

JAVA SAX PARSER - PARSE XML DOCUMENT

http://www.tutorialspoint.com/java_xml/java_sax_parse_document.htm

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Demo Example

Here is the input xml file we need to parse:

```
<?xml version="1.0"?>
<class>
  <student rollno="393">
    <firstname>dinkar</firstname>
    <lastname>kad</lastname>
    <nickname>dinkar</nickname>
    <marks>85</marks>
  </student>
  <student rollno="493">
    <firstname>Vaneet</firstname>
    <lastname>Gupta</lastname>
    <nickname>vinni</nickname>
    <marks>95</marks>
  </student>
  <student rollno="593">
    <firstname>jasvir</firstname>
    <lastname>singn</lastname>
    <nickname>jazz</nickname>
    <marks>90</marks>
  </student>
</class>
```

UserHandler.java

```
package com.tutorialspoint.xml;

import org.xml.sax.Attributes;
import org.xml.sax.SAXException;
import org.xml.sax.helpers.DefaultHandler;

public class UserHandler extends DefaultHandler {

    boolean bFirstName = false;
    boolean bLastName = false;
    boolean bNickName = false;
    boolean bMarks = false;

    @Override
    public void startElement(String uri,
        String localName, String qName, Attributes attributes)
        throws SAXException {
        if (qName.equalsIgnoreCase("student")) {
            String rollNo = attributes.getValue("rollno");
            System.out.println("Roll No : " + rollNo);
        } else if (qName.equalsIgnoreCase("firstname")) {
            bFirstName = true;
        } else if (qName.equalsIgnoreCase("lastname")) {
            bLastName = true;
        } else if (qName.equalsIgnoreCase("nickname")) {
            bNickName = true;
        }
        else if (qName.equalsIgnoreCase("marks")) {
            bMarks = true;
        }
    }

    @Override
    public void endElement(String uri,
```

```

String localName, String qName) throws SAXException {
    if (qName.equalsIgnoreCase("student")) {
        System.out.println("End Element :" + qName);
    }
}

@Override
public void characters(char ch[],
    int start, int length) throws SAXException {
    if (bFirstName) {
        System.out.println("First Name: "
            + new String(ch, start, length));
        bFirstName = false;
    } else if (bLastName) {
        System.out.println("Last Name: "
            + new String(ch, start, length));
        bLastName = false;
    } else if (bNickName) {
        System.out.println("Nick Name: "
            + new String(ch, start, length));
        bNickName = false;
    } else if (bMarks) {
        System.out.println("Marks: "
            + new String(ch, start, length));
        bMarks = false;
    }
}
}
}

```

SAXParserDemo.java

```

package com.tutorialspoint.xml;

import java.io.File;
import javax.xml.parsers.SAXParser;
import javax.xml.parsers.SAXParserFactory;

import org.xml.sax.Attributes;
import org.xml.sax.SAXException;
import org.xml.sax.helpers.DefaultHandler;

public class SAXParserDemo {
    public static void main(String[] args){
        try {
            File inputFile = new File("input.txt");
            SAXParserFactory factory = SAXParserFactory.newInstance();
            SAXParser saxParser = factory.newSAXParser();
            UserHandler userhandler = new UserHandler();
            saxParser.parse(inputFile, userhandler);
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}

class UserHandler extends DefaultHandler {

    boolean bFirstName = false;
    boolean bLastName = false;
    boolean bNickName = false;
    boolean bMarks = false;

    @Override
    public void startElement(String uri,
        String localName, String qName, Attributes attributes)
        throws SAXException {
        if (qName.equalsIgnoreCase("student")) {
            String rollNo = attributes.getValue("rollno");

```

```

        System.out.println("Roll No : " + rollNo);
    } else if (qName.equalsIgnoreCase("firstname")) {
        bFirstName = true;
    } else if (qName.equalsIgnoreCase("lastname")) {
        bLastName = true;
    } else if (qName.equalsIgnoreCase("nickname")) {
        bNickName = true;
    }
    else if (qName.equalsIgnoreCase("marks")) {
        bMarks = true;
    }
}

@Override
public void endElement(String uri,
    String localName, String qName) throws SAXException {
    if (qName.equalsIgnoreCase("student")) {
        System.out.println("End Element :" + qName);
    }
}

@Override
public void characters(char ch[],
    int start, int length) throws SAXException {
    if (bFirstName) {
        System.out.println("First Name: "
            + new String(ch, start, length));
        bFirstName = false;
    } else if (bLastName) {
        System.out.println("Last Name: "
            + new String(ch, start, length));
        bLastName = false;
    } else if (bNickName) {
        System.out.println("Nick Name: "
            + new String(ch, start, length));
        bNickName = false;
    } else if (bMarks) {
        System.out.println("Marks: "
            + new String(ch, start, length));
        bMarks = false;
    }
}
}
}

```

This would produce the following result:

```

Roll No : 393
First Name: dinkar
Last Name: kad
Nick Name: dinkar
Marks: 85
End Element :student
Roll No : 493
First Name: Vaneet
Last Name: Gupta
Nick Name: vinni
Marks: 95
End Element :student
Roll No : 593
First Name: jasvir
Last Name: singh
Nick Name: jazz
Marks: 90
End Element :student

```