# Movie Collection Database - Problem Analysis & Requirements

## Problem Analysis & Requirement

The chosen domain is a movie collection database, useful for querying movies, actors, and genres, along with their interrelations. This could extend into a more complex application where users search by genre, director, or actor.

## Main Groups (Level 1 Nodes)

The main groups in the XML structure include the following:

* 1. Movies: Stores details of each movie, including title, year, and associated actors (as references).
* 2. Actors: Lists actors with unique attributes like nationality.
* 3. Genres: Defines genre categories for movies.

## Attributes as Keys

The XML schema uses specific attributes to manage relationships and ensure unique identification within the movie collection database:

* • Each movie element uses an 'id' attribute for unique identification and a 'genreId' attribute to link to a genre.
* • Actor references within a movie element use 'actorId' attributes to link back to the actor definitions.

## Parsers Used

The following parsers are used to process and handle the XML data for the movie collection:

* • DOMParser
* • SAXParser
* • Fast-xml-parser

## Pipeline Operations

Potential operations to query and utilize the movie collection data include:

* • List all movies of a particular genre.
* • Find all movies by a specific director.
* • List all movies involving a particular actor.

## XML Document

The XML document used in this database can be found at the following link: https://github.com/dragosflow/movie-library-xml/blob/main/electron/assets/data/movieCollection.xml