21 计算机专业技术丛书（3）

JAVA PROGRAMMING GUIDE

克理省·夏尔玛　雪莉·薛金斯　著

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内 容 提 要

这是一本关于如何用 Java 进行开发和编程的教科书。全书由五个部分共十章构成。第一部分是 Java 组件包 XDK，由四章组成，内容包括用 Java 实现 XML，XML 类派生器，查询语言 XSQL Servlet 和可视化小程序；第二部分是 PL/SQL 组件包 XDK，由一章构成，内容包括用 PL/SQL 实现 XML；第三部分是 C 语言的组件包 XDK，由一章构成，内容是用 C 语言实现 XML；第四部分是 C++的组件包 XDK，由二章构成，内容包括用 C++实现 XML，Oracle XML 类派生器；第五部分是 XML-SQL 实用程序（XSU）软件包，由二章构成，内容包括 Oracle XSU 应用程序接口 Java API 和 XUS 的应用程序接口 PL/SQL API。

本书内容新、丰富，注重基础知识与实际应用相结合，面向开发和编程人员，对于从事用 Java 进行编程的工程师和高校计算机应用专业的师生是一本不可多得的计算机技术教材。

本版光盘内容包括本版电子书。

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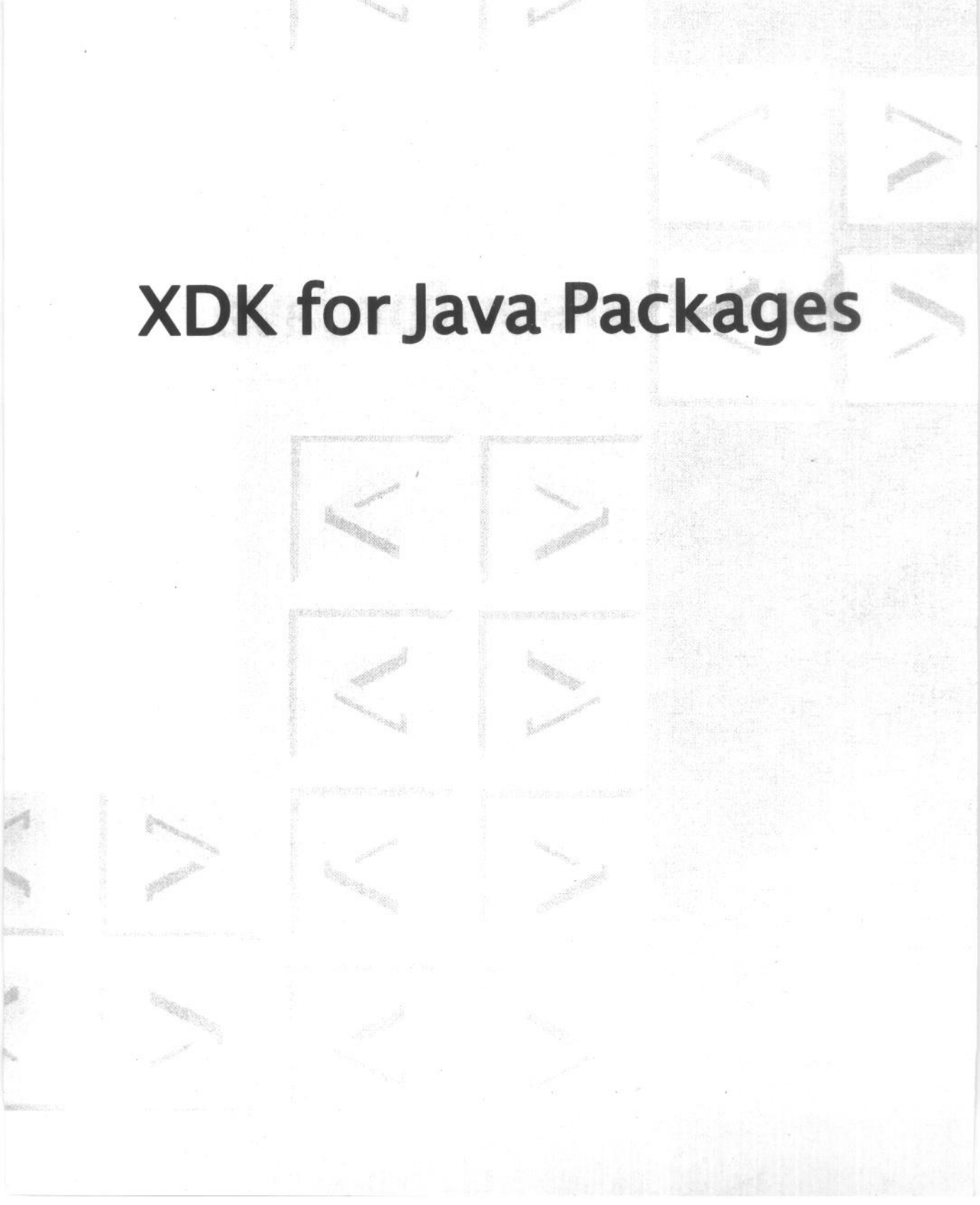
XDK for Java Packages



