



# CSA 3060 – Introduction to Internet Tech.

## Course Assignment 2004-2005

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## Developing a Music Information Retrieval Tool Using the Amazon.com Web Service.

<b>Aim:</b>	The aim of this assignment is to develop an application that retrieves information from tag data stored in computer audio files and augment it with ratings, artwork and descriptions from the Amazon.com web service.
<b>Technologies:</b>	Web services, http, binary file reading, computer audio.
<b>Functionality:</b>	<p>The functionality exposed should include:</p> <ol style="list-style-type: none"> <li>1. A front end application that lists all computer audio files recursively in a folder (MP3, WMA, OGG, FLAC, AAC).</li> <li>2. The top part of the application should list all audio files and folders in a specified folder: <div data-bbox="638 1029 1255 1386" data-label="Image"> </div> </li> <li>3. Whenever an audio file is clicked, its tag information must be read to determine the name of the song, album, year, artist, genre etc...</li> <li>4. The name of the artist and album must be used as search arguments to the Amazon.com web service to retrieve the following: <ol style="list-style-type: none"> <li>a. The artwork for the album.</li> <li>b. The URL of the album on the Amazon.com website.</li> <li>c. Further album details such as ASIN codes etc...</li> </ol> </li> <li>5. The web service will return the URL for the album image on the Amazon site. An HTTP connection must be made to download the image locally.</li> <li>6. The web service will also return the URL of the album page on the Amazon site. The HTML document being pointed to must be retrieved and parsed to locate the user Ratings value of the album, the editorial description etc... E.g.: <pre> it=12 border=0 alt="4 out of 5 stars" Based on 140 reviews. &lt;a href="/gp/customer-revie </pre> </li> <li>7. Regular expressions may be used for this purpose.</li> <li>8. The bottom end of the user interface should display the following information:</li> </ol>

	<ol style="list-style-type: none"> <li>a. Song Name (from Tag)</li> <li>b. Artist Name (from Tag)</li> <li>c. Album Name (from Tag)</li> <li>d. Year (from Tag)</li> <li>e. Genre (from Tag)</li> <li>f. Album Cover (from Amazon WS)</li> <li>g. Amazon Rating (from Amazon WS)</li> <li>h. Editorial Review (from Amazon WS)</li> <li>i. Link to Amazon.com page (from Amazon WS)</li> <li>j. ASIN (from Amazon WS)</li> </ol> <p>9. If a file is unrecognized upon clicking (e.g. clicking a spreadsheet) in the user interface, the bottom portion of the application should display an appropriate "unrecognized file" error.</p>
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Notes:

1. MP3 ID3v1, ID3v1.1 MUST be supported.
  2. Tags from two of the following formats MUST be supported: ID3v2.x, OGG, FLAC.
  3. WMA tags may be read using shell extension DLLs (optional).
- The program must be accompanied by a technical report describing any implementation details and techniques used to complete the assignment.
  - Refer to the assignment instructions at <http://webster.cs.um.edu.mt/kguil/assignment.html>