

[Home](#) [All Tutorials](#) [Java Core](#) [JSF](#) [Spring](#) [Hibernate](#) [Struts](#) [Android](#) [Others](#)

How To Read XML File In Java – (DOM Parser)



Posted on December 6, 2008 , Last modified : January 21, 2013

By [mkyong](#)

In this tutorial, we will show you how to read an XML file via **DOM XML parser**. DOM parser parses the entire XML document and loads it into memory; then models it in a "TREE" structure for easy traversal or manipulation.

In short, it turns a XML file into [DOM](#) or Tree structure, and you have to traverse a node by node to get what you want.

What is Node?

In the DOM, everything in an XML document is a node, [read this](#).

Warning

DOM Parser is slow and consumes a lot of memory when it loads an XML document which contains a lot of data. Please consider SAX parser as solution for it, SAX is faster than DOM and use less memory.

1. DOM XML Parser Example

This example shows you how to get the node by "name", and display the value.

/Users/mkyong/staff.xml

```
<?xml version="1.0"?>
<company>
  <staff id="1001">
    <firstname>yong</firstname>
    <lastname>mook kim</lastname>
    <nickname>mkyong</nickname>
    <salary>100000</salary>
  </staff>
  <staff id="2001">
    <firstname>low</firstname>
    <lastname>yin fong</lastname>
    <nickname>fong fong</nickname>
    <salary>200000</salary>
  </staff>
</company>
```

ReadXMLFile.java

```
package com.mkyong.seo;

import javax.xml.parsers.DocumentBuilderFactory;
import javax.xml.parsers.DocumentBuilder;
import org.w3c.dom.Document;
import org.w3c.dom.NodeList;
import org.w3c.dom.Node;
import org.w3c.dom.Element;
import java.io.File;

public class ReadXMLFile {

    public static void main(String argv[]) {

        try {
```

**Mkyong**[Thích](#)

19.955 người thích Mkyong.



Plugin xã hội của Facebook

```

File fXmlFile = new File("/Users/mkyong/staff.xml");
DocumentBuilderFactory dbFactory = DocumentBuilderFactory.newInstance();
DocumentBuilder dBuilder = dbFactory.newDocumentBuilder();
Document doc = dBuilder.parse(fXmlFile);

//optional, but recommended
//read this - http://stackoverflow.com/questions/13786607/normalization-in-dom-parsing-with-java
doc.getDocumentElement().normalize();

System.out.println("Root element :" + doc.getDocumentElement().getNodeName());

NodeList nList = doc.getElementsByTagName("staff");

System.out.println("-----");

for (int temp = 0; temp < nList.getLength(); temp++) {

    Node nNode = nList.item(temp);

    System.out.println("\nCurrent Element : " + nNode.getNodeName());

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

        Element eElement = (Element) nNode;

        System.out.println("Staff id : " + eElement.getAttribute("id"));
        System.out.println("First Name : " + eElement.getElementsByTagName("firstn").item(0).getTextContent());
        System.out.println("Last Name : " + eElement.getElementsByTagName("lastn").item(0).getTextContent());
        System.out.println("Nick Name : " + eElement.getElementsByTagName("nickn").item(0).getTextContent());
        System.out.println("Salary : " + eElement.getElementsByTagName("salary").item(0).getTextContent());

    }

}

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

```

Result

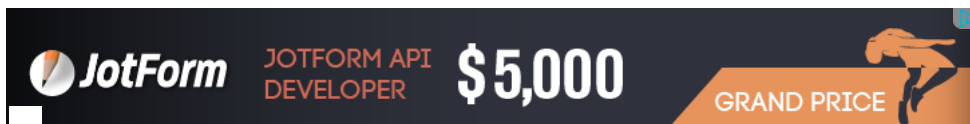
```

Root element :company
-----

Current Element :staff
Staff id : 1001
First Name : yong
Last Name : mook kim
Nick Name : mkyong
Salary : 100000

Current Element :staff
Staff id : 2001
First Name : low
Last Name : yin fong
Nick Name : fong fong
Salary : 200000

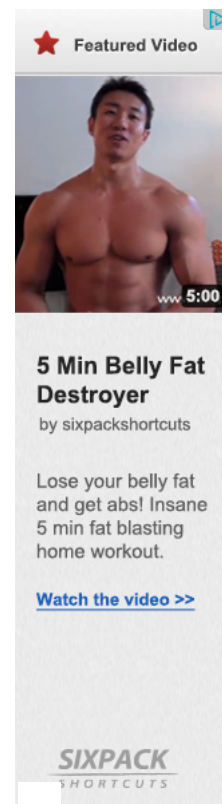
```



2. Looping the Node

This example reads the same "staff.xml", and showing you how to loop the node one by one, and print out the node name and value, and also the attribute if any.

