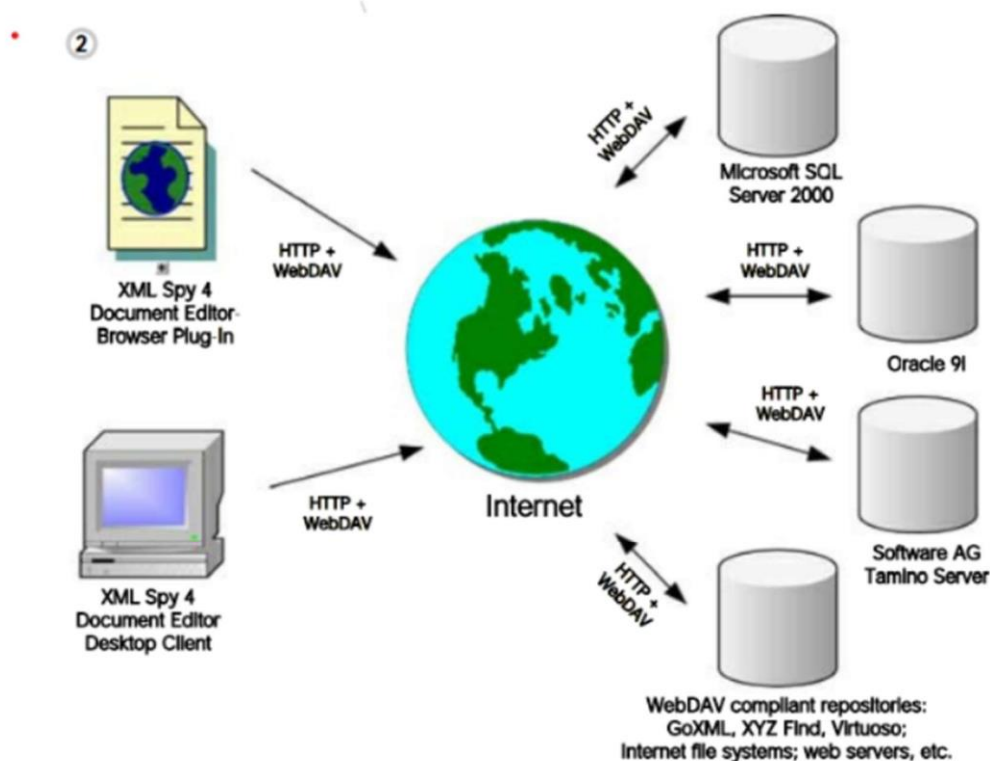# PRACTICAL: 7

Aim: Study of XMLSPY tool.

The XML Spy 4 Suite The XML Spy 4 Suite implements the WebDAV repository interface to ensure compatibility with a wide range of server products, including Oracle 9i, Microsoft SQL Server 2000, Software AG Tamino Server, Global XML's Go XML Server, and many others. WebDAV technologies effectively enable companies to break free of an age-old vendor-lock-in trap employed by many proprietary XML content management systems requiring that customers purchase both the content creation tools and back-end server products from the same vendor. Using the XML Spy 4 Document Editor Browser Plug-In, content authors can collaboratively create & edit information stored in any WebDAV repository on the Internet, as illustrated below:

XML Spy 4 Suite

The XML Spy Suite is the ultimate software development tools suite for Advanced XML Application Development! The XML Spy 4 Suite consists of the XML Spy 4 Integrated Development Environment (IDE), the XML Spy 4 XSLT Designer, and the XML Spy 4 Document Editor.
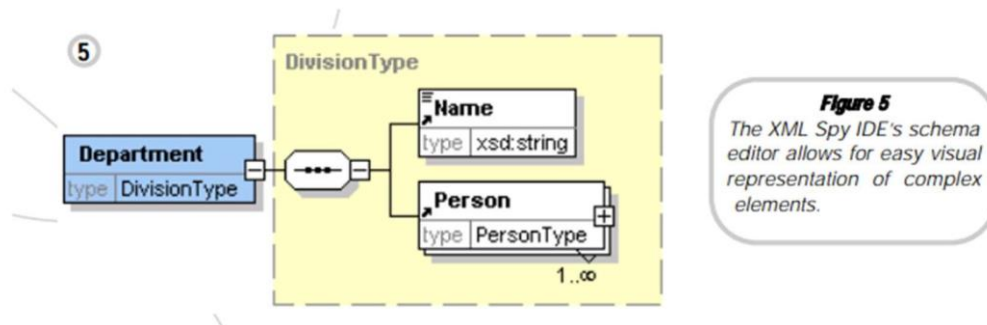

Figure 4
The XML Spy 4 Suite product line.

