In this case the study we were asked to create an E or diagram that represents the relationship between all the entities.

We have four entities:

1-musician: The primary key Is the ID.

2-album: Its primary key is the album identifier

3-song: Its primary key is that title

4-instrument: Its primary key is the name.

There are four relationships between The four entities

* **relationship play**: between the musician and the instrument
  + **Cardinality** :many to many Because One musician can play multiple many instruments and one instrument could be played by many musicians.
  + **Participation**: partial participation from both entities because in the requirements it was stated that a musician may play an instrument, and an instrument may be played by a musician.
* **Relationship has**: between the album and the song.
  + Cardinality one to many because one album can has many songs and each song should be included in one album.
  + Participation: Full participation from the album side and partial participation from the song side because song must be a part of an album but there is no album without songs however that wasn’t mentioned clearly so I made this assumption.
* **Relationship** **preform**: between musician and song.
  + **Cardinality:** many too many Because many musicians could perform one song, and many songs could be performed by one musician.
  + **Participation**: for participation from the song side and partial participation from the musician side because there is no song without a musician and there is a musician without a song.
* **Relationship produce:** betweenmusicianandalbum.
  + **Cardinality:** one to many because 1 musician can have many albums, and one album could belong to one musician.
  + **Participation:** full participation from the album side because an album must be produced by a musician and a musician may or may not produce an album.