A QUERY PROCESSOR FOR XML DOCUMENTS pdf

1: Connect to an XML file (Power Query) - Excel

XML compressionhas beenrecognizedas an effective approach for solving the above problem, and different compression schemes have been proposed [5, 11, 6, 1, 3, 2, 9].

Microsoft Scripting Guy, Ed Wilson, is here. Today the registration opens for the Scripting Games. You can go to the Scripting Games site on PoshCode, click Log On, choose your authentication mechanism, and fill out your user name and email address. Make sure your user name is the name you want to appear on the leaderboard, and on your Scripting Games certificate. Also, make sure your email address is correct because it is used to notify you about prizes. Last night, she told me that she wants me to help her look at the XML file she got by exporting her book database so that she can find titles of books and things like that. All of a sudden I look up, and she is here. The Scripting Wife thought for a minute, and then typed the following command. The Scripting Wife thought for a few seconds and began to type. Within a minute or so, she had composed the command that is shown here. Take your book element, pipe it to the Foreach-Object cmdlet, then pipe that to the Sort-Object cmdlet, and choose the DisplayName property. Then group it by DisplayName. She thought for a second, and then used the Up arrow to retrieve her previous command. She then modified it until the following command appeared. Retrieve your command that lists all the titles. This time the Scripting Wife did not hesitate. She retrieved her next to last command by pressing the Up arrow twice. Then she added a pipe character, used the question mark? She added the Match operator and looked for the word Mason. Her completed command is shown here. I think I am going to head to the mall with a couple of my friends. And she was gone. I invite you to follow me on Twitter and Facebook. If you have any questions, send email to me at scripter microsoft. Ed Wilson, Microsoft Scripting Guy.

2: multiple xml files in folder from power query

Use XQuery to take data from multiple databases, from XML files, from remote Web documents, even from CGI scripts, and to produce XML results that you can process with XSLT. Use XQuery on the back-end of a Web server, or to generate Enterprise-wide executive reports.

Below are a few examples of how XQuery can be used: Extracting information from a database for use in a web service. Generating summary reports on data stored in an XML database. Searching textual documents on the Web for relevant information and compiling the results. Pulling data from databases to be used for the application integration. Origin[edit] The two languages, however, are rooted in different traditions and serve the needs of different communities. XSLT was primarily conceived as a stylesheet language whose primary goal was to render XML for the human reader on screen, on the web as web template language , or on paper. XQuery was primarily conceived as a database query language in the tradition of SQL. Because the two languages originate in different communities, XSLT is stronger[according to whom? Versions[edit] XSLT 1. Both languages have similar expressive power, though XSLT 2. It is also true that XQuery is more orthogonal, in that any expression can be used in any syntactic context. Such applications are generally handled in XSLT by use of a coding pattern that involves an identity template that copies all nodes unchanged, modified by specific templates that modify selected nodes. XQuery has no equivalent to this coding pattern, though in future versions it will be possible to tackle such problems using the update facilities in the language that are under development. The absence of this capability starts to become noticeable when writing large applications, or when writing code that is designed to be reusable in different environments. The absence of these facilities from XQuery 1. This also makes it easier to detect errors in XQuery code at compile time. The fact that XSLT 2. However, many large applications take advantage of this capability by using XSLT to read, write, or modify stylesheets dynamically as part of a processing pipeline. Work on XQuery 3. A scripting procedural extension for XQuery was designed, but never completed. The following extensions are currently available:

3: xslt - How to process all data from multiple XML files after merging using XSL - Stack Overflow

XQuery is a language for finding and extracting elements and attributes from XML documents. Here is an example of what XQuery could solve: "Select all CD records with a price less than $10 from the CD collection stored in www.enganchecubano.com".

