# ENTITIES:

## 1. Employees

Attributes:
- Name (String) [< 32 characters] NOT NULL
- ID no. (String) [== 7 characters] NOT NULL
- SSN (String) [11] NOT NULL
- Supervisor's SNN (String) [11] NOT NULL
- DOB (Date) [< Today's date] NOT NULL
- Gender (Char) [== 1 character]
- Wage (Int 8, 2) [> 7.25]
- Job title (String) [< 32 characters]
- Location num (Int 3, 0) [<= 15]
- Start of Employment date (Date) [< End date]
- End of employment date (Date) [ > Start date]

PRIMARY KEY (ID no., SNN)
UNIQUE (SSN)
FOREIGN KEY (Location num) REFERENCES Location(Location num)

## 2. Revenue

Attributes:
- Month Date (Date) [<= Today's date] NOT NULL
- Ticket sales (Int 9, 2) [>= 0]
- Merch sales (Int 9, 2) [>= 0]
- Donations (Int 9, 2) [>= 0]
- Employee pay (Int 9, 2) [<= 0]
- Total Revenue (Int 9, 2) [>= 0] NOT NULL

PRIMARY KEY (Month Date)
UNIQUE (Month Date)

## 3. Tickets

Attributes:
- Type (String) [< 32 characters] NOT NULL
- Exhibition Access (String) [< 64 characters] *Multivalued*
- Collection Access (String) [< 64 characters] *Multivalued*
- Location Access (Int 2, 0) [1 <= num <= 10] NOT NULL *Multivalued*

- Price (Int 3, 2) [>= 0] **NOT NULL**

**PRIMARY KEY** (Type)
**UNIQUE** (Type)
**FOREIGN KEY** (Exhibition Access) **REFERENCES** Exhibition(Exhibition name)
**FOREIGN KEY** (Collection Access) **REFERENCES** Collection(Collection name)
**FOREIGN KEY** (Location Access) **REFERENCES** Location(Location num)

## 4. Events

Attributes:
- Event name (String) [< 64 characters] **NOT NULL**
- Tickets Available (Int 5, 0) [> 0]
- Location held (Int 2, 0) [1 <= num <= 10]
- Start dates (Date) [< End date]
- End dates (Date) [> Start date]

**PRIMARY KEY** (Event name)
**FOREIGN KEY** (Location held) **REFERENCES** Location(Location num)

## 5. Merchandise

Attributes:
- Item Name (String) [> 32 characters] **NOT NULL**
- Price (Int 4, 2) [>0]
- Collection Merch (String) [> 64 characters]
- Exhibition Merch (String) [> 64 characters]
- Item Amount (Int 4, 0) [>= 0]
- Incoming Restock (Int 4, 0) [>= 0] *adds onto Amount of Items when delivery comes in and this is either set to zero until another order is made or we can say that it automatically reorder the previous amount unless modified. In the later case, the amount would remain unchanged and only the Amount of Items value would change*

**PRIMARY KEY** {Item Name}
**FOREIGN KEY** (Collection Merch) **REFERENCES** Collection(Collection name)
**FOREIGN KEY** (Exhibition Merch) **REFERENCES** Exhibition(Exhibition name)

## 6. Exhibitions

Attributes:
- Artist name (String) [< 32 characters] **NOT NULL**
- Exhibit name (String) [< 64 characters] **NOT NULL**

- Location Num (Int 2, 0) [1 <= num <= 10] **NOT NULL**
- Start date (Date) [< End date]
- End date (Date) [> Start date]
- Price (Int 4, 2) [>= 0]

**PRIMARY KEY** (Artist name, Exhibit name)
**FOREIGN KEY** (Location Num) **REFERENCES** Location(Location num)

## 7. Collections

Attributes:
- Collection name (String) [< 64 characters] **NOT NULL**
- Collection author (String) [< 32 characters] *Multivalued*
- Location held (Int 2, 0) [1 <= num <= 10]

