Deanna Soukhaseum and

IS465 C1

Team 6

#### Phase II - Part A

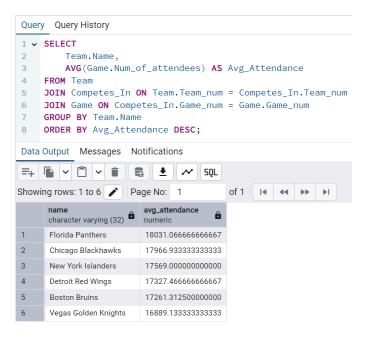
Player(Player\_num, Name, Position, Injury\_status, Birth\_date, Years\_of\_experience, Salary, Height, Weight, Total\_num\_of\_assists, Team\_num) Forward(Player\_num, Type\_of\_forward, Total\_num\_of\_goals, Plus\_minus\_score, Shooting\_percentage) Defenseman(<u>Player\_num</u>, Total\_num\_of\_blocked\_shots, Total\_num\_of\_hits, Total\_num\_of\_takeaways, Total\_num\_of\_goals) Goaltender(Player\_num, Save\_percentage, Goals\_against\_average, Total\_num\_of\_shutouts, Total\_num\_of\_blocked\_shots) Team(Team\_num, Name, Founding\_year, City, State, Mascot, Num\_of\_Stanley\_Cup\_wins, Win\_percentage) Staff\_Member(Staff\_id, Name, Birth\_date, Years\_of\_experience, Salary, Job\_title, Team\_num) Coach(Staff\_id, Num\_of\_awards received, Tactical\_approach\_type, Coach\_type) Manager(Staff\_id, Num\_of\_staff\_recruited, Num\_of\_players\_traded, Manager\_type) Season(Season\_num, Num\_of\_games, Start\_date, End\_date, Winning\_team) Game(<u>Game\_num,</u> Num\_of\_attendees, Date, Result, Home\_team\_points, Away\_team\_points, <u>Season\_num, Arena\_num</u>) Competes\_In(<u>Team\_num, Game\_num</u>) Referee(Referee\_id, Name, Birth\_date, Years\_of\_experience, Salary, Num\_of\_games\_officiated, Total\_num\_of\_penalties\_given) Oversees(Referee\_id, Game\_num) Arena(Arena\_num, City, State, Capacity) Player(Team\_num), Staff\_Member(Team\_num), Season(Winning\_team), and Competes\_In(Team\_num) are foreign keys to Team(Team\_num) Forward(Player\_num), Defenseman(Player\_num), and Goaltender(Player\_num) are foreign keys to Player(Player\_num) Coach(Staff\_id) and Manager(Staff\_id) are foreign keys to Staff\_Member(Staff\_id) Game(Season\_num) is a foreign key to Season(Season\_num) Game(Arena num) is a foreign key to Arena(Arena num) Competes\_In(Game\_num) and Oversees(Game\_num) are foreign keys to Game(Game\_num) Oversees(Referee\_num) is a foreign key to Referee(Referee\_num)

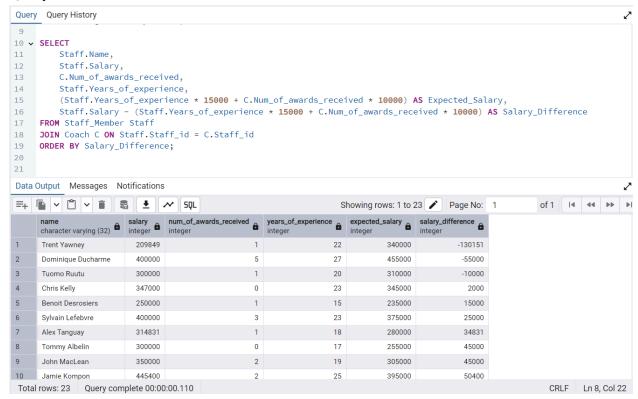
#### Phase II - Part B

#### Query 1

This query returns the average game attendance for each NHL team, ordered from highest to lowest.

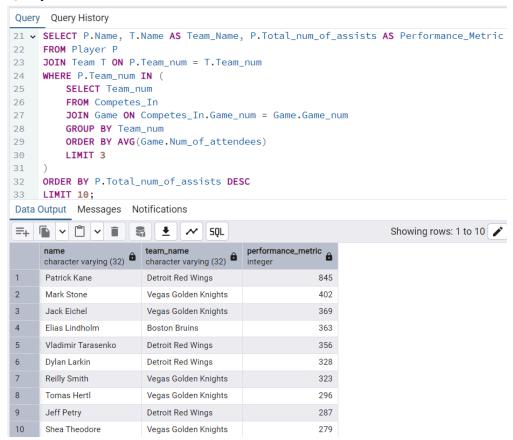
Managers of the NHL can use this query to evaluate which teams might draw the biggest crowds. Having this information can influence ticket pricing decisions, as the NHL can increase prices when teams in higher demand are playing. Game attendance can also influence the NHL's decisions regarding the arena assignments of future games due to capacity restrictions.





