Tutorial 8

The following schema is used for all exercises below (related to the Sports League Database):

Table Name	Key Column(s)	Other Columns	Relationships *
`Teams`	`TeamID` (PK)	`TeamName`, `City`, `CoachName`, `FoundingYear`	
`Players`	`PlayerID` (PK)	`FirstName`, `LastName`, `TeamID` (FK), `Position`, `Salary` ($)	`TeamID` → `Teams`
`Games`	`GameID` (PK)	`HomeTeamID` (FK), `AwayTeamID` (FK), `GameDate`, `Attendance`	`HomeTeamID`, `AwayTeamID` → `Teams`
`Stats`	`StatID` (PK)	`PlayerID` (FK), `GameID` (FK), `PointsScored`, `Fouls`	`PlayerID` → `Players`, `GameID` → `Games`

* `attribute_name` → `Table_name`, (ex: `TeamID` → `Teams`), means that column `attribute_name` (ex: `TeamID`) is the primary key of the relation `Table_name` (ex: `Teams`)

- The database name is: SDB
- All the key columns (associated with the `PRIMARY KEY` constraint) , are also associated to the `Identity` Constraint

Exercise 1:

Write The SQL queries that:

1. **Increase the** `Salary` of all players in the 'Forward' position by **5%**.
2. **Update the** `CoachName` for the team 'Eagles' to 'Coach Taylor' if their current number of players is **less than 15**.
3. **Reduce the** `Salary` of all players whose salary **exceeds $150,000 more than the average salary** of all players by **12%**.

Exercise 2:

Write The SQL queries that:

1. **Insert a new player** into the `Players` table with the last name 'Williams', first name 'Serena', position 'Guard', and a $1,000,000 salary. Assume this player belongs to the team with `TeamID = 5`. Assume also, that `TeamID = 5` row already exists in the `Teams` table.
2. **Delete the game record** for the game with `GameID = 50`.

3. **Delete all games** that were played **more than 6 months ago**.
4. **Insert a new team** into the `Teams` table named 'The Dragons' from the city 'Atlanta'.
5. **Insert a new game** into the `Games` table that happened **today**, between the team 'Bears' (as HomeTeam) and the team 'Sharks' (as AwayTeam). Set the `Attendance` to 25,000.

Exercise 3:

Write The SQL queries that:

1. **Create a view** named `Players_HighSalary` that includes the `PlayerID`, `FirstName`, `LastName`, and `Salary` for all players whose salary is **greater than $500,000**.
2. **Create a view** named `Team_Revenue` that calculates the **total revenue** for each team based on their total recorded game attendance multiplied by a hypothetical ticket price of $50. Include the `TeamName` and the calculated revenue.
3. **Create a view** named `Star_Players` of players who have scored a **total of more than 500 points** across all games.

Exercise 4:

Write The SQL queries that:

1. **Return a list of all views** currently defined in the database (SDB).
2. **List all tables** in the database that were **created in the current calendar year**.
3. **List the names of all columns** across all tables whose name **contains the word 'Name'** (e.g., `TeamName`, `CoachName`).

Exercise 5:

Write The SQL queries that:

1. **Create a view** named `Player_Game_Performance` that displays for each recorded stat line: the **player's full name**, the **team name**, the **game date**, the **points scored**, and a calculated **Performance Ratio** (`PointsScored` divided by `Fouls`). Knowing that , if the value of `Fouls` is `Null` or `equal` to `0`, then the `Performance Ratio` must be `NULL`
2. Find the `TeamName` and `City` of teams that **do not have any players** currently assigned to them.
3. Display the `GameID`, the `GameDate`, and the `Attendance` in a text format:
   - If `Attendance` is **less than 10,000**, label it 'Low Attendance'.
   - If `Attendance` is between **10,000 and 30,000**, label it 'Moderate Crowd'.
   - If `Attendance` is **greater than 30,000**, label it 'Sellout Game'.
4. **Increase the** `Salary` of all players using the following logic (use a single `UPDATE` statement with `CASE`):
   - Increase the salary by **5%** for players in the 'Guard' position.

- Increase the salary by **10%** for players in the 'Center' position.
- Keep other positions unchanged.

5. Find the `FirstName` and `LastName` of players who have **never committed a foul** (i.e., they have zero entries in the `Stats` table or all their `Fouls` entries are 0).
6. List the `TeamName` for teams whose players have an **average salary higher than $800,000**.
7. Find the `TeamName` for teams whose players have **never scored more than 10 points** in any single game (based on the `Stats` table).