**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**, email, password, museum\_id, permission, status, created\_date).

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

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

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

Guest\_Request (**g\_request\_id**, email, password, museum\_name, house\_no, street, city, phone\_no, website, status).

Member\_Request (**m\_request\_id**, account\_id, type, dob\_id, status, 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  email  password  museum\_id  permission  status  created\_date | Uniquely identify an account.  Email of account that use to login.  Password of account use to login.  Uniquely identify a museum.  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  Nvarchar(50)  Nvarchar(16)  Int  Bit  Tinyint  Double | No  No  No  Yes  No  No  No | No  No  No  No  No  No  No |
| Museum | museum\_id name  address  house\_no  street  city  phone\_no  website | Uniquely identify a museum.  Public name of museum.  Address of museum.  Phone number of museum.  Public website of museum. | Int  Nvarchar(150)  Nvarchar(30)  Nvarchar(30)  Nvarchar(30)  Nvarchar(20)  Nvarchar(50) | No  No  No  No  No  No  No | No  No  No  No  No  No  No |
| Displayed\_object | dob\_id  museum\_id  target\_id  name  text\_description  image  audio  video  model  current\_status  last\_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.  Current tatus of object’s information. (-1 is Deleted, 0 is Pending, 1 is Available, 2 is Active.)  Last tatus of object’s information. | Int  Int  Int  Nvarchar(150)  Nvarchar  Nvarchar  Nvarchar  Nvarchar  Nvarchar  Tinyint  Tinyint | No  No  No  No  Yes  Yes  Yes  Yes  Yes  No  Yes | No  No  No  No  No  No  Yes  Yes  Yes  No  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  Nvarchar(30)  Nvarchar  Nvarchar  Nvarchar | No  No  Yes  Yes  Yes | No  No  Yes  Yes  Yes |
| Guest\_Request | g\_request\_id  email  password  museum\_name  museum\_ address  house\_no  street  city  phone\_no  website  status | Uniquely identify a guest request.  Email of guest museum whose want to request to become member museum  Password of account use to login.  Public name of museum.  Address of museum.  Phone number of museum.  Public website of museum.  Current status of request (0 is pending, 1 is approved) | Int  Nvarchar(50)  Nvarchar(16)  Nvarchar(150)  Nvarchar(30)  Nvarchar(30)  Nvarchar(30)  Nvarchar(20)  Nvarchar(50)  Tinyint | No  No  No  No  No  No  No  No  No  No | No  No  No  No  No  No  No  No  No  No |
| Member\_Request | m\_request\_id  account\_id content  type  dob\_id  reason  status  sent\_time | Uniquely identify a member request.  Uniquely identify an account.  Content of request from member.  Type of request (0 is request to delete and 1 is request to change).  Id of display object that member want to work on.  Show out why member want to make the request.  Current status of request (0 is pending, 1 is approved)  Time request was sent | Int  Int  Tinyint  Int  Nvarchar  Tinyint  Double | No  No  No  No  Yes  No  No | No  No  No  No  No  No  No |

1. Table Diagram

