**ENTRY RELATIONSHIP DIAGRAM**

1. Entities: These represent the main objects or concepts within your database. In your project, key entities might include:

* Aircraft: Stores details about different aircraft models such as Boeing 737, Boeing 787, Airbus A380, Fokker 70, and Embraer E190.
* Routes: Contains information about various flight routes, including distances and connecting cities.
* Emissions Data: Records emissions data for each aircraft, including carbon emissions per kilometer over different years.
* Fuel Efficiency: Tracks fuel efficiency ratings for each aircraft model over time.
* Airlines: Represents major airlines operating the aircraft, which can include details such as airline name and operational regions.

1. Attributes: These are the specific pieces of information stored within each entity. For example:

* Aircraft Entity: Attributes might include Aircraft\_ID, Model\_Name, Fuel\_Efficiency, and Year\_Manufactured.
* Routes Entity: Attributes could include Route\_ID, Origin, Destination, and Distance\_km.
* Emissions Data Entity: Attributes might include Emissions\_ID, Aircraft\_ID, Year, and Emissions\_kg\_per\_km.
* Fuel Efficiency Entity: Attributes could include Efficiency\_ID, Aircraft\_ID, Year, and Efficiency\_Percentage.
* Airlines Entity: Attributes might include Airline\_ID, Airline\_Name, and Country.

1. Relationships: These define how the entities interact with each other. Common relationships include:

* One-to-Many Relationship: For example, one aircraft model can have multiple records in the emissions data entity representing emissions for different years.
* Many-to-Many Relationship: Could occur if multiple airlines operate the same aircraft models, necessitating a linking entity like Aircraft\_Operation.
* Foreign Keys: Used to establish relationships between entities, such as using Aircraft\_ID in the Emissions Data entity to link emissions records to specific aircraft.