XML Spy 4 Integrated Development Environment (IDE) The XML Spy 4 IDE is the world's first and leading IDE for XML. In this section, we highlight several features which are used throughout the Advanced XML Application Development process to assist with implementing document frameworks: XML Schema editing, XSL/XSLT editing, and web-services testing & debugging.

The XML Spy IDE includes an XML Schema editor, which can be employed for Shema Modelling – the first step in designing a document framework. The XML Spy 4 IDE includes a full-featured graphical XML schema editor which supports many automatic XML Schema generation capabilities, which greatly accelerate the schema modelling process; some of the possibilities are listed below:

1   The XML Spy IDE can inspect one or more XML instance documents – typically these will be use-cases – and automatically infer the underlying XML Schema.

2   The XML Spy IDE can connect to any relational database (through ODBC or ADO) and automatically generate the corresponding XML Schema, preserving data-type information, relationships, and other data restrictions.

3   The XML Spy IDE can convert older content models (DTD, DCD, or BizTalk Schema) to the most current official W3C XML Schema final recommendation.

Further refinements can easily be applied to an XML Schema, using XML Spy 4 IDE's schema editor, which supports graphical editing of XML schemas. The XML Spy IDE's schema editor is the only tool to support XML schema-to-database mapping tools through the use of various

3rd party XML Schema extensions – including Oracle 9i XDB and Microsoft SQL Server 2000 XML Schema Extensions.

Figure 5
The XML Spy IDE's schema editor allows for easy visual representation of complex elements.

The XML Spy IDE contains many features to support Transformation Modelling – the third step in developing document frameworks. To assist with the development of XSLT stylesheets, the XML Spy IDE supports single-click transformations, graphical XPath query generation and visualization, syntax help & code-completion for all XSL elements & attributes, support for XSL:FO to generate and preview popular output file types (PDF, PostScript, etc), and much more.

The XML Spy 4 IDE supports the development, testing & debugging of web-services. Data Flow & Process Modelling of sophisticated document frameworks could potentially include web-services as a key mechanism to expose document frameworks to partners and customers.

The XML Spy 4 Document Editor can be deployed in a document framework as a standalone desk-top application or browser plug-in. The decision concerning which productvariation to use is determined through Data Flow & Process Modelling, which is the second step outlined in the Advanced XML Application Development process. As a guideline, if content authors will always be located within the company network, then the Document Editor can be deployed as a desk-top application – however, in today's global economy, it is often the case that content authors are located anywhere across the Internet, and as such, require easy Internet access to the document framework system. In this case, The XML Spy 4 Document Editor Browser Plug-In is a unique solution that allows live XML content editing from a

webbrowser. The XML Spy 4 Document Editor Browser Plug-in is self-installing (similar to a Macromedia Flash, or Apple QuickTime plug-in), which dramatically eases deployment and reduces total cost of ownership; it is the only browser-based solution for rich-content editing currently offered in the industry.
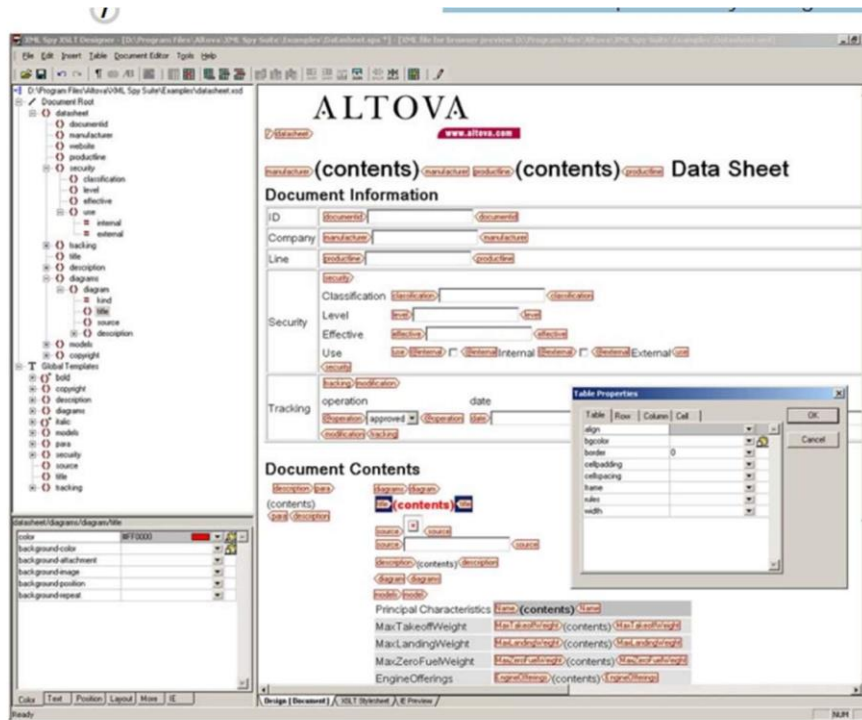
The XML Spy 4 Document Editor efficiently captures information as it is being created, preserving the context in which it was produced, and the relationships between it and other existing corporate data. Through WebDAV, the XML Spy 4 Document Editor provides integration with the leading XML databases, relational databases, and content management systems.

