



Lebanese University

Faculty of Information

Branch II

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PhD in Data Mining - Computer Science

Metadata

Data Science - Semester 4

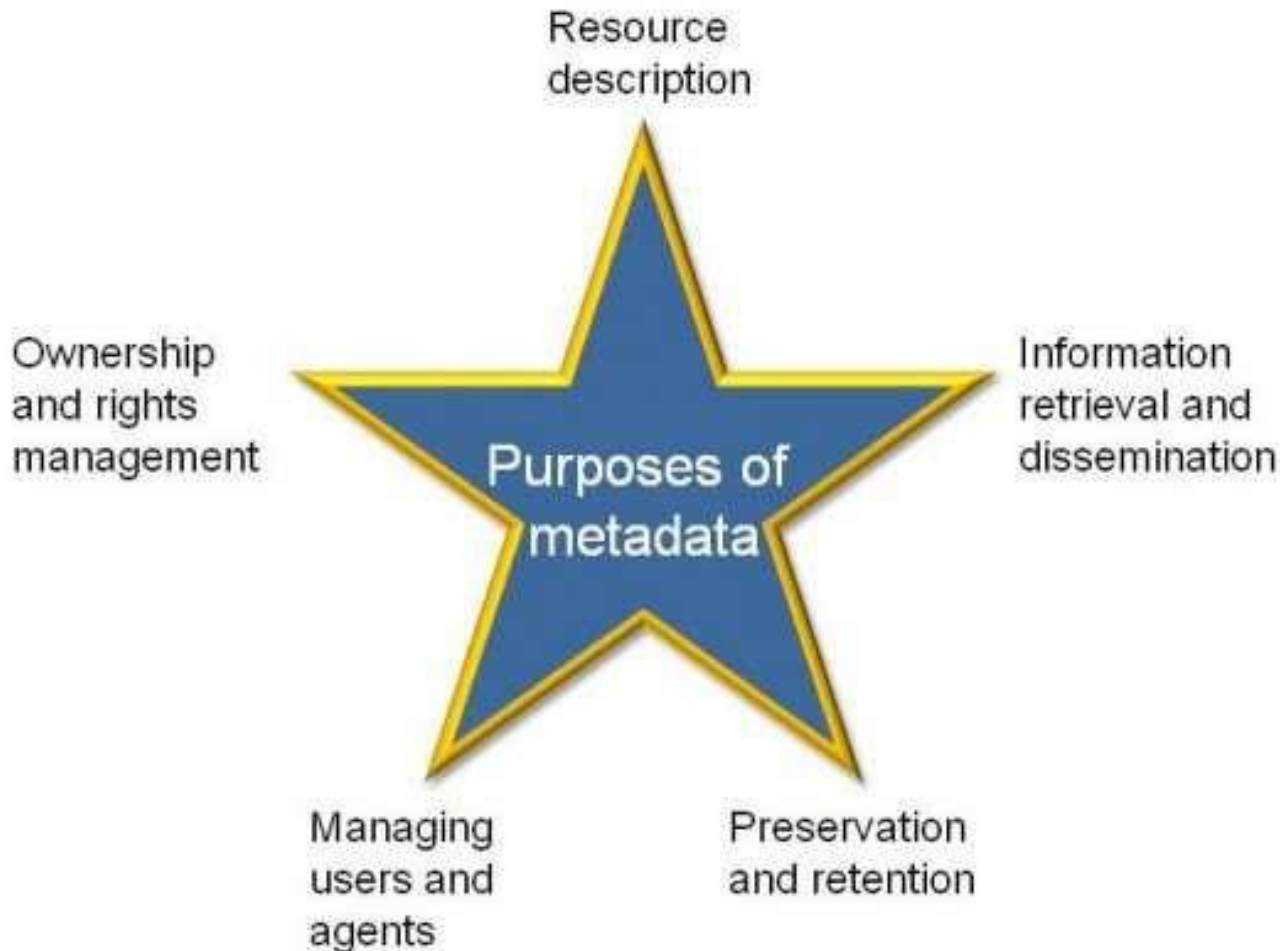
Why do we need Metadata?

Metadata is created and collected because it enables and improves use of that data. Metadata ensures that we will be able **find data, use data, and preserve and re-use data in the future.**

- › To enable discovery of your digitized material
- › To help you organize your digitized material
- › To support archiving and preservation



Purposes of Metadata



Functions of Metadata

- Metadata serves following functions :

› Resource discovery

- › Allowing resources to be found by relevant criteria;
- › Identifying resources;
- › Bringing similar resources together;
- › Distinguishing dissimilar resources;
- › Giving location information.



Functions of Metadata

- › **Organizing e-resources**
- › Organizing links to resources based on audience or topic.
- › Building these pages dynamically from metadata stored in databases.

Functions of Metadata

Facilitating interoperability

- Using defined metadata schemes, shared transfer protocols, and crosswalks between schemes, resources across the network can be searched more seamlessly.
 - Cross system search, e.g. using z39.50 protocol
 - Metadata harvesting e.g. using OAI protocol

Functions of Metadata

› Digital identification

- › Elements for standard number, e.g. ISBN.
- › The location of digital object may also given using :
 - A file name
 - A URL

Functions of Metadata

› Archiving and preservation

› Challenges :

- Digital information is fragile and can be corrupted or altered;
- It may become unusable as storage technologies change.

› Metadata is key to ensuring that resources will survive and continue to be accessible into the future. Archiving and preservation require special elements:

- to track the lineage of a digital object,
- to detail its physical characteristics
- to document its behavior in order to emulate it in future technologies.