Berkeley DB XML Reference Card

BDB XML version 2.2.13.

DbEnv

Constructor flags:

DB_CREATE|DB_INIT_LOCK|DB_INIT_LOG|DB_INIT_MPOOL|DB_INIT_TXN|DB_RECOVER

Methods:

open($dir [,flags] [,mode])
close($flags)

DbXml

Class methods:

setLogCategory(category, bool)

categories: CATEGORY_MANAGER, CATEGORY_CONTAINER, CATEGORY_INDEXER, CATEGORY_QUERY, CATEGORY_OPTIMIZER, CATEGORY_DICTIONARY, CATEGORY_NODESTORE, CATEGORY_ALL

setLogLevel(level, bool)

levels: LEVEL_DEBUG, LEVEL_INFO, LEVEL_WARNING, LEVEL_ERROR, LEVEL_ALL

dbxml_version(major, minor, patch)

XmlManager

Constructor args:

[dbenv] [,flags]

Constructor flags:

DBXML_ALLOW_EXTERNAL_ACCESS, DBXML_ALLOW_AUTO_OPEN, DBXML_ADOPT_DBENV

Methods:

createContainer([txn,] name, [,flags] [,type] [,mode])

flags: DB_CREATE, DB_EXCL, DB_RDONLY, DB_DIRTY_READ, DB_NOMMAP, DB_THREAD, DB_XA_CREATE, DB_TXN_NOT_DURABLE, DBXML_CHKSUM, DBXML_ENCRYPT, DBXML_INDEX_NODES, DBXML_TRANSACTIONAL, DBXML_ALLOW_VALIDATION
types: XmlContainer::NodeContainer, XmlContainer::WholedocContainer

createDocument()
createIndexLookup(container, uri, name, index, value, op)

ops: XmlIndexLookup::NONE, ::EQ, ::LT, ::LTE, ::GT, ::GTE

createLocalFileInputStream(filename)
createMemBufInputStream(bytes, count, buffer)
createModify()
createQueryContext(rt, et)

et: XmlQueryContext::LiveValues, XmlQueryContext::DeadValues
rt: XmlQueryContext::Eager, XmlQueryContext::Lazy

createResults()
createStdInInputStream()
createTransaction([txn,] flags)

flags: DB_DEGREE_2, DB_DIRTY_READ, DB_TXN_NOSYNC, DB_TXN_NOWAIT, DB_TXN_SYNC

createURLInputStream(baseid, systemid [,publicid])
createUpdateContext()
dumpContainer(name, outfile)
existsContainer(name)
getDbEnv()
getHome()
loadContainer(name, inputstream, lineno, ucontext)
openContainer([txn,] name [,flags] [,type] [,mode])
prepare([txn,] query, qcontext)
query(txn,] query, qcontext, flags)

flags: DBXML_LAZY_DOCS, DB_DEGREE_2, DB_DIRTY_READ, DB_RMW

reindexContainer([txn,] name, ucontext, flags)

Methods (cont. for XmlManager):

removeContainer([txn,] name)
renameContainer([txn,] oldname, newname)
setDefaultContainerFlags(flags)
setDefaultContainerType(type)
setDefaultPageSize(pagesize)
upgradeContainer(name, ucontext)
verifyContainer(name, outfile, flags)

flags: DB_SALVAGE, DB_SALVAGE|DB_AGGRESSIVE

XmlContainer

Methods:

addAlias(alias)
addIndex([txn,] uri, name, index, ucontext)
addDefaultIndex([txn,] index, ucontext)
deleteDocument([txn,] name (or document), ucontext)
deleteIndex([txn,] uri, name, index, ucontext)
deleteDefaultIndex([txn,] index, ucontext)
getAllDocuments([txn,] flags)

flags: DBXML_LAZY_DOCS, DB_RMW, DBXML_REVERSE_ORDER, DB_DEGREE_2, DB_DIRTY_READ

getContainerType()
getDocument([txn,] name, flags)

flags: DBXML_LAZY_DOCS, DB_RMW, DB_DEGREE_2, DB_DIRTY_READ

getIndexNodes()
getIndexSpecification([txn,] flags)
getManager()
getName()
getNumDocuments([txn])
. getPageSize()
lookupStatistics([txn,] uri, name, parent_uri, parent_name, index [,val])
putDocument([txn,] name, stream (or content), ucontext [,flags])
putDocument([txn,] name, document, ucontext [,flags])

flags: DBXML_GEN_NAME

removeAlias(alias)
replaceIndex([txn,] uri, name, index, ucontext)
replaceDefaultIndex([txn,] index, ucontext)
setIndexSpecification([txn,] indexspec, ucontext)
sync()
updateDocument([txn,] document, ucontext)

