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chs: A Chess Schema

**Introduction**

The theme of this Application Profile is the great game of chess. This schema was created to help users navigate objects created in relation to chess. The amount of content and material surrounding chess has only increased as well as the interest in the ancient game. It may be difficult for beginners to navigate all the objects without prior knowledge of the game. Some advanced players or teachers may need to access a specific bit of material on a topic like endgames, for example. A proper metadata schema would help users navigate the selected objects and be able to better find what is needed.

With the recent increase in interest in chess, there has been a boom in content created surrounding the topic. Creators are using platforms like YouTube and Twitch to create videos about chess. Chess.com has become the premier site for playing the game itself as well as learning the basics and strategy. The recent uptick in exposure for chess does not provide the only relevant material, however. Chess books about strategic openings, middlegame theory, and endgames have been around for decades. Physical chess boards and pieces have an even longer history. All the objects could benefit from a metadata schema, that allows for users to differentiate between which objects are more recent, the medium of the objects, and the specific subtopic that it relates to within the overall theme.

**Objectives/functional requirements for schema**

The high-level objectives of this schema can be broken down into two functional requirements for the user to achieve. The first being the ability to facilitate access to materials that can be used to improve skill level and the second being to facilitate entertainment. The different types of users of this schema can be varied, but I have narrowed it to four major users: beginner players, advanced players, teachers, and observers. I anticipate the first functional requirement for this schema (to facilitate access to material to aid in improvement in skill level) being achieved by both player user groups and the teacher user group. While technically all four user groups could benefit from the facilitation of entertaining or collectible content, I anticipate the observer user group would benefit more so and more often in that capacity.

User Groups:

1. Beginner Players
   1. These are individuals who want to either get started playing chess or are relatively novice.
   2. They would use this type of collection to learn the basics of chess, how the pieces move, the rules of the game, and basic strategies to help them improve.
   3. Beginner players will use this collection on an entry or surface level. They will most likely not have the background to search by specific terminology, but rather conduct broader searches on key concepts. (e.g., “Chess rules”)
   4. They will benefit mostly from metadata that facilitates resource discovery and information retrieval, as well as resource linking with related resources.
2. Advanced Players
   1. These are individuals who range from intermediate skill level all the way to master level players. They understand the basics and rules wholly.
   2. They would use this type of collection to improve specific parts of their game, read up on theory and strategy, study games played by themselves or higher-level players, and/or discover new openings to use.
   3. Advanced players would likely use this collection in a variety of ways. They are familiar with chess terminology, nuanced rules, and the names of certain opening strategies.
   4. They would benefit from a controlled vocabulary as they will likely filter their query by specific chess related terms. (e.g., Topics: Chess- rook and pawn endgames.)
   5. This group will benefit from metadata that facilitates resource discovery as well but will also benefit more from metadata that facilitates resource usage.
3. Teachers
   1. These individuals are users who will seek to instruct others and provide the content used by both advanced and beginner players.
   2. They would use this collection to ensure originality of their work, derive inspiration from existing content, design their own course using found resources.
   3. Teachers will use this collection by keeping record of the content they are researching and collecting citation data to credit others work if used in their own.
   4. They will search by citation data so most likely publishing year, title, creator, etc.
   5. This user group will benefit mainly from metadata that supports resource management.
4. Observers
   1. These are individuals whose main objective is not to play the game but rather to watch. They are looking to enjoy the game as a casual fan or collector.
   2. They would use this type of collection to discover creators to watch, entertaining books to read, or a nice chess board to collect and display.
   3. Observers will use this collection by seeking out specific people or areas of interest.
   4. They will search by creator name or physical description of an item.
   5. This user group will benefit mostly from metadata that facilitates resource discovery and information retrieval.

These examples only scratch the surface of uses for the different types of metadata surrounding chess. Many users’ needs and user groups will crossover in practice.