Relational or XML Data Model If your data is highly structured with known schema, the relational model is likely to work best for data storage. SQL Server provides the required functionality and tools you may need. On the other hand, if the structure is semi-structured or unstructured, or unknown, you have to give consideration to modeling such data. XML is a good choice if you want a platform-independent model in order to ensure portability of the data by using structural and semantic markup. Additionally, it is an appropriate option if some of the following properties are satisfied: Your data is sparse or you do not know the structure of the data, or the structure of your data may change significantly in the future. Your data represents containment hierarchy, instead of references among entities, and may be recursive. Order is inherent in your data. You want to query into the data or update parts of it, based on its structure. If none of these conditions is met, you should use the relational data model. For example, if your data is in XML format but your application just uses the database to store and retrieve the data, an [n]varchar max column is all you require. Storing the data in an XML column has additional benefits. This includes having the engine determine that the data is well formed or valid, and also includes support for fine-grained query and updates into the XML data. You want to share, query, and modify your XML data in an efficient and transacted way. Fine-grained data access is important to your application. For example, you may want to extract some of the sections within an XML document, or you may want to insert a new section without replacing your whole document. You have relational data and XML data and you want interoperability between both relational and XML data within your application. You need language support for query and data modification for cross-domain applications. You want the server to guarantee that the data is well formed and also optionally validate your data according to XML schemas. You want indexing of XML data for efficient query processing and good scalability, and the use of a first-rate query optimizer. You want to use administrative functionality of the database server for managing your XML data. For example, this would be backup, recovery, and replication. If none of these conditions is satisfied, it may be better to store your data as a non-XML, large object type, such as [n]varchar max or varbinary max. Native storage as xml data type The data is stored in an internal representation that preserves the XML content of the data. This internal representation includes information about the containment hierarchy, document order, and element and attribute values. For more information about InfoSet, visit https: The InfoSet content may not be an identical copy of the text XML, because the following information is not retained: This improves parsing speed significantly. This preserves fidelity of the data at the relational level. As a result, the hierarchical structure is preserved although order among elements is ignored. The schema cannot be recursive. Large object storage, [n]varchar max and varbinary max An identical copy of the data is stored. This is useful for special-purpose applications such as legal documents. Most applications do not require an exact copy and are satisfied with the XML content InfoSet fidelity. Generally, you may have to use a combination of these approaches. For example, you may want to store your XML data in an xml data type column and promote properties from it into relational columns. Or, you may want to use mapping technology to store nonrecursive parts in non-XML columns and only the recursive parts in xml data type columns. Storage options Your XML data may be more appropriate for large object storage for example, a product manual , or more amenable to storage in relational columns for example, a line item converted to XML. Each storage option preserves document fidelity to a different extent. Query capabilities You may find one storage option more appropriate than another, based on the nature of your queries and on the extent to which you query your XML data. Fine-grained query of your XML data, for example, predicate evaluation on XML nodes, is supported to varying degrees in the two storage options. Indexing options vary with the storage options; you have to make the appropriate choice to optimize your workload. Data modification capabilities Some workloads involve fine-grained modification of XML data. For example, this can include adding a new section within a document, while other workloads, such as Web content, do not. Data modification language support may be important for your application. Different choices also have different performance characteristics. This is an appropriate choice if the following applies: You want a straightforward way to store your XML data at the server and, at the same time, preserve document order and document structure. You may or may not have a schema for your XML data. You want to query and modify your XML data. You want to index the XML data for faster query processing. Native XML storage is useful when you have XML documents that have a range of structures, or you have XML documents that conform to different or complex schemas that are too hard to map to relational structures. A section can contain subsections. Product manuals contain a large amount of mixed content, diagrams, and technical material; the data is semi-structured. Users may want to perform a contextual search for topics of interest such as searching for the section on "clustered index" within the chapter on "indexing", and query technical quantities. An appropriate storage model for your XML documents is an xml data type column. Indexing the XML column benefits query performance. For example, these could include signed documents, legal documents, or stock transaction orders. You may want to store your documents in a [n]varchar max column. For querying, convert the data to xml data type at run time and execute Xquery on it. The run-time conversion may be costly, especially when the document is large. If you query frequently, you can redundantly store the documents in an xml data type column and index it while you return exact document copies from the [n]varchar max column. The XML column may be a computed column, based on the [n]varchar max column. Similarly, updates are also propagated to those tables. This technology is useful in the following situations: Order is not important in your data, or your query table data is not recursive, or the maximal recursion depth is known in advance. This model is useful if you have to exchange data that contains XML markup with other applications while your SQL applications work uninterrupted. Hybrid Model Frequently, a combination of relational and xml data type columns is appropriate for data modeling. This may yield better performance in that you have more control over the indexes created on the relational columns and locking characteristics. The values to store in relational columns depend on your workload. On the other hand, if your XML data is extensively and nonredundantly decomposed into relational columns, the re-assembly cost may be significant. For highly structured XML data, for example, the content of a table has been converted into XML; you can map all values to relational columns, and possibly use XML view technology. Therefore, row-level locking causes all XML instances in the row to be locked. When the granularity is large, locking large XML instances for updates causes throughput to decline in a multiuser scenario. On the other hand, severe decomposition loses object encapsulation and increases reassembly cost. A balance between data modeling requirements and locking and update characteristics is important for good design. For example, updates to an XML instance are performed by using new support for partial binary large object BLOB and partial index updates in which the existing stored XML instance is compared to its updated version. Partial binary large object BLOB update performs a differential comparison between the two XML instances and updates only the differences. Partial index updates modify only those rows that must be changed in the XML index. Limitations of the xml Data Type Note the following general limitations that apply to the xml data type: The stored representation of xml data type instances cannot exceed 2 GB. It does not support casting or converting to either text or ntext. Use varchar max or nvarchar max instead. It cannot be compared or sorted. It cannot be used as a key column in an index. However, it can be included as data in a clustered index or explicitly added to a nonclustered index by using the INCLUDE keyword when the nonclustered index is created.