XmlDocument

Methods:

fetchAllData()
getContent()
getContentAsDOM()
getContentAsXmlInputStream()
getMetaData(uri, name, value)
getMetaDataIterator()
getName()
removeMetaData(uri, name)
setContent(content (or xmldata or stream))
setContentAsDOM(xercesdom)
setContentAsXmlInputStream(stream)
setMetaData(uri, name, string (or xmlvalue))
setName(name)

Index string format:

unique-{path type}-{node type}-{key type}-{syntax}

path types: node, edge
node types: element, attribute, metadata
key types: presence, equality, substring
syntaxes: none, anyURI, base64Binary, boolean, date, dateTime, dayTimeDuration, decimal, double, duration, float, gDay, gMonth, gMonthDay, gYear, gYearMonth, hexBinary, NOTATION, QName, string, time,

XmlIndexSpecification

Methods:

addIndex(uri, name, index)
addDefaultIndex(index)
deleteIndex(uri, name, index)
deleteDefaultIndex(index)
find(uri, name, index*)
getDefaultIndex()
next()
replaceIndex(uri, name, index)
replaceDefaultIndex(index)
reset()

XmlQueryContext

Methods:

clearNamespaces()
removeNamespace(prefix)
setDefaultCollection(uri)
setNamespace(prefix, uri)
setBaseURI(uri)
setEvaluationType(type)

types: XmlQueryContext::Eager, XmlQueryContext::Lazy

setReturnType(type)

types: XmlQueryContext::LiveValues, XmlQueryContext::DeadValues

setVariableValue(name, value)

XmlQueryExpression

Methods:

execute([txn,] [contextitem,] qcontext, flags)

flags: DBXML_LAZY_DOCS, DB_DIRTY_READ, DB_DEGREE_2. DB_RMW

getQuery()
getQueryPlan()

XmlResults

Methods:

add(xmlvalue)
hasNext()
hasPrevious()
next(xmlvalue (or document)*)
peek(xmlvalue (or document)*)
previous(xmlvalue (or document)*)
reset()
size()

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XmlTransaction

Methods:

- abort()
- commit([flags])
  - flags: DB_TXN_NOSYNC, DB_TXN_SYNC
- createChild()
- getDbTxn()

XmlUpdateContext

Methods:

- setApplyChangesToContainers(bool)
- getApplyChangesToContainers()

XmlModify

Methods:

- addAppendStep(expr, type, name, content [,location])
- addInsertAfterStep(expr, type, name, content)
- addInsertBeforeStep(expr, type, name, content)
  - types: XmlModify::Element, ::Attribute, ::Text, ::ProcessingInstruction, ::Comment
- addRemoveStep(expr)
- addRenameStep(expr, newname)
- addUpdateStep(expr, content)
- execute([txn,] tomodify, content, ucontext)

XmlStatistics

Methods:

- getNumberOfIndexedKeys()
- getNumberOfUniqueKeys()

XmlMetaDataIterator

Methods:

- next(uri, name, value)
- reset()

XmlValue

Constructor args:

- [value (or document)]
- [type,] [value (or document)]
  - types: XmlValue::NONE, XmlValue::NODE, XmlValue::ANY_SIMPLE_TYPE, XmlValue::ANY_URI, XmlValue::BASE_64_BINARY, XmlValue::BINARY, XmlValue::BOOLEAN, XmlValue::DATE, XmlValue::DATE_TIME, XmlValue::DAY_TIME_DURATION, XmlValue::DECIMAL, XmlValue::DOUBLE, XmlValue::DURATION, XmlValue::FLOAT, XmlValue::G_DAY, XmlValue::G_MONTH, XmlValue::G_MONTH_YEAR, XmlValue::G_YEAR, XmlValue::G_YEAR_MONTH, XmlValue::HEX_BINARY, XmlValue::NOTATION, XmlValue::QNAME, XmlValue::STRING, XmlValue::TIME, XmlValue::YEAR_MONTH_DURATION, XmlValue::UNTYPED_ATOMIC

Methods:

