**TASK 1**

1. **List of all the entities for given process and the reason why each is a separate entity.**
2. AlbumCollection:

AlbumCollection is the entity which stores information about every album that has been purchased and kept in the collection. There may be more than one instance of an album in the collection in different or same conditions. The album collection contains purchase details of every album in the collection.

1. Album:

Album is the main entity where we store the unique information about every album. It stores other mandate and relevant information about every album which is a part of our collection, for example AlbumName, AlbumDuration etc.

1. Genre:

Genre is a separate entity because each Album can either belong to a single genre or can belong to multiple genres.

1. Artist:

Artist is a separate entity which stores a unique ArtistID and Artist name. An artist can have multiple entries in ArtistCollection because one artist can have many albums. Artist can also be a part of one or many Bands. Thus we should have Artist entity as a separate entity.

1. ArtistCollection:

ArtistCollection is a separate entity which stores the information of all artists and their corresponding albums. One artist can have many albums. Also one album can have many artists. The ArtistCollection entity is created to demonstrate this relation between the entities Album and Artist.

1. Band:

Band is a separate entity which stores information about each unique band. One band has many band members.

1. BandMembers:

BandMembers is separate entity which stores the information about band and its artists / band members. One artist can belong to many bands and one band has many band members. This entity demonstrates the relation between band and artists.

1. **List of all entities with their required attributes and datatypes.**

**Note:** Primary keys are denoted in Red color **and** Underlined. Hence, In case of Composite primary keys, all the keys participating are denoted in Red Color **and** Underlined.

1. AlbumCollection:

|  |  |
| --- | --- |
| **Attribute** | **Data Type** |
| Product\_ID (PK) | Integer |
| Album\_ID (FK) | Integer |
| Album\_Format | Varchar |
| Album\_Condition | Varchar |
| Record\_Date | Date |
| Release\_Date | Date |
| Purchase\_Date | Date |
| Purchase\_Amount | Integer |

1. Album:

|  |  |
| --- | --- |
| **Attribute** | **Data Type** |
| Album\_ID (PK) | Integer |
| Album\_Name | Varchar |
| Album\_Duration | Double |
| Number\_of\_tracks | Integer |
| Album\_Type | Enum |
| Album\_Rating | Enum |

1. Genre:

|  |  |
| --- | --- |
| **Attribute** | **Data Type** |
| Album\_ID (FK) | Integer |
| Genre | Enum |

1. Artist:

|  |  |
| --- | --- |
| **Attribute** | **Data Type** |
| Artist\_ID (PK) | Integer |
| Artist\_Name | Varchar |

1. ArtistCollection:

|  |  |
| --- | --- |
| **Attribute** | **Data Type** |
| Artist\_ID (FK) | Integer |
| Album\_ID (FK) | Varchar |

1. Band:

|  |  |
| --- | --- |
| **Attribute** | **Data Type** |
| Band\_ID (PK) | Integer |
| Band\_Name | Varchar |

1. BandMembers:

|  |  |
| --- | --- |
| **Attribute** | **Data Type** |
| Band\_ID (FK) | Integer |
| Artist\_ID (FK) | Varchar |