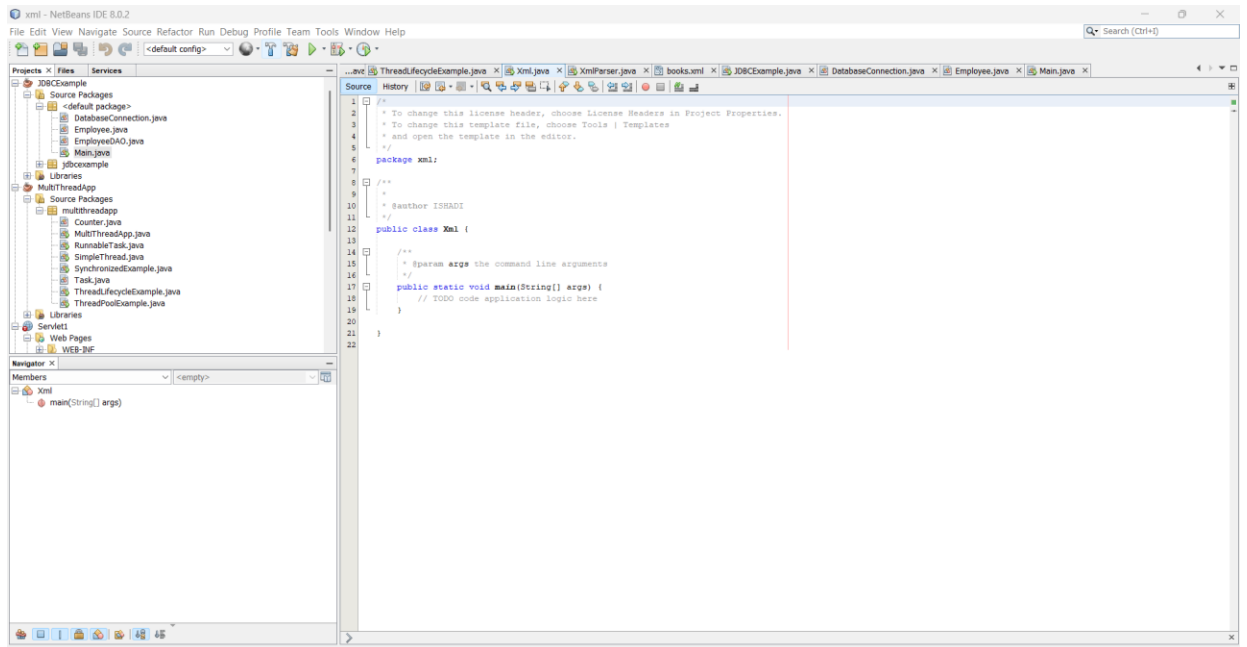


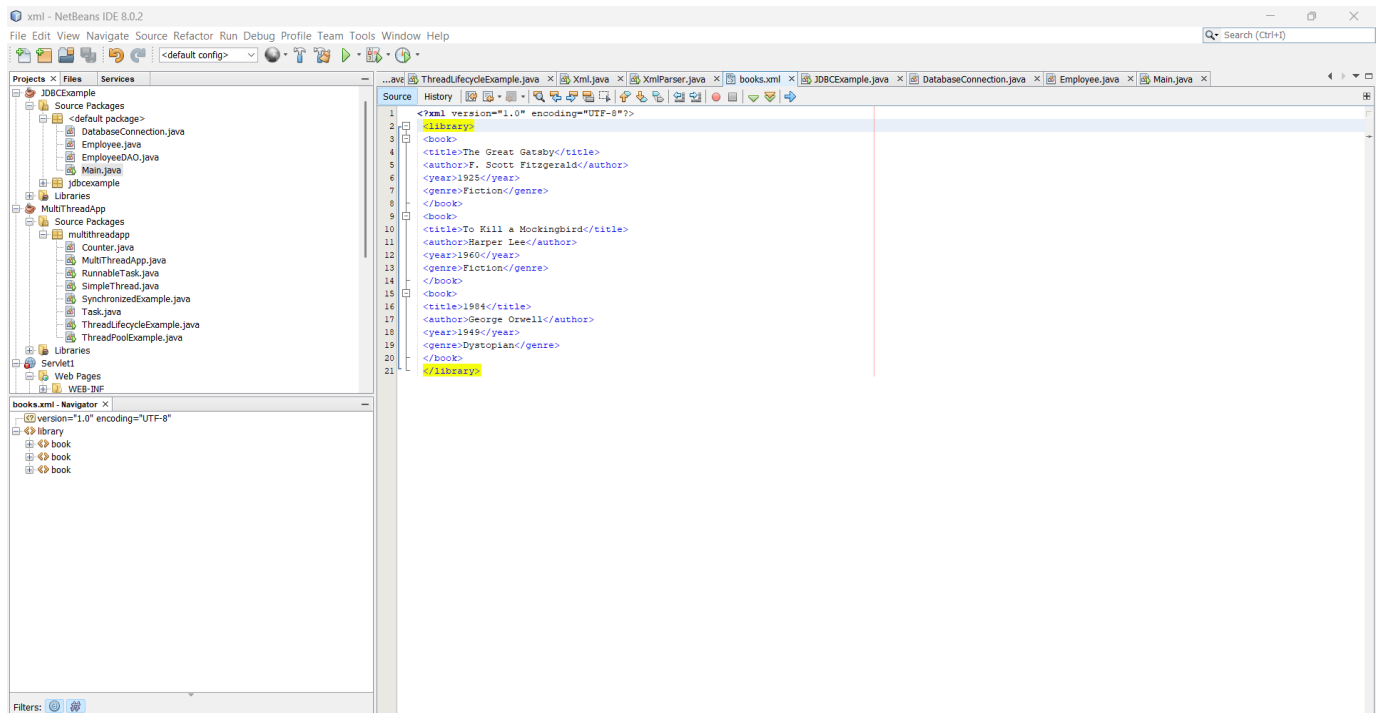
## Lab Sheet 3 : Introduction to XML and Basic Operations

### 1. Create an XML Document:



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>
```



Create a Java Class for XML Parsing:

XmlParser.java

/\*

\* To change this license header, choose License Headers in Project Properties.

\* To change this template file, choose Tools | Templates

\* and open the template in the editor.

\*/

package xml;

/\*\*

\*

\* @author ISHADI

\*/

```
import org.w3c.dom.*;

import javax.xml.parsers.*;

public class XmlParser {

    public static void main(String[] args) { try {

        DocumentBuilderFactory factory = DocumentBuilderFactory.newInstance();

        DocumentBuilder builder = factory.newDocumentBuilder();

        Document document = builder.parse("books.xml");

        document.getDocumentElement().normalize();

        NodeList nodeList = document.getElementsByTagName("book");

        for (int i = 0; i < nodeList.getLength(); i++) {

            Node node = nodeList.item(i);

            if (node.getNodeType() == Node.ELEMENT_NODE) {

                Element element = (Element) node;

                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();

}

}

}

```

- Output

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)

