**Week 1 – Data Model Assignment: Logical Data Modeling**

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**Data Model of Choice: Image Representation**

For this week’s task, I will be working on the library of digital assets model. Below is an image representation of the data model.

Diagram

Description automatically generated

**List of Library of Digital Assets Model Entities**

Listed below are all entities in the data model, as shown in the image representation above.

* Asset
* Asset\_Creators
* Events
* Format\_Types
* Publishing\_Devices
* Recording\_Devices

**List of Each Library of Digital Assets Model Entities Attributes**

* **Asset**
  + date\_of\_creation
  + asset\_title
  + location
  + description
  + playing\_titme
  + other\_details
* **Asset\_Creator**
  + first\_name
  + middle\_name
  + last\_name
  + other\_details
* **Events**
  + event\_name
  + event\_description
  + start\_date
  + end\_date
  + other\_details
* **Format\_Types**
  + Format\_type\_description
* **Publishing\_Devices**
  + device\_name
  + device\_description
  + supplier
  + other\_details
* **Recording\_Devices**
  + device\_name
  + device\_description
  + supplier
  + other\_details

**List of Each Library of Digital Assets Model Entity’s Primary Keys**

* **Asset**
  + asset\_ID
* **Asset\_Creator**
  + creator\_id
* **Events**
  + event\_id
* **Format\_Types**
  + format\_type\_code
* **Publishing\_Devices**
  + device\_id
* **Recording\_Devices**
  + recording\_device\_id

**List of Each Library of Digital Assets Model Entity’s Foreign Keys**

* **Asset**
  + asset\_ID
  + creator\_ID
  + event\_ID
  + format\_type\_code
* **Asset\_Creator**
  + This entity has no foreign keys
* **Events**
  + This entity has no foreign keys
* **Format\_Types**
  + This entity has no foreign keys
* **Publishing\_Devices**
  + format\_type\_code
* **Recording\_Devices**
  + format\_type\_code

**Relationships Between Library of Digital Assets Model Entities**

An entity relationship model represents relational connectivity among data model entities. Its graphical representation is called an Entity relationship diagram (ERD). Listed below are the relationship among entities, and beside each entity’s relationships are the relationship annotations.

* Relationship between the Asset\_Creators entity and Asset entity **(1:M)**.
  + Asset\_Creators can generate zero or more Assets, but Assets can be generated once by Asset\_Creators.
* Relationship between the Events entity and the Assets entity. **(1:M)**.
  + Events can generate zero or more assets, but Assets can be generated once by Events.
* Relationship between the Format\_Types entity and the Assets entity **(1:M)**.
  + Format\_types can generate zero or more Assets, but Assets can be generated once by Format\_Types.
* Relationship between the Format\_Types and the Publishing\_Devices **(1:M)**.
  + Format\_Types can generate zero or more Publishing\_Devices, but Publishing\_Devices can be generated once by Format\_Types.
* Relationship between the Format\_Types and the Recording\_Devices **(1:M)**.
  + Format\_Types can generate zero or more Recording\_Devices, but Recording\_Devices can be generated once by Format\_Types.

**Associative Relationships Between Library of Digital Assets Model Entities**

The data model shows a 1:M entity relationship between parent and child entities. This is best identified using a data model's foreign key and primary key symbols. Indicated below are some of the entity relationships identified from the data model.

* Associative relationship between Asset\_Creators entity and Assets entity
  + The Creator\_ID attribute in the Asset\_Creators entity is used to match the Creator\_ID attribute in the Assets entity.
* Associative relationship between Events entity and Assets entity
  + The Event\_ID attribute in the Events entity is used to match the Event\_ID attribute in the Assets entity.
* Associative relationship between Format\_Types entity and Assets entity
  + The Format\_Type\_Code attribute in the Format\_Types entity is used to match the Format\_Type\_Code attribute in the Assets entity.
* Associative relationship between Format\_Types entity and Recording\_Devices entity
  + The Format\_Type\_Code attribute in the Format\_Types entity is used to match the Format\_Type\_Code attribute in the Recording\_Devices entity.
* Associative relationship between Format\_Types entity and Publishing\_Devices entity
  + The Format\_Type\_Code attribute in the Format\_Types entity is used to match the Format\_Type\_Code attribute in the Publishing\_Devices entity.