

CS345 Final Project

Hockey Queries and Data Insertion

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Queries:

-- Getting Player career stats

```
with x as ( Select last_Name , first_Name, Team_id, sum(goals) as Goals, sum(assists) as
Assists, sum(shooting_percentage)/count(shooting_percentage) as shot_percentage,sum(PIM)
as Total_PIM, sum(saves) as Saves, sum(GAA) as Goals_Against_Average
            From players natural join statistics
            Where Active_flag = True
            Group by last_name, first_name, Team_id)
```

```
Select last_Name as "Last", first_Name as "First", Team_Name as "Team", Goals, Assists,
round(cast(shot_percentage as numeric), 2) as "Shot Percentage", Total_PIM, Saves,
Goals_Against_Average
from x natural join teams;
```

-- Getting Team Standings for a season

```
Select Team_Name as "Team", wins as "Total Wins", losses as "Total Losses", year as
"Season" from Teams natural join
records
Where year = 2017
order by League_name;
```

-- Getting a team schedule for a season

```
select Team_Name, Date, Home_Team, away_team
from teams join games on teams.team_id = games.away_team
      where team_Name = 'Canadiens'
      UNION
select Team_Name, Date, Home_Team, away_team
from teams join games on teams.team_id = games.home_team
      where team_Name = 'Canadiens'
      order by date;
```

-- Get home team venue

```
select Team_name, League_name, venue_name from teams natural join venues
order by team_name;
```

-- Get highest salary on each team

```
with x as (select Player_id, first_name, Last_Name, number, age, Team_Name
            from teams natural join players)
select Team_Name, max(Salary) as Salary
      from x natural join salaries
      group by team_Name;
```

-- Get apparel types/colors for a team

```
select team_name, name, color
      from teams natural join apparel
      where team_name = 'Canadiens';
```

-- Get equipment for a particular player

```
select first_name, last_name, type, color
from players join equipment on players.player_id = equipment.player_id
where last_name = 'Douglas';
```

-- Get team affiliations

```
select club_name, affiliations.city, team_name, league_name
from affiliations join teams on affiliations.team_id = teams.team_id;
```

-- Get sponsor information for a particular team

```
select distinct team_name, sponsor_name, amount, year from teams natural join sponsors;
```

--Get all the teams in a particular league

```
select distinct team_name, league_name
from teams
where league_name = 'National Hockey League'
order by team_name asc;
```

/*#####UPDATES#####*/

-- Update player stats

```
update statistics
    set goals = 14,
        assists = 7,
        points = goals + assists,
        shots = 100,
        games_played = 50
    where player_id = 'rd29016' and year = 2016 and team_id = '1jsgd56';
```

--Update Team Records

```
update records
    set wins = 50,
        losses = 25,
        ties = 7,
        points = 107
    where team_id = '5hdyer4' and year = 2016;
```

Note: Similar updates can be performed on:

- Players - updating player information
- Any table with an Active-Flag - teams, players, venues, and other tables will need to be kept up to date in the case of retirement

Database Creation:

/*#####TABLE INSERTION#####*/

CREATE TABLE Owners (

Owner_ID varchar(7) not null,
First_Name varchar(25) not null,
Last_Name varchar(25) not null,
Active_Flag boolean not null,
primary key (Owner_ID)
);

CREATE TABLE Leagues (

League_Name varchar(50) not null,
Active_Flag boolean not null,
primary key (League_Name)
);

CREATE TABLE Teams (

Team_ID varchar(7) not null,
Team_Name varchar(25) not null,
City varchar(25) not null,
Active_Flag boolean not null,
League_Name varchar(50) not null,
Owner_ID varchar(7) not null,
primary key (Team_ID),
foreign key(League_Name) references Leagues (League_Name),
foreign key(Owner_ID) references Owners (Owner_ID)
);