XML Spy 4 XSLT Designer

Writing even the most basic XSLT stylesheets by hand is a truly daunting task, requiring an understanding of XSL elements, the XPath query language, and complicated rules-based document processing models. Yet, without the ability to transform and render your XML content to a desired output, the decision of adopting XML remains for the most part an academic exercise.

The XML Spy 4 XSLT Designer automates writing of complex XSLT stylesheets through an intuitive, drag-and-drop user interface; it is ideal for use throughout the Transformation Modelling process, the third step outlined in the Advanced XML Application Development methodology.

Through a powerful GUI, a user can drag and drop XML data elements corresponding to an XML Schema or DTD (in the left window) into the main design window (the right window), adding descriptive text and presentation tags such as tables, hyperlinks and graphics. The resulting XSLT stylesheet is automatically generated and can be previewed by clicking on the browser-preview tab.

Figure 7
The XML Spy 4 XSLT Designer main screen: Easy-to-use tool makes writing XSLT style sheets simple.

The XML Spy 4 XSLT Designer is a clear and easy to use tool. Unlike complicated, proprietary content management systems, the intuitive user-interface allows any web-designer (even with little or no understanding of XSLT) to leverage existing skills and design advanced stylesheets.

PRACTICAL: 8

Aim: Create an RSS for the events occurring in your institute

What is RSS?
- RSS stands for Really Simple Syndication
- RSS allows you to syndicate your site content
- RSS defines an easy way to share and view headlines and content
- RSS files can be automatically updated
- RSS allows personalized views for different sites
- RSS is written in XML

Why use RSS?

RSS was designed to show selected data.

Without RSS, users will have to check your site daily for new updates. This may be too timeconsuming for many users. With an RSS feed (RSS is often called a News feed or RSS feed) they can check your site faster using an RSS aggregator (a site or program that gathers and sorts out RSS feeds).

Since RSS data is small and fast-loading, it can easily be used with services like cell phones or PDA's.

Web-rings with similar information can easily share data on their web sites to make them better and more useful.

Who Should use RSS?

Webmasters who seldom update their web sites do not need RSS!

RSS is useful for web sites that are updated frequently, like:
- News sites - Lists news with title, date and descriptions
- Companies - Lists news and new products
- Calendars - Lists upcoming events and important days
- Site changes - Lists changed pages or new pages

Benefits of RSS

Here are some benefits of using RSS:

Choose your news

With RSS you can choose to view the news you want, the news that interest you and are relevant to your work.

Remove unwanted information

With RSS you can (finally) separate wanted information from unwanted information (spam)!

Increase your site traffic

With RSS you can create your own news channel, and publish it to the Internet!

RSS Reference

The <channel> Element

The links in the "Element" column point to more information about each specific element.

Element	Description
<category>	Optional. Defines one or more categories for the feed
<cloud>	Optional. Register processes to be notified immediately of updates of the feed
<copyright>	Optional. Notifies about copyrighted material

<description>	Required. Describes the channel
<docs>	Optional. Specifies a URL to the documentation of the format used in the feed
<generator>	Optional. Specifies the program used to generate the feed
<image>	Optional. Allows an image to be displayed when aggregators present a feed
<language>	Optional. Specifies the language the feed is written in
<lastBuildDate>	Optional. Defines the last-modified date of the content of the feed
<link>	Required. Defines the hyperlink to the channel

<managingEditor>	Optional. Defines the e-mail address to the editor of the content of the feed
<pubDate>	Optional. Defines the last publication date for the content of the feed
<rating>	Optional. The PICS rating of the feed
<skipDays>	Optional. Specifies the days where aggregators should skip updating the feed

<skipHours>	Optional. Specifies the hours where aggregators should skip updating the feed
<textInput>	Optional. Specifies a text input field that should be displayed with the feed
<title>	Required. Defines the title of the channel
<ttl>	Optional. Specifies the number of minutes the feed can stay cached before refreshing it from the source
<webMaster>	Optional. Defines the e-mail address to the webmaster of the feed

The <item> Element

Element	Description
<author>	Optional. Specifies the e-mail address to the author of the item
<category>	Optional. Defines one or more categories the item belongs to
<comments>	Optional. Allows an item to link to comments about that item

<description>	Required. Describes the item
<enclosure>	Optional. Allows a media file to be included with the item
<guid>	Optional. Defines a unique identifier for the item
<link>	Required. Defines the hyperlink to the item
<pubDate>	Optional. Defines the last-publication date for the item

<source>	Optional. Specifies a third-party source for the item
<title>	Required. Defines the title of the item

Creating a new RSS Event Item

1. Select "New Events Article" page template option when making a new page. ...
2. Fill out the new events page information.
3. Ones the page is created you can customize what gets displayed in your RSS feed for the event: ...
4. To Edit RSS feed item:
5. "Publish Date" is what is displayed as an "Event Date".