**Conceptual model**

A picture containing diagram

Description automatically generated

**Application profile documentation**

**Namespace**

|  |  |
| --- | --- |
| **Prefixes** | **Namespaces** |
| dc | https://www.dublincore.org/specifications/dublin-core/dcmi-terms/ |
| mods | http://www.loc.gov/standards/mods/mods.xsd |
| chs | Local URI |

**Elements**

|  |  |
| --- | --- |
| **Element Name** | **<titleInfo>** |
| Namespace | mods:titleInfo |
| URI | https://www.loc.gov/standards/mods/userguide/titleinfo.html |
| Definition | A word, phrase, character, or group of characters, normally appearing in a resource, that names it or the work contained in it |
| Obligation | M |
| Repeatability | NR |
| Value rules | N/A |
| Subelements | <title>, <subtitle> |
| Attributes | N/A |
| Example | <mods:titleInfo>  <mods:title>Silman's Complete Endgame Course </mods:title>  <mods:subtitle> from beginner to master </mods:subtitle>  </mods:titleInfo> |
| Notes | N/A |
|  |  |

|  |  |
| --- | --- |
| **Element** | **<subject>** |
| Namespace | dc:subject |
| URI | http://purl.org/dc/terms/subject |
| Definition | A topic of the resource |
| Obligation | M |
| Repeatability | R |
| Value rules | Controlled Vocabulary : FAST |
| Subelements | N/A |
| Attributes | N/A |
| Example | <dc:subject>  Chess  </dc:subject> |
| Notes | N/A |

|  |  |
| --- | --- |
| **Element** | **<physicalDescription>** |
| Namespace | mods:physicalDescription |
| URI | https://www.loc.gov/standards/mods/userguide/physicaldescription.html |
| Definition | Physical characteristics of the resource |
| Obligation | O |
| Repeatability | R |
| Value rules | Syntax: metric system |
| Subelements | <form>, <extent> |
| Attributes | N/A |
| Example | <mods: physicalDescription>  38.1 cm x 38.1 cm x 2.54 cm  </mods:physicalDescription> |
| Notes | N/A |

|  |  |
| --- | --- |
| **Element** | **<skillRating>** |
| Namespace | chs:skillRating |
| URI | Local element |
| Definition | Level of skill required to understand material of resource |
| Obligation | M |
| Repeatability | R |
| Value rules | Local Controlled Vocabulary: Beginner, Intermediate, Advanced, Master, All |
| Subelements | none |
| Attributes | n/a |
| Example | <chs:skillRating>  Beginner  </chs:skillRating> |
| Notes | N/A |

|  |  |
| --- | --- |
| **Element** | **<originInfo>** |
| Namespace | mods:originInfo |
| URI | https://www.loc.gov/standards/mods/userguide/origininfo.html |
| Definition | Information about the origin of the resource, including place of origin or publication, publisher/originator, and dates associated with the resource |
| Obligation | O |
| Repeatability | R |
| Value rules | Syntax: (for dates) YYYYMMDD |
| Subelements | <date>, <place>, <publisher> |
| Attributes | n/a |
| Example | <mods:originInfo>  <mods:publisher>Siles Press</mods:publisher>  <mods:place>Los Angeles, CA</mods:place>  </mods:originInfo> |
| Notes | N/A |

|  |  |
| --- | --- |
| **Element** | **<creator>** |
| Namespace | dc:creator |
| URI | http://purl.org/dc/terms/creator |
| Definition | An entity responsible for making the resource |
| Obligation | M |
| Repeatability | R |
| Value rules | FAST: but many of the names associated with the objects may not be in any name authority. For Syntax- Last name, First Name |
| Subelements | none |
| Attributes | n/a |
| Example | <dc:creator>  Rozman, Levy  </dc:creator> |
| Notes | N/A |

|  |  |
| --- | --- |
| **Element** | **<language>** |
| Namespace | mods:language |
| URI | https://www.loc.gov/standards/mods/userguide/language.html |
| Definition | The language in which the content of a resource is expressed |
| Obligation | O |
| Repeatability | NR |
| Value rules | authority: iso639code |
| Subelements | languageTerm |
| Attributes | n/a |
| Example | <mods:language>  <mods:languageTerm authority="iso639-2b" type="code">eng</mods:languageTerm>  </mods:language> |
| Notes | N/A |