CREATE TABLE Players (

Player_ID varchar(7) not null,
First_Name varchar(25) not null,
Last_Name varchar(25) not null,
Team_ID varchar(7) not null,
Age int,
Gender varchar(6) not null check (Gender in ('Male', 'Female', 'N/A')),
Level varchar(11) not null check (Level in ('Collegiate', 'Youth', 'Pro', 'Semi-Pro', 'High School')),
Nationality varchar(50) not null ,
Height varchar(10) not null,

```

Position varchar(2) not null check (Position in ('RW', 'LW', 'C', 'G', 'LD', 'RD', 'F')),
Number integer not null check (0 <= Number and Number <= 99),
Handedness varchar(2) not null check (Handedness in ('RH', 'LH', 'AM')),
Active_Flag boolean not null,
primary key (Player_ID),
foreign key (Team_ID) references Teams (Team_ID)
);

```

```

CREATE TABLE Coaches (
    First_Name varchar(25) not null,
    Last_Name varchar(25) not null,
    Team_ID varchar(7) not null,
    Type varchar(10) not null check (Type in ('Head', 'Assistant', 'Volunteer', 'Trainer')),
    Active_Flag boolean not null,
    primary key (First_Name, Last_Name, Team_ID),
    foreign key (Team_ID) references Teams (Team_ID)
);

```

```

CREATE TABLE Sponsors (
    Sponsor_Name varchar(50) not null,
    Team_ID varchar(7) not null,
    Amount float,
    Year int not null,
    primary key (Sponsor_Name, Team_ID, Year),
    foreign key (Team_ID) references Teams (Team_ID)
);

```

```

CREATE TABLE Apparel (
    Team_ID varchar(7) not null,
    Name varchar(50) not null,
    Color varchar(6) not null check (Color in ('Red', 'Blue', 'Yellow', 'White', 'Black', 'Grey',
'Green', 'Orange', 'Purple', 'Silver', 'Gold', 'Brown')),
    primary key (Team_ID, Name),
    foreign key (Team_ID) references Teams (Team_ID)
);

```

```

CREATE TABLE Salaries (
    Player_ID varchar(7) not null,
    Salary float not null,
    Years_Remaining int not null,
    primary key (Player_ID),
    foreign key (Player_ID) references Players (Player_ID)
);

```

```

CREATE TABLE Equipment (
    Player_ID varchar(7) not null,
    Team_ID varchar(7) not null,
    Type varchar(15) not null check (Type in ('Shoulder Pads', 'Helmet', 'Neckguard', 'Elbow
Pads', 'Gloves', 'Stick', 'Pants', 'Shin Pads', 'Skates')),
    Color varchar(6) not null check (Color in ('Red', 'Blue', 'Yellow', 'White', 'Black', 'Grey',
'Green', 'Orange', 'Purple', 'Silver', 'Gold', 'Brown')),
    primary key (Player_ID, Team_ID),
    foreign key (Player_ID) references Players (Player_ID),
    foreign key (Team_ID) references Teams (Team_ID)
);

```

```

CREATE TABLE Statistics (
    Player_ID varchar(7) not null,
    Team_ID varchar(7) not null,
    Year int not null,
    Goals int not null,
    Assists int not null,
    Points int not null,
    Shots int not null,
    GAA float,
    Shooting_Percentage float not null,
    PIM int not null,
    Saves int,
    Games_Played int not null,
    primary key (Player_ID, Team_ID, Year),
    foreign key (Player_ID) references Players (Player_ID),
    foreign key (Team_ID) references Teams (Team_ID)
);

```

```

CREATE TABLE Affiliations (
    Club_Name varchar(25) not null,
    City varchar(25) not null,
    Team_ID varchar(7) not null,
    Affiliate_Owner varchar(50) not null,
    Active_Flag boolean not null,
    primary key (Club_Name, City, Team_ID),
    foreign key (Team_ID) references Teams (Team_ID)
);