4: USB2 - System and method of XML query processing - Google Patents

The Importance of Algebra for XML Query Processing Stelios Paparizos and H.V. Jagadish University of Michigan, Ann Arbor, MI, USA {spapariz, jag}@www.enganchecubano.comtract.

Prefabricated Entity Resolvers 7. Example displays the contents of books. Example shows how to execute the query books. The example generates this output: The XQuery processor invokes the entity resolver during query processing to get the document to be returned by the fn: OXQEntityLocator instance that is passed in the call to the entity resolver provides the name of the XQuery function and its argument types. The entity resolver can then return any class that extends oracle. OXQFunctionEvaluator and has a public constructor. Then, the XQuery processor instantiates the returned class. When the XQuery external function call is evaluated, the evaluate method is invoked. Example shows how you can use an entity resolver to define the implementation of an XQuery external function. Example displays the contents of trim. Example runs trim. This function is implemented in Java and called within the query. In some cases, it might be more convenient to return a Java static method instead of a class. When a static method is returned, the query processor automatically maps the method arguments and the return value to the XQuery data model, as defined by the XQJ specification. Again, the example generates this output: For each imported module, the entity resolver is called with the entity kind oracle. If no location is provided in the module import, you can invoke the method getNamespace to get the target namespace of the module. The entity resolver can then return the corresponding library module. The example in this section shows how you can use an entity resolver to control the resolution of XQuery library modules. Example displays the contents of math. Example displays the contents of main. Example shows how to execute a query that imports a library module. You can use imported declarations and definitions in a query to validate and test data instances. The example in this section shows how you can use an entity resolver to control which XML schema is used when a query imports a schema. Example displays the contents of size. Example shows how to execute a query that imports a schema. In the previous examples that resolve entities using the file system, you could replace MyEntityResolver with the file entity resolver that is available in XDK. The example in this section shows how you can run the query in Example without having to implement your own entity resolver. Example generates this output: Then, this factory is used to create an entity resolver that resolves schemas, modules, and documents against the file system. By contrast with this example, Example uses the custom entity resolver MyEntityResolver to resolve only documents against the file system. XDK provides these entity resolver factories: Creates an entity resolver that delegates requests to other entity resolvers. For any kind of request, the resolver returns the first nonnull result it receives from one of the delegate resolvers. Creates an entity resolver that resolves external functions and modules to Java static methods or classes. This section includes these subsections:

5: XQuery - Wikipedia

Key ideaFrom the flexibility of XML data, we can classify each element using DTDs and give a hint to a query processor in run time. For example, let's assume that a DTD declaration for the person element in Fig. 1 is as follows.