- getType()
- isType(type)
- isBoolean()
- isBinary()
- isNumber()
- isString()
- isNode()
- isNull()
- asBoolean()
- asBinary()
- asDocument()
- asNode()
- asNumber()
- asString()
- equals(value)
- getNodeName()
- getNodeValue()
- getNamespaceURI()
- getPrefix()
- getLocalName()
- getNodeType()
- getParentNode()
- getFirstChild()
- getLastChild()
- getPreviousSibling()
- getNextSibling()
- getAttributes()
- getOwnerElement()

XmlException

Methods:

- what()
- getExceptionCode()
- getDbError()

XML Schema Data Types:

- item()
- node()
- xdt:anyAtomicType
- attribute()
- comment()
- document-node()
- element()
- namespace()
- processing-instruction()
- text()
- xs:anyURI
- xs:base64Binary
- xs:boolean
- xs:byte
- xs:date
- xs:dateTime
- xdt:dayTimeDuration
- xs:decimal
- xs:double
- xs:duration
- xs:float
- xs:gDay
- xs:gMonth
- xs:gMonthDay
- xs:gYear
- xs:gYearMonth
- xs:hexBinary
- xs:ID
- xs:IDREF
- xs:IDREFS
- xs:int
- xs:integer
- xs:language
- xs:long
- xs:Name
- xs:NCName
- xs:negativeInteger
- xs:nonNegativeInteger
- xs:nonPositiveInteger
- xs:normalizedString
- xs:NOTATION
- xs:positiveInteger
- xs:QName
- xs:short
- xs:string
- xs:time
- xs:token
- xs:unsignedByte
- xs:unsignedInt
- xs:unsignedLong
- xs:unsignedShort
- xdt:untypedAtomic
- xdt:yearMonthDuration

XQuery Functions:

- abs(number)
- adjust-dateTime-to-timezone(dateTime, time zone)
- adjust-date-to-timezone(date, time zone)
- adjust-time-to-timezone(time, time zone)
- avg(seq)
- base-uri(node)
- boolean(seq)
- ceiling(number)
- codepoints-to-string(sequence)
- collection(string)
- compare(string1, string2)
- concat(string1, ...)
- contains(string1, string2)
- count(seq)
- current-date()
- current-dateTime()
- current-time()
- data(seq)
- day-from-date(date)
- day-from-dateTime(dateTime)
- days-from-duration(duration)
- dbxml:metadata()
- deep-equal(seq, seq)
- default-collation()
- distinct-values(seq)
- doc(string)
- document-uri(node)
- empty(seq)
- ends-with(string1, string2)
- error(item)
- escape-uri(string, boolean)
- exactly-one(seq)
- exists(seq)
- false()
- floor(number)
- hours-from-dateTime(dateTime)
- hours-from-duration(duration)
- hours-from-time(time)
- id(string)*
- idref(string)*
- implicit-timezone()
- index-of(seq, item)
- in-scope-prefixes(element)insert-before(seq1, position, seq2)
- lang(string)
- last()
- local-name(node)
- local-name-from-QName(stringQName)
- lower-case(string)
- matches(string, pattern)
- max(seq)
- min(seq)
- minutes-from-dateTime(dateTime)
- minutes-from-duration(duration)
- minutes-from-time(time)
- month-from-date(date)
- month-from-dateTime(dateTime)
- months-from-duration(duration)
- name(node)
- namespace-uri(node)
- namespace-uri-for-prefix(element, string)
- namespace-uri-from-QName(QName)
- node-name(node)
- normalize-space(string)
- normalize-unicode(string)not(expr)
- number(expr)
- one-or-more(seq)
- position()
- QName(namespace, local name)
- remove(seq, position)
- replace(string, pattern1, pattern2)
- resolve-QName(string, element)
- resolve-uri(string)
- reverse(seq)
- root(node)
- round(number)
- round-half-to-even(number)
- seconds-from-dateTime(date)
- seconds-from-duration(duration)
- seconds-from-time(time)
- starts-with(string1, string2)
- string(item)
- string-join(seq, delim)
- string-length(string)
- string-to-codepoints(string)
- subsequence(seq, position1, position2)
- substring(string, position1, position2)
- substring-after(string1, string2)
- substring-before(string1, string2)
- sum(seq)
- timezone-from-date(date)
- timezone-from-dateTime(dateTime)
- timezone-from-time(time)
- tokenize(string1, string2)
- trace(seq, string)
- translate(string1, string2, string3)
- true()
- unordered(seq)
- upper-case(string)
- year-from-date(date)
- year-from-dateTime(dateTime)
- years-from-duration(duration)
- zero-or-one(seq)

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