre").item(index: 0).getTextContent();
32
33                     System.out.println("Title: " + title);
34                     System.out.println("Author: " + author);
35                     System.out.println("Year: " + year);
36                     System.out.println("Genre: " + genre);
37                     System.out.println(x: "-----");
38                 }
39             }
40
41             } catch (Exception e) {
42                 e.printStackTrace();
43             }
44         }
45     }
```

## Output:

### Output - XML (run)

```
run:
Title: The Great Gatsby
Author: F. Scott Fitzgerald
Year: 1925
Genre: Fiction
-----
Title: To Kill a Mockingbird
Author: Harper Lee
Year: 1960
Genre: Fiction
-----
Title: 1984
Author: George Orwell
Year: 1949
Genre: Dystopian
-----
BUILD SUCCESSFUL (total time: 0 seconds)
```