Mon, 20 Nov oXygen Editor 8. Specifications that are joint work with the XSL working group have also the additional patent disclosures provided by the XSL wg at http: Only subscribed users can post to this list. Subscription is open to everybody: The list is publicly archived at http: Most of our documents now ask you to send comments using bugzilla. This is not a discussion list use www-ql w3. XML Query Implementations If your implementation is not here, or if you know of an implementation that is not listed, send liam w3. There is a separate list of XPath 2 implementations. Includes a GUI for creating and editing queries. Last update July ; project homepage is gone. Bluestream Database Software Corp. They have a Web page demonstrating the XQuery Use Cases, and support static typing and modules as well as some full-text extensions. It supports streaming execution and runs on all devices support CLDC 1. GPL or as negotiated]. There is extensive support for data analysis, including plotting graphs and making tables. Compiles XQuery on-the-fly to Java bytecodes. Based on and part of the Kawa framework. Qexo implements the optional XQuery static typing feature. HXQ , a compiler from XQuery to Haskell; appears to be an imcomplete research project, but said to be already useful. Open source, license terms unclear from the Web page. There is also a technical overview document. Commercial, with free download restricted to Megaybytes of data. A limited duration trial license is also available, limited to 1G of content. Implements the XQuery Update Facility. It is based on the Pathfinder compiler developed at TU Munich, and aims at achieving high performance. Open Source adapting the Mozilla Public License. Patternist , an XQuery 1.

6: W3C XML Query (XQuery)

lenges in query processing on graph-structured XML doc- uments because traditional query processing techniques for tree-structured XML documents cannot be directly applied.

You can find the updated version here. We all know the problem: What is XQuery For? XQuery was devised primarily as a query language for data stored in XML form. So its main role is to get information out of XML databases â€” this includes relational databases that store XML data, or that present an XML view of the data they hold. Some people are also using XQuery for manipulating free-standing XML documents, for example, for transforming messages passing between applications. In that role XQuery competes directly with XSLT, and which language you choose is largely a matter of personal preference. Playing with XQuery The best way to learn about anything is to try it out. Two ways you can try out the XQuery examples in this article are: If you like that approach, go ahead. Download Saxon - Put the saxon8. Then enter your query into a file using your favorite text editor, and on the command line type: The precision of the time value fractions of a second depends on the XQuery processor you are using, and the timezone 5 hours before GMT in this case depends on how your system is configured. But within a query language, you need to be able to do little calculations, and XQuery has this covered. Further, XQuery is designed so that expressions are fully nestable â€” any expression can be used within any other expression, provided it delivers a value of the right type â€” and this means that expressions that are primarily intended for selecting data within a where clause can also be used as free-standing queries in their own right. XQuery allows you to access the file directly from either of these locations, using a suitable URL as an argument to its doc function. Those URLs are a bit unwieldy, but there are shortcuts you can use: You can now refer to this document in your query simply as ". Use the command line option -s c: The file contains a number of sections.

7: XML - Wikipedia

document or various XML documents. For processing the query, an XML query engine or processor translates the.

Existing work on XML query evaluation has either focused on algebraic optimization techniques suitable for XML databases, or on algorithms to efficiently process XML messages represented as a stream of parsing events. In practice, complex applications often must handle both. In this paper, we develo In this paper, we develop a physical algebra that combines streaming operators with other standard relational and XML operators. Our physical model includes marked XML streams, which permit efficient XPath evaluation, but can only be consumed once. This constraint restricts the use of streaming operators to fragments of a query plan that only access data using depth-first traversal. We develop static analysis techniques to decide which fragment of a plan can be streamed. Our experiments demonstrate the benefits of blending streaming with other evaluation techniques. In this paper, the design of an automatic streaming processor for XSLT transformations is presented. Unlike other similar systems, our processor guarantees Unlike other similar systems, our processor guarantees bounds on the resource usage for the processing of a particular type of transformation. This feature is achieved by employing tree transducers as the underlying formal base. The processor includes a set of streaming algorithms, each of them is associated with a tree transducer with specific resource usage memory, number of passes , and thus captures different transformation subclass. The input XSLT stylesheet is analyzed in order to identify the transformation subclass to which it belongs. Then the lowest resourceconsuming streaming algorithm capturing this subclass is applied. Although many algorithms have been proposed for evaluating XPath queries containing un-ordered axes child, descendant, parent and ancestor against streaming XML data, there are very few efforts towards developing algorithms for processing path expressions with ordered axes following, followingsib In this paper, we show how order information can be built into the conventional twig-structure, in order to represent path expressions with following and following-sibling axes in addition to child and descendant axes. We then discuss an efficient way of encoding and matching XPath queries with forward child, descendant, following, following-sibling axes against streaming XML data. The algorithm processes branches of the twig in left-to-right order. A branch is never processed unless constraints specified in the preceding branches are satisfied by the stream. Also, the algorithm avoids repeated processing of branches whose constraints have already been satisfied by the stream. Experiments over real-world, synthetic and benchmark data sets show that our system outperforms the currently available algorithm by wide margins. Twig-based streaming algorithms e. However, the research efforts towards processing query expressions with ordered axes against streaming data, to the best of our knowledge, is limited to the