XML Parser for Java

Chapter 1

1.1 | Package Oracle.xml.parser.v2 Description

Class Summary	
Interfaces	
NSName	This interface provides Namespace support for Element and Attr names
NSResolver	This interface provides support for resolving Namespaces
XMLDocumentHandler	This interface extends the org.xml.sax.DocumentHandler interface.
XMLToken	Basic interface for XMLToken
Classes	
AttrDecl	This class hold information about each attribute declared in an attribute list inthe Document Type Definition.
Package Oracle.xml.parser.v2	This class implements the default behaviour for the XMLDocumentHandler interface.
DOMParser	This class implements an eXtensible Markup Language (XML) 1.0 parser according to the World Wide Web Consortium (W3C) recommendation.
DTD	Implements the DOM DocumentType interface and holds the Document Type Definition information for an XML document.
ElementDecl	This class represents an element declaration in a DTD.
NodeFactory	This class specifies methods to create various nodes of the DOM tree built during parsing.
oraxsl	The oraxsl class provides a command-line interface to applying stylesheets on multiple XML documents.

Continued

Class Summary	
SAXAttrList	This class implements the SAX AttributeList interface and also provides Namespace support.
	This class implements an eXtensible Markup Language (XML) 1.0 SAX parser according to the World Wide Web Consortium (W3C) recommendation.
XMLAttr	This class implements the DOM Attr interface and holds information on each attribute of an element.
XMLCDATA	This class implements the DOM CDATASection interface.
XMLComment	This class implements the DOM Comment interface..Description
XMLDocument	This class implements the DOM Document interface, represents an entire XML document and serves the root of the Document Object Model tree.
XMLDocumentFragment	This class implements the DOM DocumentFragment interface.
XMLElement	This class implements the DOM Element interface.
XMLEntityReference	
XMLNode	Implements the DOM Node interface and serves as the primary datatype for the entire Document Object Model.
XMLParser	This class serves as a base class for the DOMParser and classes.
XMLPI	This class implements the DOM Processing Instruction interface.
XMLText	This class implements the DOM Text interface.
XMLTokenizer	This class implements an eXtensible Markup Language (XML) 1.0 parser according to the World Wide Web Consortium (W3C) recommendation.
XSLProcessor	This class provides methods to transform an input XML document using a previously constructed XSLStylesheet.
XSLStylesheet	The class holds XSL stylesheet information such as templates, keys, variables, and attribute sets.
Exceptions	
XMLParseException	Indicates that a parsing exception occurred while processing an XML document
XSLException	Indicates that an exception occurred during XSL tranformation

1.2 | oracle.xml.parser.v2 AttrDecl

Syntax

public class AttrDecl extends XMLNode implements
oracle.xml.parser.v2.XMLConstants, java.io.Serializable

```
java.lang.Object
  |
  +--XMLNode
      |
      +--oracle.xml.parser.v2.AttrDecl
```

All Implemented Interfaces

java.lang.Cloneable, org.w3c.dom.Node, java.io.Serializable,
oracle.xml.parser.v2.XMLConstants

Description

This class holds information about each attribute declared in an attribute list in the Document Type Definition.

