**Conceptual Design & Logical Design**

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1. **Conceptual Design:**
2. Handling Entities:

* Museum.
* Account.
* Displayed Object.
* Target.

1. ER Diagram (with pathways):



1. Data Dictionary:

Data Dictionary showing a description of relationship:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Entity name** | **Multiplicity** | **Relationship** | **Multiplicity** | **Entity name** |
| Museum | 1..1 | Has | 0..\* | Display Object |
| Account | 1..1 | Manages | 0..\* | Display Object |
| Displayed Object | 1..\* | Has | 1..1 | Target |
| Account | 1..1 | Represents | 1..1 | Museum |

1. **Logical Design:**
2. Translate To Table:

Account (**account\_id**, museum\_id, username, password, permission, status, created\_date).

Museum (**museum\_id**, name, house\_no, street, city, phone\_no, website, email).

Displayed\_object (**dob\_id**, target\_id , museum\_id, name, text\_description, image, audio, video, model, status).

Target (target\_id, name, image, object\_scan, metadata).

Commentary (**comm\_id**, dob\_id, account\_id, message, sent\_time).

1. Data Dictionary:

Data Dictionary showing a description of attribute:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table name** | **Attribute** | **Description** | **Data Type and Length** | **Null** | **Multi-valued** |
| Account | account\_id  museum\_id  username  password  permission  status  created\_date | Uniquely identify an account.  Uniquely identify a museum.  Name of account use to login.  Password of account use to login.  The role of account to define which kind of account is.(0 is Admin account and 1 is Museum account)  Current status of an account.(0 is De-active and 1 is Active)  The time when account was created. | Int  Int  Nvachar(50)  Nvachar(16)  Bit  Bit  Datetime | No  Yes  No  No  No  No  No | No  No  No  No  No  No  No |
| Museum | museum\_id name  address  house\_no  street  city  phone\_no  website  email | Uniquely identify a museum.  Public name of museum.  Address of museum.  Phone number of museum.  Public website of museum.  Email of museum | Int  Nvachar(150)  Nvachar(30)  Nvachar(30)  Nvachar(30)  Nvachar(20)  Nvachar(50)  Nvachar(50) | No  No  No  No  No  No  No  No | No  No  Yes  Yes  Yes  Yes  Yes  Yes |
| Displayed\_object | dob\_id  museum\_id  target\_id  name  text\_description  image  audio  video  model  status | Uniquely identify an object that is displayed.  Uniquely identify a museum.  Uniquely identify an object’s target.  Name of an object that is displayed.  Information of object of museum in text format.  Link to information of object of museum in image format.  Link to information of object of museum in audio format.  Link to information of object of museum in video format.  Link to information of object of museum in 3D model format.  Status of object’s information. | Int  Int  Int  Nvachar(150)  Nvachar(500)  Nvachar(150)  Nvachar(150)  Nvachar(150)  Nvachar(150)  int | No  No  No  No  Yes  Yes  Yes  Yes  Yes  No | No  No  No  No  No  No  Yes  Yes  Yes  No |
| Target | target\_id  name  image  object\_scan  metadata | Uniquely identify an object’s target.  Name of target.  Link to image target of object that can be used as target.  Link to object scan file of object that can be used as target.  Link to metadata of target. | Int  Nvachar(30)  Nvachar(150)  Nvachar(150)  Nvachar(500) | No  No  Yes  Yes  Yes | No  No  Yes  Yes  Yes |
| Commentary | comm\_id  dob\_id  account\_id  message  sent\_time | Uniquely identify a commentary.  Uniquely identify an object that is displayed.  Uniquely identify an account.  An expression of opinions or offering of explanations explanations about object’s information. | Int  Int  Int  Nvachar(500) | No  No  No  No  No | No  No  No  No  No |

1. Table Diagram