8: Use PowerShell to Parse an XML File and Sort the Data â€“ Hey, Scripting Guy! Blog

The XML Path Language (XPath) has emerged as the de facto standard for navigating XML documents. The core addressing capability of XPath lies in the location path, which is used to locate nodes on an XML tree.

However, the invention can be embodied in a multitude of different ways as defined and covered by the claims. In this description, reference is made to the drawings wherein like parts are designated with like numerals throughout. Structured types of documents are typically characterized by their hierarchical, tree type construction, which is defined by start and end tag pairs. In XML, each named start tag must have a corresponding end tag with the same name. Any pair of tags may contain an unlimited number of other pairs. Also, any start and end tag pair and their contents may be nested to arbitrary depth. However, any given tag pair must be completely contained within another pair of tags or be completely outside, partial overlap is not allowed. This fragment has an implicit tree structure with a depth of 2. This fragment has a depth of 1. The following is not legal: HTML and SGML allow some tags to be optional when it is implicitly clear from the structure of the document where the implied tags would be. Nevertheless, they also have a hierarchical tree type structure. A system designed to process structured documents is preferably able to accommodate each successive document having a completely different structure from the document before it. This adds complexity to managing the memory in which the data structure representing the document is stored. This may be addressed in the parsing phase of processing using time-consuming memory allocation mechanisms. However, it has been found that by using certain characteristics of the structure of a document being processed, e. In one embodiment, these statistics may be calculated during an earlier lexical analysis of the document, XPath processing may be performed more efficiently and with simplified, e. Moreover, it has been found that by compiling a set of XPath queries into easily traversed data structures, very large sets of XPath queries can be processed, essentially concurrently, by making a token by token traversal of these data structures. In particular, it has been found that data driven processing based on traversal of data structures is substantially more efficient than approaches such as DOM. Further, statistics regarding the contents of an XML document may be used to predict processing memory usage such that data structures associated with the processing may be statically allocated before processing. Moreover, memory usage has been found to scale approximately linearly with the size of the XML document. This contrasts with systems such as DOM, for which memory usage increases in a geometric relationship with the size of the document. The system may be driven by a client application The client application is in communication with a document handler module via an interface The document handler module may act as a high level interface to the system In particular, it may provide a high level interface to an XPath API application programmer interface module via interface and a tokenizer module via interface The XPath API module may provide functions to define a set of XPath queries, to process query results, and to provide lower level control over associated XPath modules, including an XPath expression compiler module and an XPath engine module via interface The tokenizer module receives the contents of the XML document via the interface and produces a stream of tokens via interface that represent lexemes, groups of syntactically relevant symbols in the document, for use by the XPath engine module The XPath expression compiler module receives a set of XPath queries from the XPath API module via interface and returns a set of compiled data structures via the interface Finally, the XPath engine module receives these data structures via interface and returns the results of executing the queries on the XML document via the interface The specific data or data structures that may be communicated over each of the interfaces , , , , , , and is discussed in more detail below. It is to be appreciated that each of the modules comprises various sub-routines, procedures, definitional statements, and macros. Each of the modules may be separately compiled and linked into a single executable program. The following description is used for convenience to describe the functionality of one embodiment of a system. Thus, the processes that are performed by each of the modules may be redistributed to one of the other modules, combined together in a single module, or made available in, for example, a shareable dynamic link library. It is to be appreciated that the modules may be produced using any computer language or environment, including general-purpose languages such as C or FORTRAN. Furthermore, in one embodiment, interfaces between the modules may be implemented in terms of a set of function calls, e. In other embodiments, other inter program communication methods such as remote procedure calls, a client-server interface, or other methods of inter-program communication that are known to those of skill in the art may be employed. It is to be appreciated that depending on the embodiment, additional steps may be added, others removed, steps merged, or the order of the steps rearranged. The method begins from a step where a set of XPath expressions or queries is received by the document handler module via interface from a client program Next, at a step , the XPath expressions are compiled into a data structure. In the system , the expressions may be sent via interface to the XPath expression compiler module for compiling and the resulting data structures returned via interfaces , , and to the client program. In one embodiment, this data structure includes a set of trees of query nodes representing each of the XPath query expressions and one or more symbol tables that index the query nodes based on symbols associated with the query nodes. A discussion of the data structures compiled from the XPath query is presented hereinafter with reference to FIG. It is to be appreciated that the steps and may be performed repeatedly by a client application for any number of different sets of XPath expressions. The resulting compiled data structures may be saved until processing of the XPath queries with respect to a specific XML document is requested by the client application Moving on to a step , an XML document is received by the document handler module from