Member Summary	
Fields	
CDATA	AttType - StringType - CDATA
DEFAULT	Attribute presence - Default
ENTITIES	AttType - TokenizedType - Entities
ENTITY	AttType - TokenizedType - Entity
ENUMERATION	AttType - EnumeratedType - Enumeration
FIXED	Attribute presence - Fixed
ID	AttType - TokenizedType - ID
IDREF	AttType - TokenizedType - ID reference
IDREFS	AttType - TokenizedType - ID references
IMPLIED	Attribute presence - Implied.AttrDecl
NMTOKEN	AttType - TokenizedType - Name token
NMTOKENS	AttType - TokenizedType - Name tokens
NOTATION	AttType - EnumeratedType - Notation
REQUIRED	Attribute presence - Required
Methods	
getAttrPresence()	Gets attribute presence
getAttrType()	Gets attribute type
getDefaultValue()	Gets attribute default value
getEnumerationValues()	Gets attribute values

Inherited Member Summary

Fields inherited from class XMLNode

AMP, ASTERISK, ATTRDECL, cANY, cATTLIST, cCDATA, cCDATAEND, cCDATASTART, cCOMMENTEND, cCOMMENTSTART,cDECCREF, cDECLSTART, cDOCTYPE, cELEMENT, EMPTY, cEMPTYTAGEND, cENCODING, cENDTAGSTART, cENTITIES, cENTITY, cFIXED, cHEXCREF, cID, cIDREF, cIDREFS, cIGNORE, cIMPLIED, cINCLUDE, cNDATA, cNMTOKEN, cNMTOKENS, cNOTATION, COLON, COMMA, cPIEND, cPISTART, cPUBLIC, cREQUIRED, cSTANDALONE, cSYSTEM, cVERSION, cXML, DOUBLEQUOTE, ELEMENTDECL, EOF, EQ, ERROR, FATAL_ERROR, FDIGIT, FLETTER, FMISCNAME, FSTARTNAME, FWHITESPACE, HASH, ICOUNT, ISTART, LEFTSQB, LPAREN, nameCDATA, nameCOMMENT, nameDOCUMENT, nameDOCUMENTFRAGMENT, nameENCODING, nameNameSpace, nameSpaceSeparator, nameSTANDALONE, nameTEXT, nameVERSION, nameXML, nameXMLLang, nameXMLNamespace, nameXMLNSNamespace, nameXMLSpace, nameXSLPI, NONVALIDATING, OR, PERCENT, PLUS, QMARK, QUOTE, RIGHTSQB, RPAREN, SEMICOLON, SLASH, TAGEND, TAGSTART, VALIDATING, WARNING

Fields inherited from interface oracle.xml.parser.v2.XMLConstants

AMP, ASTERISK, cANY, cATTLIST, cCDATA, cCDATAEND, cCDATASTART, cCOMMENTEND, cCOMMENTSTART, cDECCREF, cDECLSTART, cDOCTYPE, cELEMENT, cEMPTY, cEMPTYTAGEND, cENCODING, cENDTAGSTART, cENTITIES, cENTITY, cFIXED, cHEXCREF, cID, cIDREF, cIDREFS, cIGNORE, cIMPLIED, cINCLUDE, cNDATA, cNMTOKEN, cNMTOKENS, cNOTATION, COLON, COMMA, cPIEND, cPISTART, cPUBLIC, cREQUIRED, cSTANDALONE, cSYSTEM, cVERSION, cXML, DOUBLEQUOTE, EOF, EQ, ERROR, FATAL_ERROR, FDIGIT, FLETTER, FMISCNAME, FSTARTNAME, FWHITESPACE, HASH, ICOUNT, ISTART, LEFTSQB, LPAREN, nameCDATA, nameCOMMENT, nameDOCUMENT, nameDOCUMENTFRAGMENT, nameENCODING, nameNameSpace,

nameSpaceSeparator, nameSTANDALONE, nameTEXT, nameVERSION, nameXML, nameXMLLang, nameXMLNamespace,nameXMLNSNamespace, nameXMLSpace, nameXSLPI, NONVALIDATING, OR, PERCENT, PLUS, QMARK, QUOTE, RIGHTSQB,RPAREN, SEMICOLON, SLASH, TAGEND, TAGSTART, VALIDATING, WARNING

Fields inherited from interface Node

NODE, ENTITY_NODE, ENTITY_REFERENCE_NODE, NOTATION_NODE, PROCESSING_INSTRUCTION_NODE, TEXT_ NODE Methods inherited from class