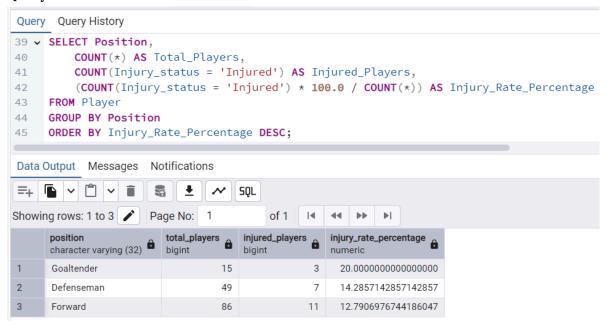
This query returns the salaries of each of the coaches and their qualifications, which are the number of awards they received and their years of experience. The query then calculates each coach's expected salary based on their qualifications and the difference between their expected and actual salaries.

Managers of the NHL can use this information to ensure that the coaches are being fairly compensated based on their qualifications. Using the salary\_difference column, these managers can easily identify underpaid coaches who might deserve a raise (those with a significant negative salary\_difference) or overpaid coaches whose salaries need to be reviewed (those with a significant positive salary\_difference).



This query first finds the 3 teams with the highest average game attendance using the subquery. Then, the query returns the top 10 players with the highest performance metric (defined as their total number of assists) who are from the teams that were identified by the subquery.

Managers of the NHL can use this information to determine which players should be the main focus of their national marketing campaigns. By using this information, the NHL can ensure that they are maximizing fan appeal by choosing players from popular teams, which is determined by the number of game attendees. In addition, they would also ensure that they are highlighting their star players with the best overall performance, which is determined through a performance metric.



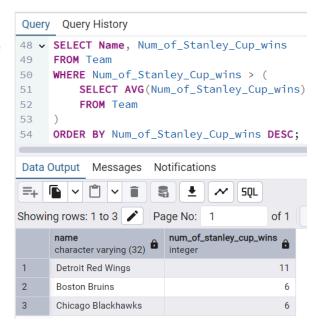
This query returns the number of injured players and the percentage of players that were injured across the three different types of players (goaltenders, defensemen, and forwards).

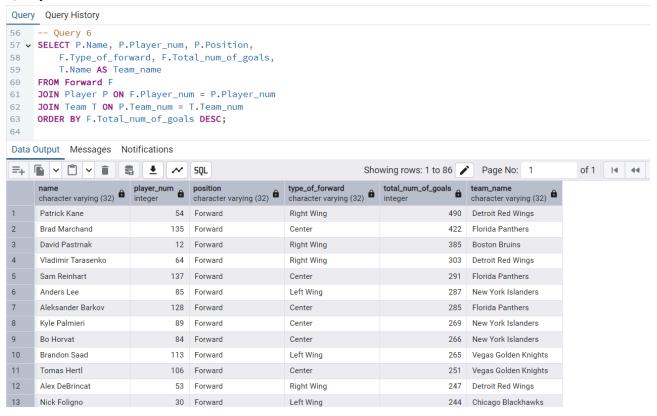
Managers of the NHL can use this information to make decisions about where to focus their efforts regarding game regulations designed to prevent their players' injuries. Looking at the output of the query, the NHL can easily figure out which types of players have the highest injury rates (goaltenders) and can then create more regulations targeted towards them in order to reduce their injury rate.

### Query 5

This query identifies the NHL teams that have won more Stanley Cups than the average across the league and returns the number of Stanley Cups won for each of those teams.

Managers of the NHL can use this information to determine which teams have consistently been most successful, influencing their strategies regarding fan engagement, marketing campaigns, and sponsorship opportunities. In addition, the NHL can use this information to determine whether one or a few teams are winning significantly more than the rest, which would signal to them a need for better league parity.





The query returns the different types of top performing forwards by using their total number of goals scored.

Managers of the NHL can use this information to help enhance marketing and fan engagement through dynamic promotional campaigns and social media content. By showcasing the forwards with the highest goals scored in advertisements and integrating their stats, the NHL can build excitement for upcoming games. These analytics can allow for special advertisements, such as social media posts highlighting players reaching milestones goals, in order to drive ticket sales.