the client program via interface Next, at a step , the document handler module passes the document via interface to the tokenizer module which performs lexical analysis, or tokenization, on the XML document to produce a sequence, or list, of tokens. It is to be appreciated that tokenizing may be performed using any lexical analysis system or method, such as those that are well known in the art. It has been found that compiling statistics during tokenizing can improve performance of query processing. Preferably, a set of statistics regarding the occurrence of tokens in the XML document is also produced by the tokenizer module More preferably, these statistics include, for example, the maximum depth of the XML tree defined by the document, XML namespaces defined in the document, and the number of recurrences of each item. After tokenizing, the tokens may be passed directly to the XPath engine module via an interface Next at a step , the XPath engine module processes the tokens sequentially using the XPath expression compiled data structures One embodiment of this step is described in more detail below in connection with FIG. Match results may be returned via interface to the XPath API module and then to the client application via interfaces and A match generally comprises the matched query expression and the position of at least one matching token in the XML document. Moving on to a step , if it is determined in step that there are additional XML documents to be processed, processing of the method returns to the step and functions as described above. Otherwise, the method terminates. In one embodiment, the client application may provide the additional XML documents to the document handler for parsing by the XPath engine module using the same compiled query structure for each of the additional documents. The XPath compiler module compiles the queries into the data structures that include, in this embodiment, a set of trees The set of trees may include one tree for each of the XPath query expression that comprises the XPath query. An XPath query expression includes one or more hierarchical path components that serve to define a query with respect to the hierarchical structure of an XML document. Each path component is itself an expression that includes one or more symbols. In the simple example of FIG. The structure of the trees is formed by a set of linked query nodes, In the depicted example of FIG. The nodes of each tree may be linked together to form the tree using pointers or any other method of tree representation known in the art. It is to be appreciated that more complex XPath queries may include a group or set of queries that are compiled into a corresponding forest of trees In one embodiment, the trees may be compiled into a simple forest Preferably, however, the forest of trees is optimized to merge duplicate nodes to improve the performance of later processing steps by reducing the number of nodes that are traversed. In one embodiment, a two pass procedure is performed to optimize the tree. In the first pass, the statistics about the symbols in the nodes of the trees are gathered in order to determine common prefixes. A second traversal of the trees is performed in which new optimized trees are formed to have the common prefixes are merged. It is to be appreciated that this tree compression can be performed using any lossless compression algorithm, such as numerous ones that are well-known in the related art. Each of the query nodes of the set of trees is generally associated with a symbol e. Thus, in addition to the trees , the XPath expression compiler may compile the XPath queries into a data structure that indexes each of the query nodes in the trees by the symbols associated with each path component and corresponding node. In one embodiment, this index includes one or more lookup, or symbol tables The symbol tables act as lookup tables mapping an entry for symbol, e. In the exemplary data structure of FIG. Preferably, a plurality of symbol tables are produced by the compiler module corresponding to different types of XPath expression items. More preferably, symbol tables are produced for lookup of XML elements, attributes, namespaces, and values found in the XPath expressions. In one embodiment, the symbol tables may also include a table of XML namespace prefixes. Processing of the queries with respect to XML documents may include receiving each token in the documents and traversing the data structures as described below. In one embodiment, the XPath engine module receives the tokens to process for an XML document from the tokenizer module and receives the compiled XPath expression data structures from the XPath API module The process then includes token by token processing of the tokens by the XPath engine module Beginning at a decision step , the method conducts a test of the document to check whether the document is well-formed according to the XML specification. In a content processor, for example, for processing email messages that include XML content, the ability to quickly check and reject malformed documents without further processing is advantageous. Checking for whether the XML document is well-formed may include checking whether the XML document is lexicographically correct in terms of syntactic elements. In one embodiment, this check includes comparing the maximum depth of the XML tree to a preselected maximum depth. Preferably, this maximum depth information is received as a token that is produced by the tokenizer module XML documents whose depth exceeds the preselected maximum may thus be rejected to prevent malformed, or even maliciously calculated, XML documents having very deep depths from clogging a system. For example, in a content processor that is part of an email system, it may be advantageous to screen out messages containing malformed XML documents that have excessively deep nesting of elements to prevent the processing of such documents from adversely affecting email system throughput. In one embodiment, if the XML document fails check for being well-formed, processing ends. If a well-formed XML document is confirmed in the step , the method moves to a step , wherein the sequence of tokens is examined to determine whether the end of the token sequence for the XML document has been reached. If there are no more tokens to process, processing terminates. Otherwise, processing of the tokens continues to a step where the next token is received from the sequence of tokens in the XML document. Next, at a step , the token is classified in terms of XML items. The classifications of token types may include elements, attributes, namespaces e.

