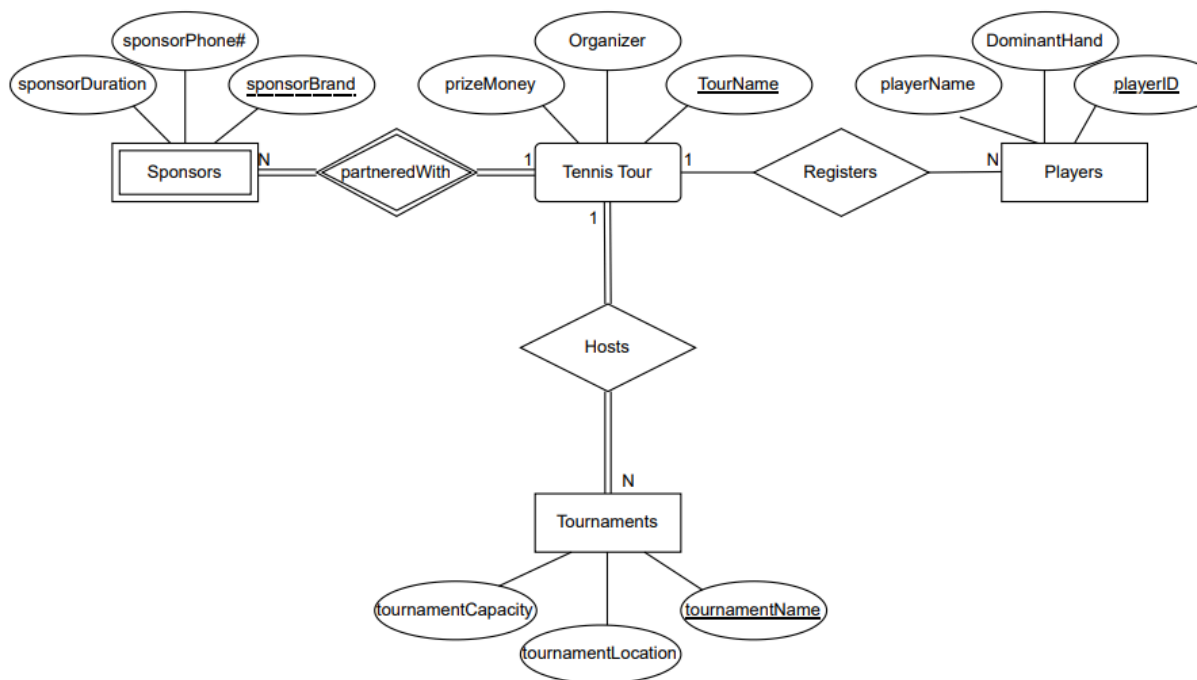**Database Description Paragraph for Tennis Tour Database:**

A tennis tour has a unique name, it must be partnered with at least one sponsor which is distinguished by the sponsor brand along with the tour name and a sponsor must be partnered with exactly one tennis tour. A sponsor cannot exist independently without being tied to a tennis tour. A tennis tour may register at least one player which has a unique ID and a player may compete in at most one tour. A tennis tour must host at least one tournament which has a unique name and a tournament must be hosted by exactly one tour.
(FDs: organizer → prizeMoney, sponsorContactDetails → the sponsorDuration, playerName → playerDominantHand)

NOTE: The above FDs do not include the key dependencies

ERD:

Normalisation Forms:

TennisTour **referenced** Table:

2NF, because it is in 1NF but the organizer implies prizeMoney and both are non-prime attributes so it is not 3NF.

sponsorsPartneredWith **referencing** Table:

2NF, as it is in 1NF but the sponsorContactDetails imply the sponsorDuration and both are non-prime attributes so it is not 3NF.

playersRegistered **referencing** Table:

2NF, because it is in 1NF but playerName implies playerDominantHand and both are non-prime attributes so it is not 3NF.

tournamentsHosted **referencing** Table:

BCNF, as the only FD is the key FD and this key is nor composite.

MySQL Database Queries:

1) SELECT playerDominantHand FROM playersRegistered WHERE TourName = 'ATP';

2) SELECT TourName, prizeMoney FROM TennisTour;

3) SELECT TourName, COUNT(sponsorBrand) AS sponsorCount FROM sponsorsPartneredWith WHERE TourName IN ('ATP', 'WTA', 'GTFT') GROUP BY TourName;

4) SELECT tournamentCapacity FROM tournamentsHosted;

Implementing Queries and Database, Populating the Database and Printing Queries:

In the ZIP file you will find attached a python file(scc_221Coursework.py) that implements the TennisTour database by reading the CSV files also attached in the ZIP file. When scc_221Coursework.py is executed it generates four bar charts representing the returned data from my queries presented above.