PRACTICAL:9

Aim: Write a program to read the articles in RSS created in above practical

```python
import feedparser def
read_rss_feed(feed_url):    #
Parse the RSS feed    feed =
feedparser.parse(feed_url)

  #  Check  if  the  feed  parsing  was
successful    if feed.bozo == 0:
    print(f"Feed Title: {feed.feed.title}")
print(f"Feed Description: {feed.feed.description}")
print(f"Feed URL: {feed.feed.link}")        print("")


    # Display information about each article
for entry in feed.entries:
        print(f"Title: {entry.title}")
        print(f"Published Date:
{entry.published}")        print(f"Link:
{entry.link}")        print("")

else:
    print("Error parsing the feed.")

if __name__ == "__main__": rss_feed_url =
  'http://www.gameinformer.com/b/MainFeed.aspx?Tags=preview'
  read_rss_feed(rss_feed_url)
```

Output:

```
Feed Title: Game Informer Previews
Feed Description: Get an early look at the most exciting games on the horizon as Game Informer showcases the biggest titles before they arrive.
Feed URL: https://www.gameinformer.com/

Title: A Hands-On Look At Skull And Bones' Season 1 Endgame Content
Published Date: Thu, 25 Jan 2024 11:00:00 CST
Link: https://www.gameinformer.com/hands-on-preview/2024/01/25/a-hands-on-look-at-skull-and-bones-season-1-endgame-content

Title: Palworld's Early Access Roadmap Includes PvP, Raid Bosses, Crossplay, And More
Published Date: Wed, 24 Jan 2024 08:34:15 CST
Link: https://www.gameinformer.com/news/2024/01/24/palworlds-early-access-roadmap-includes-pvp-raid-bosses-crossplay-and-more

Title: WWE 2K24 Celebrates 40 Years Of Wrestlemania
Published Date: Mon, 22 Jan 2024 07:00:00 CST
Link: https://www.gameinformer.com/2024/01/22/wwe-2k24-celebrates-40-years-of-wrestlemania

Title: Trying To Catch Them All In Palworld | Game Informer Live
Published Date: Fri, 19 Jan 2024 12:18:00 CST
Link: https://www.gameinformer.com/gi-live/2024/01/19/trying-to-catch-them-all-in-palworld-game-informer-live

Title: Indiana Jones And The Great Circle Launches This Year, First Gameplay Footage Revealed
Published Date: Thu, 18 Jan 2024 15:08:00 CST
Link: https://www.gameinformer.com/xbox-developer-direct/2024/01/18/indiana-jones-and-the-great-circle-launches-this-year-first

Title: Here's A Deep Dive Of Ara: History Untold, A New Strategy Game From Former Firaxis Developers
Published Date: Thu, 18 Jan 2024 14:42:00 CST
Link: https://www.gameinformer.com/xbox-developer-direct/2024/01/18/heres-a-deep-dive-of-ara-history-untold-a-new-strategy-game-from
```

PRACTICAL:10

Aim: Study of RDF (Resource Description Framework)

• RDF is a standard model for data interchange on the Web. RDF has features that facilitate data merging even if the under lying schemas differ ,and it specifically supports the evolution of schemas overtime without requiring all the data consumers to be changed.

• RDF extends the linking structure of the Web to use URIs to name the relationship between things as well as the two ends of the link (this is usually referred to as a "triple"). Using this simple model, it allows structured and semi structured data to be mixed, exposed, and shared across different applications.

• This linking structure forms a directed, labeled graph, where the edges represent the named link between two resources, represented by the graph nodes. This graph view is the easiestpossiblementalmodelforRDFandisoftenusedineasy-to-understandvisualexplanations.

• Itistheformallanguagefordescribingstructuredinformation.Theprimarygoal of RDF is to exchange data on the web while preserving the original meaning of the data. It is a data model that is used to describe resources. For Example Physical Things, Abstract Concepts, Numbers and Strings. RDF allows the processing of information. RDF representation can be in the form of triples and graphs. RDF graph is a directed graph which is used to serve as a description language for data on the world wide web and other electronic networks. Resources are described using triples. Triples capture the relationship between the subject and the object.

Triples have a subject, predicate and an object. Triples are enclosed within angular brackets.

• Example: Delhi is capital of India

The triple generated from this sentence is : <Delhi> <capital of> <India>