Aqeel Ahlam: 29262674

<u>Assumptions made for Assignment 1B</u>
Relationships: Includes changes made to Conceptual Model:

<u>1. Artwork & Exhibition:</u>
1. An Artwork will be exhibited in a minimum of 0 and a maximum of Many Exhibitions. (An Exhibition is Optional to the Artworks- Artworks don't have to be in an Exhibition)
2. An Exhibition must exhibit a minimum of 1 and a maximum of 1 Artwork. (Each Artwork is unique, so the exhibition is for each instance of an Artwork. Artwork is Mandatory to an Exhibition

<u>2. Artwork & Style:</u>
1. An Artwork is assigned a minimum of 1 and a maximum of 1 Style. (As every Artwork is assigned a Style, Style is Mandatory to Artwork)
2. A Style will have a minimum of 0 and a maximum of Many Artworks. (Not all styles will be there in Artwork, Artwork is optional to the Style: i.e When a new Style is introduced, it may not have any Artworks assigned to it)

<u>3. Exhibition & Sale:</u>
1. When an Artwork is being sold, MAU considers 1 Sale for every Artwork(One receipt for each Artwork)
2. Each Sale is for 1 Artwork.

<u>4. Style & Style:</u>
1. If the style_artwork is a parent, it will not have any art_style as parent is the top level(art_style will be null in this case).
2. Another possibility is that style_artwork will have many child styles, hence the many. This is also optional in the case where we introduce a new style to be the parent, it may not have any child styles to begin with.

style_artwork	art_style
1	Null (It's the Parent style)
2	1
3	Null
4	1

- Using the above example, I can say that style_artwork 1 & 3 are parent styles.
- style_artwork 2 & 4 both have a parent which is style_artwork 1. Therefore, 1 style_artwork can have many art_styles (children)
- style_artwork 3 is a parent style with no children. (Hence Minimum Cardinality is 0)

Artwork & Media Description:
1. Each Artwork is assigned a minimum of 1 and a maximum of 1 Media Description.
2. A media description is assigned to a min of 0 (case where a new media description is introduced) and a maximum of Many Artworks (case where many Artworks can be of the same material)

Artwork & Current Status:
1. An Artwork must have a minimum of 1(case where an Artwork will have a minimum of one status which could be "In MAU Warehouse") and a maximum of Many Status(case where the Artwork is being moved around)
2. Each Current Status Must be associated with a minimum of 1 and a maximum of 1 Artwork. (If there is a status, an Artwork is Mandatory).

Gallery & Current Status:
1. A gallery is involved in a minimum of 0(When no Gallery is associated. "When Artwork is in MAU") and a maximum of Many(case where the same gallery is associated multiple times, or different Gallery is associated) Status
2. When there is a status, it can have a minimum of 0(When no Gallery is associated with that status) and a max of 1(If a Gallery is involved with the status)

Keys(Surrogate):

In Exhibition:
As the Exhibition entity had a composite primary key(of 3 different Keys), I made those attributes unique and introduced a new Surrogate Key.

In Media Description:
I created a new attribute media_id as a surrogate key to lookup the media description.

In Current Status:
Since assignment requires at least one Surrogate, I decided to leave Current Status alone as the Composite Primary key is Numeric and Date which allows for a fast lookup.

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Entities:

<u>Style:</u>

This Entity represents the style of the work. Even if we enter the child style, we can still derive the parent style, and we can also have the style to be the parent style.

<u>Exhibition:</u>

This entity holds information regarding an exhibition hosted by the Gallery, and also has the Artworks it has on display.

Attributes:

<u>In Media Description:</u>

media_id: This attribute is created to be a Surrogate Key for the Media Description (Lookup Table) Entity.

<u>In Exhibition:</u>

exhibition_no: This attribute is created to be a Surrogate Key for the Exhibition Entity.

<u>In Style:</u>

art_style: This is a foregin key of the Primary key (Since its a Unary Relationship, I renamed the attribute to clear confusion)