Continued

Inherited Member Summary

XMLNode appendChild(Node), cloneNode(boolean), getAttributes(), getChildNodes(), getFirstChild(), getLastChild(), getNextSibling(), getNodeName(), getNodeType(), getNodeValue(), getOwnerDocument(), getParentNode(), getPreviousSibling(), hasChildNodes(),insertBefore(Node,Node),print(OutputStream),print(OutputStream,String) ,print(PrintWriter),removeChild (Node), replaceChild(Node, Node), selectNodes(String, NSResolver), selectSingleNode (String, NSResolver), setNodeValue(String), transformNode(XSLStylesheet), valueOf(String, NSResolver) Methods inherited from class java.lang.Object clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait Methods inherited from interface Node appendChild(Node), cloneNode(boolean), getAttributes(), getChildNodes(), getFirstChild(), getLastChild(),getNextSibling(),getNodeName(),getNodeType(),getNodeValue(),getOwner Document(), getParentNode(), getPreviousSibling(), hasChildNodes(), insertBefore(Node, Node), removeChild (Node), replaceChild(Node, Node), setNodeValue(String)

Fields

CDATA

public static final int CDATA
AttType - StringType - CDATA

DEFAULT

public static final int DEFAULT
Attribute presence - Default

ENTITIES

public static final int ENTITIES
AttType - TokenizedType - Entities

ENTITY

public static final int ENTITY
AttType - TokenizedType – Entity

ENUMERATION

public static final int ENUMERATION
AttType - EnumeratedType - Enumeration

FIXED

public static final int FIXED
Attribute presence - Fixed

ID

public static final int ID
AttType - TokenizedType - ID

IDREF

public static final int IDREF
AttType - TokenizedType - ID reference

IDREFS

public static final int IDREFS
AttType - TokenizedType - ID references

IMPLIED

public static final int IMPLIED
Attribute presence - Implied

NMTOKEN

public static final int NMTOKEN
AttType - TokenizedType - Name token

NMTOKENS

public static final int NMTOKENS
AttType - TokenizedType - Name tokens

NOTATION

public static final int NOTATION
AttType - EnumeratedType - Notation.AttrDecl

REQUIRED

public static final int REQUIRED
Attribute presence – Required

Methods

getAttrPresence()

public int getAttrPresence()
Gets attribute presence

Returns

The presence of the attribute

getAttrType()

public int getAttrType()
Gets attribute type

Returns

The type of the attribute

getDefaultValue()

public java.lang.String getDefaultValue()
Gets attribute default value

Returns

The default value of the attribute

getEnumerationValues()

public java.util.Vector getEnumerationValues()
Gets attribute values

Returns

The values of the attribute as an `Enumeration`.DefaultXMLDocumentHandler

1.3 | oracle.xml.parser.v2 DefaultXMLDocumentHandler

Syntax

public class DefaultXMLDocumentHandler extends org.xml.sax.HandlerBase implements XMLDocumentHandler

```
java.lang.Object
  |
  +--org.xml.sax.HandlerBase
       |
       +--oracle.xml.parser.v2.DefaultXMLDocumentHandler
```

Direct Known Subclasses:

XMLTokenizer

All Implemented Interfaces

org.xml.sax.DocumentHandler, org.xml.sax.DTDHandler, org.xml.sax.EntityResolver, org.xml.sax.ErrorHandler, `XMLDocumentHandler`

Description

This class implements the default behaviour for the `XMLDocumentHandler` interface. Application writers can extend this class when they need to implement only part of the interface

Member Summary

Constructors	
DefaultXMLDocumentHandler()	Constructs a default document handler
Methods	
cDATASection(char[], int, int)	Receive notification of a CDATA Section.
comment(String)	Receive notification of a comment.
endDoctype()	Receive notification of end of the DTD.
endElement(NSName)	Receive notification of the end of an element.
setDoctype(DTD)	Receive notification of DTD.
setTextDecl(String, String)	Receive notification of a Text XML Declaration.
setXMLDecl(String, String, String)	Receive notification of an XML Declaration.
startElement(NSName, SAXAttrList)	Receive notification of the beginning of an element.

Inherited Member Summary

Methods inherited from class HandlerBase

characters(char[], int, int), endDocument(), endElement(String), error(SAXParseException), fatalError(SAXParseException), ignorableWhitespace(char[], int, int), notationDecl(String, String, String),processingInstruction(String, String), resolveEntity(String, String), setDocumentLocator(Locator),startDocument(), startElement(String, AttributeList), unparsedEntityDecl(String, String, String, String),

warning(SAXParseException)