|  |  |
| --- | --- |
| **Element** | **<location >** |
| Namespace | mods:location |
| URI | https://www.loc.gov/standards/mods/userguide/location.html |
| Definition | The institution or repository holding the resource, the physical location of the resource, and/or the electronic location for a digital resource in the form of a URL. |
| Obligation | O |
| Repeatability | NR |
| Value rules | syntax: https… |
| Subelements | <url> |
| Example | <mods:location>  <mods:url>https://www.chess.com/play </mods:url>  </mods:location> |
| Notes | N/A |

|  |  |
| --- | --- |
| **Element** | **<bio >** |
| Namespace | chs:bio |
| URI | local element |
| Definition | Information about a creator or event that shows why they are relevant to the schema. |
| Obligation | O |
| Repeatability | NR |
| Value rules | n/a |
| Subelements | none |
| Attributes | n/a |
| Example | <chs:bio>  Hikaru Nakamura is an American Grandmaster currently the world #1 Blitz chess player, and avid streamer/ content creator.  </chs:bio> |
| Notes | N/A |

**Meeting Functional Requirements**

This schema provides each user group with the tools and resources they need to fulfill their functional requirements. Beginner players will be able to search the schema by broad subject to find objects in the schema that cater to their need to learn the basics of the game. The schema will also fulfill the requirements of advanced players by providing them with more detailed filtering of <skillRating> to determine if a book or video will be appropriate for their requirement of improving/ perfecting their craft. Teacher group users will be able to locate citation information with the inclusion of the <originInfo> element, facilitating the creation of courses and lessons built up with other resources. Finally, the observer will be able to identify the <physicalDescription> of an object and determine if it is worth collecting. They will also be able to see the content creator and title of a particular video and determine for themselves if it is worth viewing for entertainment value. All user groups can cross over in practice and the elements and objects chosen for the schema will help facilitate all the users’ needs.

**List of items**

* Silman’s Complete Endgame Course, by Jeremy Silman (book)
* Chess Basics by David Levens (book)
* The Art of Attack in Chess by Vladimir Vukovicm (book)
* Fighting Chess: My Games and Careers by Garry Kasparov (book)
* How to Reasses Your Chess by Jeremy Silman (book)
* Learn the London with Hikaru by Hikaru Nakamura (video)
* Premoving a Whole Game Against Magnus Carlsen by Hikaru Nakamura (video)
* The BEST Beginner Chess Opening by Levy Rozman [GothamChess] (video)
* Want to DOUBLE your chess elo? By Levy Rozman [GothamChess] (video)
* GM Fabiano Caruana Hustles Trash Talker with BRUTAL Mate! By Coffee Chess (video)
* GothamChess on Twitch (live stream)
* GMHikaru on Kick (live stream)
* e4 New York Style by Levy Rozman (course)
* Chess Board (physical item)
* Game Platform by Chess.com (online platform)
* Levy Rozman (creator)
* Hikaru Nakamura (creator)
* Magnus Carlsen (creator)
* Paul Morphy (creator)
* The Opera Game by Paul Morphy (famous games)
* Deep Blue v. Garry Kasparov (famous games)