ReadXMLFile2.java



```
package com.mkyong.seo;

import java.io.File;
import javax.xml.parsers.DocumentBuilder;
import javax.xml.parsers.DocumentBuilderFactory;
import org.w3c.dom.Document;
import org.w3c.dom.NamedNodeMap;
import org.w3c.dom.Node;
import org.w3c.dom.NodeList;

public class ReadXMLFile2 {

    public static void main(String[] args) {

        try {

            File file = new File("/Users/mkyong/staff.xml");

            DocumentBuilder dBuilder = DocumentBuilderFactory.newInstance()
                .newDocumentBuilder();

            Document doc = dBuilder.parse(file);

            System.out.println("Root element : " + doc.getDocumentElement().getNodeName());

            if (doc.hasChildNodes()) {

                printNote(doc.getChildNodes());

            }

        } catch (Exception e) {
            System.out.println(e.getMessage());
        }

    }

    private static void printNote(NodeList nodeList) {

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

            Node tempNode = nodeList.item(count);

            // make sure it's element node.
            if (tempNode.getNodeType() == Node.ELEMENT_NODE) {

                // get node name and value
                System.out.println("\nNode Name = " + tempNode.getNodeName() + " [OPEN]");
                System.out.println("Node Value = " + tempNode.getTextContent());

                if (tempNode.hasAttributes()) {

                    // get attributes names and values
                    NamedNodeMap nodeMap = tempNode.getAttributes();

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

                        Node node = nodeMap.item(i);
                        System.out.println("attr name : " + node.getNodeName());
                        System.out.println("attr value : " + node.getNodeValue());

                    }

                }

                if (tempNode.hasChildNodes()) {

                    // loop again if has child nodes
                    printNote(tempNode.getChildNodes());

                }

                System.out.println("Node Name = " + tempNode.getNodeName() + " [CLOSE]");

            }

        }

    }

}
```

```

    }
}
}

```

Result :

```

Root element :company

Node Name =company [OPEN]
Node Value =

    yong
    mook kim
    mkyong
    100000

    low
    yin fong
    fong fong
    200000

Node Name =staff [OPEN]
Node Value =

    yong
    mook kim
    mkyong
    100000

attr name : id
attr value : 1001

Node Name =firstname [OPEN]
Node Value =yong
Node Name =firstname [CLOSE]

Node Name =lastname [OPEN]
Node Value =mook kim
Node Name =lastname [CLOSE]

Node Name =nickname [OPEN]
Node Value =mkyong
Node Name =nickname [CLOSE]

Node Name =salary [OPEN]
Node Value =100000
Node Name =salary [CLOSE]
Node Name =staff [CLOSE]

Node Name =staff [OPEN]
Node Value =

    low
    yin fong
    fong fong
    200000

attr name : id
attr value : 2001

Node Name =firstname [OPEN]
Node Value =low
Node Name =firstname [CLOSE]

Node Name =lastname [OPEN]
Node Value =yin fong
Node Name =lastname [CLOSE]

Node Name =nickname [OPEN]
Node Value =fong fong
Node Name =nickname [CLOSE]

```

```

47  Name =salary  [OPEN]
    Value =200000
    Name =salary  [CLOSE]
Node Name =staff  [CLOSE]
142 Name =company [CLOSE]

```

Thích

13

may interest at this [How to get Alexa Ranking In Java](#). It shows you how to use DOM to parse the Alexa XML result.

Tweet
result.

References

1. [When to Use DOM](#)
2. [Normalization in DOM parsing with java – how does it work?](#)
3. [Learn XML DOM](#)
4. [What is Node?](#)
5. [What is Element?](#)

Tags : [dom](#) [java](#) [xml](#)

KANGAROO KG106 KNT – MÁY LỌC NƯỚC



Other Products



SPECIAL PRICE
VND 4.949.000

BUY NOW



mkyong

Founder of Mkyong.com, love Java and open source stuffs. Follow him on [Twitter](#), or befriend him on [Facebook](#) or [Google Plus](#).

