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<u>Assumptions made for Assignment 1A</u>

<u>Relationships:</u>

<u>1. Artwork & Artist:</u>
   1. An Artist paints a minimum of one Artwork, and a max of many Artworks.
   2. An Artwork is painted by a minimum of one Artist and a maximum of one Artist (An Artwork has to have an Artist)

<u>2. Artwork & Exhibition:</u>
   1. An Artwork is exhibited at one exhibition at a given time. One artwork can't be in many exhibitions at the same time. At the same time, a Gallery may choose to display an Artwork, hence the cardinality of zero or one is used.
   2. An Exhibition needs to have a minimum of one Artwork and a maximum of many Artworks as there won't be a point in hosting an Exhibition without any Artworks.

<u>3. Artwork & Style:</u>
   1. An Artwork is assigned a minimum of one and a maximum of one style as per requirement. Each Artwork has to have a Style.
   2. A Style is assigned to a minimum of one and a maximum of many Artworks as there can be many Artworks which follow the same style.

<u>4. Gallery & Exhibition:</u>
   1. A Gallery can host a minimum of zero and a maximum of many Exhibitions. As during maintenance periods, a Gallery won't be able to host any Exhibitions. And also a Gallery can have multiple Exhibitions on the same date.
   2. An Exhibition must be hosted by at least one Gallery. An Exhibition cannot exist without a Gallery. Therefore the cardinality of minimum of one and maximum of one is used.

<u>5. Exhibition & Sale:</u>
   1. An Exhibition can generate a minimum of no sales(zero sales) and a maximum of many sales.
   2. A Sale can only be generated if the Gallery decides to host an Exhibition, therefore I assume that a sale will only be generated during an Exhibition.

<u>6. Sale & Customer:</u>
   1. A sale is made by a minimum of one Customer and a max of one Customer. A sale is unique to each customer.
   2. A Customer makes a minimum of zero sales(when he/she doesnt purchase anything) and a maximum of many sales(when he/she decides to purchase 1 or more Artworks)

Keys:

<u>Artwork:</u>

Since all the artworks are assigned an artwork number specific to an artist, I will incorporate a composite key of "artist_code" & "artwork_no". I take artist_code from the artist table, this makes it unique.

<u>Style:</u>

I assigned style_artwork to be the key as every artwork needs a Style, and a style is unique to each artwork.

<u>Exhibition:</u>
The composite key of artwork_no, artist_code & exhibit_start_date makes it unique to each exhibition, mainly because the Gallery may host two exhibitions on the same date.

<u>Sale, Customer, Artist & Gallery:</u>

This was given clearly in the assignment spec.

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 Exhibition:</u>

exhibition_start_date: This attribute will store the date when the exhibition began in the Gallery.

exhibition_is_artwork_on_display: This attribute is to show that a particular artwork is on display as the gallery can choose to return the artwork back to Mau if it attracts less attention.

<u>In Style:</u>

style_artwork: This stores information about the style, it can either store the Parent or the child. If a child style is put, the parent style can easily be determined.

UML:

Artist:
- I broke down the artistName into firstName and lastName as I assumed artistName to be a composite attribute. (A person has a first name and last name)
- I broke down the artistAddress into street, town and postCode as I assumed artistAddress to be a composite attribute.
- I broke down the artistPhoneNumber into areaCode and lineNumber as I assumed artistPhoneNumber to be a composite attribute. lineNumber is the attribute that holds the rest of the phone number.
- artistNoOfWork is a calculated variable that increments each time an Artist submits a new artwork to MAU.

Gallery:
- I broke down the galleryManager into firstName and lastName as I assumed galleryManager to be a composite attribute. (A person has a first name and last name)
- I broke down the galleryAddress into street, town and postCode as I assumed galleryAddress to be a composite attribute.
- I broke down the galleryContact into areaCode and lineNumber as I assumed galleryContact to be a composite attribute. lineNumber is the attribute that holds the rest of the phone number.

Customer:
- I broke down the customerName into firstName and lastName as I assumed customerName to be a composite attribute. (A person has a first name and last name)
- I broke down the customerAddress into street, town and postCode as I assumed customerAddress to be a composite attribute.
- I broke down the customerPhone into areaCode and lineNumber as I assumed customerPhone to be a composite attribute. lineNumber is the attribute that holds the rest of the phone number.