Methods inherited from class java.lang.Object

Continued

Inherited Member Summary

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait
Methods inherited from interface DocumentHandler
characters(char[], int, int), endDocument(), endElement(String),
ignorableWhitespace(char[], int, int),processingInstruction(String, String),
setDocumentLocator(Locator), startDocument(), startElement(String, AttributeList)
Methods inherited from interface EntityResolver
resolveEntity(String, String)
Methods inherited from interface DTDHandler
notationDecl(String, String, String), unparsedEntityDecl(String, String, String, String)
Methods inherited from interface ErrorHandler
error(SAXParseException), fatalError(SAXParseException), warning(SAXParseException)

Constructor

DefaultXMLDocumentHandler()

public DefaultXMLDocumentHandler()
Constructs a default document handler

Methods

cDATASection(char[], int, int)

public void cDATASection(char[] ch, int start, int length)
Receive notification of a CDATA Section.
The Parser will invoke this method once for each CDATA Section found.

Specified By

cDATASection(char[ ], int, int) in interface XMLDocumentHandler

Parameters

`ch` - The CDATA section characters.
`start` - The start position in the character array.
`length` - The number of characters to use from the character array.

Throws

org.xml.sax.SAXException - Any SAX exception, possibly wrapping another exception.

comment(String)

public void comment(java.lang.String data)
Receive notification of a comment.
The Parser will invoke this method once for each comment found: note that comment may occur before or after the main document element.

Specified By

comment(String) in interface XMLDocumentHandler

Parameters

`data` - The comment data, or null if none was supplied.

Throws

org.xml.sax.SAXException - Any SAX exception, possibly wrapping another exception..DefaultXMLDocumentHandler

endDoctype()

public void endDoctype()
Receive notification of end of the DTD.

Specified By

endDoctype() in interface XMLDocumentHandler

Throws

org.xml.sax.SAXException - Any SAX exception, possibly wrapping another exception.

endElement(NSName)

public void endElement(NSName elem)
Receive notification of the end of an element. The SAX parser will invoke this method at the end of every element in the XML document; there will be a corresponding startElement() ev ent for every endElement() event (even when the element is empty).
By implementing this method instead of
org.xml.sax.DocumentHandler.endElement, SAX Applications can get the Namespace support provided by NSName.

Specified By

endElement(NSName) in interface XMLDocumentHandler

Parameters

`elem` - NSName object

Throws

org.xml.sax.SAXException - A `SAXException` could be thrown.

See Also

org.xml.sax.DocumentHandler.endElement(String)

setDoctype(DTD)

public void setDoctype(DTD dtd)
Receive notification of DTD. Sets the DTD.DefaultXMLDocumentHandler

Specified By

setDoctype(DTD) in interface XMLDocumentHandler

Throws

org.xml.sax.SAXException - Any SAX exception, possibly wrapping another exception.

setTextDecl(String, String)

public void setTextDecl(java.lang.String version, java.lang.String encoding) Receive notification of a Text XML Declaration.

The Parser will invoke this method once for each text XML Decl

Specified By

setTextDecl(String, String) in interface XMLDocumentHandler

Parameters

`version` - The version number (or null, if not specified)
`encoding` - The encoding name

Throws

org.xml.sax.SAXException - Any SAX exception, possibly wrapping another exception.

setXMLDecl(String, String, String)

public void setXMLDecl(java.lang.String version, java.lang.String standalone, java.lang.String encoding)

Receive notification of an XML Declaration.

The Parser will invoke this method once for XML Decl

Specified By

setXMLDecl(String, String, String) in interface XMLDocumentHandler

Parameters

`version` - The version number

`standalone` - The standalone value (or null, if not specifed).DefaultXMLDocumentHandler

`encoding` - The encoding name (or null, if not specifed)

Throws

org.xml.sax.SAXException - Any SAX exception, possibly wrapping another exception.

startElement(NSName, SAXAttrList)

public void startElement(NSName elem, SAXAttrList attrlist)Receive notification of the beginning of an element. The Parser will invoke this method at the beginning of every element in the XML document; there will be a corresponding endElement() event for every startElement() event (even when the element is empty). All of the element's content will be reported, inorder, before the corresponding endElement() event.

By implementing this method instead of

org.xml.sax.DocumentHandler.startElement, SAX Applications can get the Namespace support provided by NSName and SAXAttrList.

Specified By

startElement(NSName, SAXAttrList) in interface XMLDocumentHandler

Parameters

`elem` - NSName object

`attrlist` - SAXAttrList for the element

Throws

org.xml.sax.SAXException - A `SAXException` could be thrown.