9: Using the XQuery Processor for Java

I'm trying to read in multiple xml files from a folder. The combine function works and if I view the text output from the combined rows then you can see the files have been appended one after the other.

Applications for the Microsoft. Apple has an implementation of a registry based on XML. Many of these standards are quite complex and it is not uncommon for a specification to comprise several thousand pages. XML is used extensively to underpin various publishing formats. Disparate systems communicate with each other by exchanging XML messages. This is also referred to as the canonical schema. XML has come into common use for the interchange of data over the Internet. This is not an exhaustive list of all the constructs that appear in XML; it provides an introduction to the key constructs most often encountered in day-to-day use. Character An XML document is a string of characters. Almost every legal Unicode character may appear in an XML document. Processor and application The processor analyzes the markup and passes structured information to an application. The specification places requirements on what an XML processor must do and not do, but the application is outside its scope. The processor as the specification calls it is often referred to colloquially as an XML parser. Markup and content The characters making up an XML document are divided into markup and content, which may be distinguished by the application of simple syntactic rules. Strings of characters that are not markup are content. In addition, whitespace before and after the outermost element is classified as markup. Tags come in three flavors: Element An element is a logical document component that either begins with a start-tag and ends with a matching end-tag or consists only of an empty-element tag. Attribute An attribute is a markup construct consisting of a nameâ€”value pair that exists within a start-tag or empty-element tag. An XML attribute can only have a single value and each attribute can appear at most once on each element. In the common situation where a list of multiple values is desired, this must be done by encoding the list into a well-formed XML attribute [i] with some format beyond what XML defines itself. Usually this is either a comma or semi-colon delimited list or, if the individual values are known not to contain spaces, [ii] a space-delimited list can be used. Characters and escaping[edit] XML documents consist entirely of characters from the Unicode repertoire. Except for a small number of specifically excluded control characters , any character defined by Unicode may appear within the content of an XML document. XML includes facilities for identifying the encoding of the Unicode characters that make up the document, and for expressing characters that, for one reason or another, cannot be used directly. In the case of C1 characters, this restriction is a backwards incompatibility; it was introduced to allow common encoding errors to be detected. Encoding detection[edit] The Unicode character set can be encoded into bytes for storage or transmission in a variety of different ways, called "encodings". XML allows the use of any of the Unicode-defined encodings, and any other encodings whose characters also appear in Unicode. XML also provides a mechanism whereby an XML processor can reliably, without any prior knowledge, determine which encoding is being used. Escaping[edit] XML provides escape facilities for including characters that are problematic to include directly. There are five predefined entities:

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