**Metadata Records**

**<?**xml version=”1.0” encoding=”UTF-8”?>

<chs xmlns= “local URI here”>

<mods:titleInfo>

<mods:title>Silman's Complete Endgame Course </mods:title>

<mods:subtitle> from beginner to master </mods:subtitle>

</mods:titleInfo>

<dc:creator>

Silman, Jeremy

</dc:creator>

<dc:subject>

Chess

</dc:subject>

<dc:subject>

Chess – endgames

</dc:subject>

<chs:skillRating>

All

</chs:skillRating>

<mods:originInfo>

<mods:publisher>Siles Press</mods:publisher>

<mods:place>Los Angeles, CA</mods:place>

</mods:originInfo>

<mods:language>

<mods:languageTerm authority="iso639-2b" type="code">eng</mods:languageTerm>

</mods:language>

</chs>

**<?**xml version=”1.0” encoding=”UTF-8”?>

<chs xmlns= “local URI here”>

<mods:titleInfo>

<mods:title>Chess Basics </mods:title>

</mods:titleInfo>

<dc:creator>

Levens, David

</dc:creator>

<dc:subject>

Chess

</dc:subject>

<dc:subject>

Chess – Openings

</dc:subject>

<chs: skillRating>

Beginner

</chs:skillRating>

<chs: skillRating>

Intermediate

</chs:skillRating>

<mods:language>

<mods:languageTerm authority="iso639-2b" type="code">eng</mods:languageTerm>

</language>

</chs>

**<?**xml version=”1.0” encoding=”UTF-8”?>

<chs xmlns= “local URI here”>

<mods:titleInfo>

<mods:title>e4 New York Style</mods:title>

</mods:titleInfo>

<dc:creator>

Rozman, Levy

</dc:creator>

<dc:subject>

Chess

</dc:subject>

<dc:subject>

Chess – Openings

</dc:subject>

<dc: subject>

Web-based Instruction

</dc:subject>

<mods:physicalDescription>

<mods:form authority="marcform">electronic</mods:form>

</mods:physicalDescription>

<chs:skillRating>

All

</chs:skillRating>

<mods:location>

<mods:url>https://chessly.com/courses/812a7981-0439-4de4-a86b-35b9833eea25</mods:url>

</mods:location>

<mods:languageTerm authority="iso639-2b" type="code">eng</mods:languageTerm>

</mods:language>

</chs>

**<?**xml version=”1.0” encoding=”UTF-8”?>

<chs xmlns= “local URI here”>

<mods:titleInfo>

<mods:title>The Opera Game </mods:title>

</mods:titleInfo>

<dc:creator>

Morphy, Paul

</dc:creator>

<dc:creator>

Karl II, Duke of Brunswick

</dc:creator>

<dc:creator>

de Vauvenargues, Count Isouard

</dc:creator>

<dc:subject>

Chess

</dc:subject>

<dc:subject>

Chess – Middlegame

</dc:subject>

<dc: subject>

Chess -- Sacrifices

</dc:subject>

<chs: skillRating>

Intermediate

</chs:skillRating>

<chs: skillRating>

Advanced

</chs:skillRating>

<chs: skillRating>

Master

</chs:skillRating>

<chs:bio>

The Opera Game is one of the most famous games ever played and is used heavily by chess instructors to highlight the importance of piece development and sacrifice.

</chs:bio>

</chs>

**<?**xml version=”1.0” encoding=”UTF-8”?>

<chs xmlns= “local URI here”>

<mods:titleInfo>

<mods:title> Chess Set </mods:title>

</mods:titleInfo>

<dc: creator>

Chess Armory

</dc:creator>

<mods: physicalDescription>

38.1 cm x 38.1 cm x 2.54 cm

</mods:physicalDescription>

<mods:physicalDescription>

<mods:extent> 34 pieces (2 extra queens)</mods:extent>

</mods:physicalDescription>

<dc:subject>

Chess

</dc:subject>

<dc:subject>

Chess sets

</dc:subject>

<chs:skillRating>

All

</chs:skillRating>

</chs>

**<?**xml version=”1.0” encoding=”UTF-8”?>

<chs xmlns= “local URI here”>

<mods:titleInfo>

<mods:title> Game Platform</mods:title>

</mods:titleInfo>

<dc:creator>

Chess.com

</dc:creator>

<mods:physicalDescription>

<mods:form authority="marcform">electronic</mods:form>

</mods:physicalDescription>

<dc:subject>

Chess

</dc:subject>

<dc:subject>

Internet games

</dc:subject>

<chs:skillRating>

All

</chs:skillRating>

<mods:location>

<mods:url>https://www.chess.com/play</mods:url>

</mods:location>

</chs>