**PRIMARY KEY** (Collection name)
**FOREIGN KEY** (Location held) **REFERENCES** Location(Location num)

## 8. Art

Attributes:
- Art name (String) [< 32 characters] **NOT NULL**
- Date of Creation (Date) [< Today's date]
- Artist name (String) [< 32 characters] **NOT NULL**
- Location (Int 2, 0) [1 <= num <= 10]
- Exhibition (String) [< 64 characters]
- Collection (String) [< 64 characters]
- I.D no. (Int 7, 0) [> 0]

**PRIMARY KEY** (Art name, Artist name)
**UNIQUE** (I.D no.)
**FOREIGN KEY** (Artist name) **REFERENCES** Artist (Artist's name)
**FOREIGN KEY** (Location) **REFERENCES** Location(Location num)
**FOREIGN KEY** (Exhibition) **REFERENCES** Exhibition(Exhibition name)
**FOREIGN KEY** (Collection) **REFERENCES** Collection(Collection name)

## 9. Artist

Attributes:
- Artist's name (String) [< 32 characters] **NOT NULL**
- Date of Birth (Date) [< Today's date]
- Date of Death (Date) [!= Future date]

- I.D (String) [== 7 characters] **NOT NULL** *For searching and catalog purposes*

**PRIMARY KEY** (I.D)

**UNIQUE** (I.D)

## 10.  Location

Attributes:
- Location name (String) [< 64 characters] **NOT NULL**
- Building name (String) [< 64 characters] **NOT NULL**
- Building num (Int 2, 0) [1<= num <= 3] **NOT NULL**
- Location num (Int 2, 0)[1<= num <= 10] **NOT NULL**
- Hrs of operation (Int 5, 0) [>= 0]
- Manager's name (String) [< 32 characters]
- Manager's SNN (Int 8, 0) [> 0]
- Choices of Dining (String) [< 32 characters] *Multivalued*

**PRIMARY KEY** (Building num, Location num)

**UNIQUE** (Location num)

**FOREIGN KEY** (Manager's SNN) **REFERENCES** Employee(SNN)

## 11.  Donations (Funding)

Attributes:
- Donor Name (String) (< 64 characters) **NOT NULL**
- Amount of donation (Int 8, 2) [> 0] **NOT NULL**
- Date of donation (Date) [<= Today's date] **NOT NULL**
- Donation Name (String) (< 64 characters) **NOT NULL**

**PRIMARY KEY** (Donor Name)

## 12.  Members

Attributes:
- Member name (String) [< 32 characters] **NOT NULL**
- Membership I.D (Int 5, 0) [> 0] **NOT NULL**
- Price (Int 8, 2) [>= 0] **NOT NULL**
- Duration Days (Int 4, 0) [>= 0]
- Membership start (Date) [> Museum opening date]
- Expiration date (Date) [Membership start + 365 days]

**PRIMARY KEY** (Member name, Membership I.D)

**UNIQUE** (Membership I.D)

**FOREIGN KEY** (Member name) **REFERENCES** Customer(name)

## 13.   Director

Attributes:
- Director name (String) [< 32 characters] **NOT NULL**
- Film name (String) [< 32 characters] **NOT NULL**
- Release date (Date) [< Today's date]

**PRIMARY KEY** (Direction name, Film name)
**FOREIGN KEY** (Film name) **REFERENCES** Films(Film name)

## 14.   Customer

Attributes:
- Name (String) [< 32 characters] **NOT NULL**
- Phone Number (Int 10, 0) [> 0]
- Membership I.D (Int 5, 0) [> 0]
- Last scheduled visit (Date) [< Today's date]
- Email (String) [< 64 characters]
- Credit Card Info (Int 16, 0) [> 0]

**PRIMARY KEY** (Name)
**FOREIGN KEY** (Membership I.D) **REFERENCES** Members(Membership I.D)

## 15.   Films

Attributes:
- Film name (String) [< 32 characters] **NOT NULL**
- Director (String) [< 32 characters] **NOT NULL**
- Film Company (String) [< 32 characters]
- Released date (Date) [< Today's date]

**PRIMARY KEY** (Film name, Director)
**FOREIGN KEY** (Director) **REFERENCES** Director(Director name)