Normalizing the tables

All the tables are already in BCNF. Each table has its primary key which will make each records unique and table cell will also contain a single value which means that it satisfies the condition of First Normal Form. Most of the tables have a single-column primary key so it does not have to be normalized to 2NF and rest of the tables with composite primary key does not have partial dependencies which satisfies the condition to be in Second Normal Form. In Third Normal Form there should not be any transitive functional dependencies which means no non key columns functionally determine other nonkey columns of a relation. As all the non key columns does not determine the other non key columns in any of the table satisfies the condition to be in Third Normal Form.

We are chosing two table and explain why they are in BCNF.

1.Departure Table

Dep_Date	Dep_Time	Flight_ID	Airport_ID

Dep_Date and Dep_Time act as primary key. There is no multi values so it is in 1NF. Flight ID and Airport ID are each dependent on the composite primary key so there is no partial dependency. No transitive dependency exists in this table. In addition, Dep_Date and Dep_Time do not depend on flight_id and Airport_ID

2.Airport Table

Airport_id	Airport_Name	city	country

We can see that there is a primary key which is Airport id and each of the attributes are all dependent on it. There is no multi values hence its in first normal form. There is no partial dependency as there is no composite key and no non key attribute depending on it. In addition, for BCNF, no key attribute is dependent on a non key attribute.