Here are some of my favorite books



[Head First Java](#)



[Design Pattern](#)



[Effective Java](#)



[Spring Recipes](#)



[JavaScript Ninja](#)

Related Posts

- ▶ [How to modify XML file in Java – \(DOM Parser\)](#)
- ▶ [How to count XML Elements in Java – \(DOM Parser\)](#)
- ▶ [Java XML Tutorial](#)
- ▶ [How to create XML file in Java – \(DOM Parser\)](#)
- ▶ [How to count the depth of xml document \(DOM example\)](#)

Popular Posts

- ▶ [Top 8 Java People You Should Know](#)
- ▶ [Top 20 Java Websites](#)
- ▶ [Top 5 Free Java eBooks](#)
- ▶ [Top 10 Java Regular Expression Examples](#)
- ▶ [Top 5 Open Source Q&A Systems](#)

You might also like following tutorials :



[← Older Comments](#)**Kugelmaus**

August 9, 2013 at 11:38 pm

Thanks for this very easy introduction in javaXml. Better than some books about it

[Reply](#)**saleh**

August 6, 2013 at 1:35 pm

For what we need to use the second way "Looping the Node"? I a beginner in this topic. The first way "DOM XML Parser Example" presents beautiful output.

[Reply](#)**nirmal**

July 26, 2013 at 7:44 pm

Some other examples

<http://www.pretechsol.com/2012/09/java-xml-dom-parser-reading-xml-example.html#.UfJgyRkzVZh>

[Reply](#)**Volker**

July 17, 2013 at 5:01 pm

THX very much, great tutorial!

[Reply](#)**Pedro Costa**

July 4, 2013 at 4:23 am

The tag:
Motherboard

[Reply](#)**Pedro Costa**

July 4, 2013 at 4:22 am

Hello,

I need some help about this great tutorial.
How can I get the value from this tag:
Motherboard

[Reply](#)**Medeea**

June 23, 2013 at 4:58 am

Thanks! Exactly what I needed!

Reply



falix

June 19, 2013 at 11:43 am

Thanks...Thanks very much for this!!

Reply

[← Older Comments](#)

What is your opinion?

Your email address will not be published. Required fields are marked *

Name *

Email *

Website

Comment

Note

To post source code in comment, uses `<pre lang="java"> source code </pre>`

Post Comment

☐ Notify me of followup comments via e-mail

Download Free Software

mobogenie.com/download-software/
Download Free PC Manager
Software. Easy File Transfer.
Download Now !

JavaScript XML API module

jsliquid.com/xml_api.html
Portable XML parser with XPath-like
query selector for Web and Mobile

Find A Foreign Husband

www.AsianDating.com
Men From USA, Canada, Australia
Seek Ladies For Love And Dating.

XML to PDF Engine

www.ecrion.com
On the fly XML to PDF conversion,
supports Visual Design. Try now!

AdChoices

All Available Tutorials

Java Core Technologies :
Java I/O, Java RegEx, Java XML, Java JSON, JDBC,
Java Misc
J2EE Frameworks :
Hibernate, JSF 2.0, Spring Core, Spring MVC,
Spring Security, Spring MongoDB, Spring
BatchApache Wicket, Struts 1.x, Struts 2.x
Web Service :
JAX-WS (SOAP), JAX-RS (REST)
Build Tools :
Maven, Archiva
Unit Test Frameworks :
JUnit, TestNG

Favorites Links

Android Developer
Google App Engine using Java
DZone - Fresh Links
Official Java EE 5 Tutorial
Official Java EE 6 Tutorial
Spring 2.5.x documentation
Spring 3.2.x documentation
Hibernate core documentation
Java SE 6.0 API documentation
Java EE 6.0 API documentation
Java Secure Socket Extension
(JSSE) Reference Guide
JSP home page

Friends & Links

Java Code Geeks
PHP Tutorials
TenthOfMarch
Web Security Blog
Web Development

About Us

Mkyong.com is a weblog dedicated to Java/J2EE
developers and Web Developers. We constantly
publish useful tricks, tutorials on J2EE or web
development.

All examples are simple, easy to read, and full
source code available, and of course well tested in
our development environment.

We're Social

Twitter - [Follow Me](#)
Facebook - [Like Me](#)
Google Plus - [Add Me](#)
RSS - [Subscribe Me](#)

Others :

[Android](#), [Google App Engine](#), [jQuery](#), [Java](#)
[MongoDB](#), [Quartz Scheduler](#)

[JSF home page](#)
[Eclipse IDE for Java developer](#)
[Struts 1.3 documentation](#)
[Struts 2.2 documentation](#)
[Maven home page](#)
[Maven central repository Search](#)
[Java.Net Maven repository](#)
[Ant home page](#)
[JAX-WS Official Website](#)
[JAX-RS Official Website \(Jersey\)](#)
[MongoDB Official Website](#)

Copyright © 2008-2013 Mkyong.com, all rights reserved. Web Hosting Powered by [Liquid Web](#)