

# JAVA DOM4J PARSER - PARSE XML DOCUMENT

[http://www.tutorialspoint.com/java\\_xml/java\\_dom4j\\_parse\\_document.htm](http://www.tutorialspoint.com/java_xml/java_dom4j_parse_document.htm)

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## Steps to Using DOM4J

Following are the steps used while parsing a document using DOM4J Parser.

- Import XML-related packages.
- Create a SAXReader
- Create a Document from a file or stream
- Get the required nodes using XPath Expression by calling document.selectNodes
- Extract the root element
- Iterate over the list of nodes.
- Examine attributes
- Examine sub-elements

### Import XML-related packages

```
import java.io.*;  
import java.util.*;  
import org.dom4j.*;
```

### Create a DocumentBuilder

```
SAXBuilder saxBuilder = new SAXBuilder();
```

### Create a Document from a file or stream

```
File inputFile = new File("input.txt");  
SAXBuilder saxBuilder = new SAXBuilder();  
Document document = saxBuilder.build(inputFile);
```

### Extract the root element

```
Element classElement = document.getRootElement();
```

### Examine attributes

```
//returns specific attribute  
valueOf("@attributeName");
```

### Examine sub-elements

```
//returns first child node  
selectSingleNode("subelementName");
```

## Demo Example

Here is the input xml file we need to parse:

```
<?xml version="1.0"?>  
<ltclass>  
  <ltstudent rollno="393">  
    <ltfirstname>dinkar</firstname>
```

```

        &lt;lastname>kad</lastname>
        &lt;nickname>dinkar</nickname>
        &lt;marks>85</marks>
    </student>
    &lt;student rollno="493">
        &lt;firstname>Vaneet</firstname>
        &lt;lastname>Gupta</lastname>
        &lt;nickname>vinni</nickname>
        &lt;marks>95</marks>
    </student>
    &lt;student rollno="593">
        &lt;firstname>jasvir</firstname>
        &lt;lastname>singn</lastname>
        &lt;nickname>jazz</nickname>
        &lt;marks>90</marks>
    </student>
</class>

```

## Demo Example:

*DOM4JParserDemo.java*

```

package com.tutorialspoint.xml;

import java.io.File;
import java.util.List;

import org.dom4j.Document;
import org.dom4j.DocumentException;
import org.dom4j.Element;
import org.dom4j.Node;
import org.dom4j.io.SAXReader;

public class DOM4JParserDemo {
    public static void main(String[] args) {
        try {
            File inputFile = new File("input.txt");
            SAXReader reader = new SAXReader();
            Document document = reader.read( inputFile );

            System.out.println("Root element : "
                + document.getRootElement().getName());

            Element classElement = document.getRootElement();

            List<Node> nodes = document.selectNodes("/class/student" );
            System.out.println("-----");
            for (Node node : nodes) {
                System.out.println("\nCurrent Element : "
                    + node.getName());
                System.out.println("Student roll no : "
                    + node.valueOf("@rollno" ));
                System.out.println("First Name : " +
                    node.selectSingleNode("firstname").getText());
                System.out.println("Last Name : " +
                    node.selectSingleNode("lastname").getText());
                System.out.println("First Name : " +
                    node.selectSingleNode("nickname").getText());
                System.out.println("Marks : " + node.selectSingleNode("marks").getText());
            }
        } catch (DocumentException e) {
            e.printStackTrace();
        }
    }
}

```

This would produce the following result:

Root element :class

-----

Current Element :student

Student roll no :

First Name : dinkar

Last Name : kad

First Name : dinkar

Marks : 85

Current Element :student

Student roll no :

First Name : Vaneet

Last Name : Gupta

First Name : vinni

Marks : 95

Current Element :student

Student roll no :

First Name : jasvir

Last Name : singn

First Name : jazz

Marks : 90

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