```

```

CREATE TABLE Awards (
    Award_Name varchar(50) not null,

```

```
Year int not null,  
Team_ID varchar(7) not null,  
Description varchar(255) not null,  
primary key (Award_Name, Year),  
foreign key (Team_ID) references Teams (Team_ID)  
);
```

```
CREATE TABLE Records (  
    Team_ID varchar(7) not null,  
    League_Name varchar(50) not null,  
    Year int not null,  
    Wins int not null,  
    Losses int not null,  
    Ties int not null,  
    Points int not null,  
    Place int,  
    primary key (Team_ID, Year),  
    foreign key (Team_ID) references Teams (Team_ID),  
    foreign key (League_Name) references Leagues (League_Name)  
);
```

```
CREATE TABLE Venues (  
    Venue_Name varchar(50) not null,  
    City varchar(25) not null,  
    Active_Flag boolean not null,  
    Team_ID varchar(7) not null,  
    primary key (Venue_Name, City),  
    foreign key (Team_ID) references Teams (Team_ID),  
    Unique (Venue_Name)  
);
```

```

CREATE TABLE Games (
    Date DATE not null,
    Time TIME not null,
    Home_Team varchar(7) not null,
    Away_Team varchar(7) not null,
    Game_Type varchar(10) not null check (Game_Type in ('Regular', 'Playoff', 'Final',
'Exhibition', 'Friendly')),
    Venue_Name varchar(50) not null,
    H_score varchar(3),
    A_score varchar(3),
    primary key (Date, Time, Home_Team, Away_Team),
    foreign key (Home_Team) references Teams (Team_ID),
    foreign key (Away_Team) references Teams (Team_ID),
    foreign key (Venue_Name) references Venues (Venue_Name)
);

```

/*#####DATAINSERTION#####*/

/* owners */

```

INSERT INTO Owners
VALUES ('hs47823', 'Henry', 'Samueli', 'true');
INSERT INTO Owners
VALUES ('jj10945', 'Jeremy', 'Jacobs', 'true');
INSERT INTO Owners
VALUES ('tp83526', 'Terrance', 'Pegula', 'true');
INSERT INTO Owners
VALUES ('tg67223', 'Tom', 'Gaglardi', 'true');
INSERT INTO Owners
VALUES ('ab65883', 'Andrew', 'Barroway', 'true');
INSERT INTO Owners
VALUES ('rw11134', 'Rocky', 'Wirtz', 'false');

```

/* leagues */

```

INSERT INTO Leagues
VALUES ('National Hockey League', 'True');
INSERT INTO Leagues
VALUES ('American Hockey League', 'True');
INSERT INTO Leagues
VALUES ('Federal Hockey League', 'True');
INSERT INTO Leagues
VALUES ('Canadian Womens Hockey League', 'True');

```



```
INSERT INTO Leagues
VALUES ('Southern Professional Hockey League', 'True');
INSERT INTO Leagues
VALUES ('Greater Seattle Hockey League', 'False');
```

/* teams */

```
INSERT INTO Teams
VALUES ('1jsgd56','Canadiens','Montreal', 'true', 'National Hockey League','hs47823');
INSERT INTO Teams
VALUES ('5hdyer4','Penguins','Pittsburgh', 'true', 'National Hockey League','jj10945');
INSERT INTO Teams
VALUES ('f763gwy','Inferno','Calgary', 'true', 'Canadian Womens Hockey League','ab65883');
```

/* players */

```
INSERT INTO Players
VALUES
('rd29016','Ryan','Douglas','1jsgd56','21','Male','Pro','american','5ft10in','C','12','RH','true');
INSERT INTO Players
VALUES ('rf39486','Ryan','Flynn','1jsgd56','23','Male','Pro','american','5ft11in','RD','3','RH','true');
INSERT INTO Players
VALUES ('nc29463','Nick','Cannon','1jsgd56','19','Male','Pro','canadian','6ft1in','G','0','LH','true');

INSERT INTO Players
VALUES
('sm18263','Shannon','Moore','f763gwy','19','Female','Pro','american','5ft10in','RW','23','LH','true')
;
INSERT INTO Players
VALUES
('ja78263','Jessica','Alberts','f763gwy','24','Female','Pro','australian','5ft8in','C','34','RH','true');
INSERT INTO Players
VALUES
('lh78432','Lauren','Hughes','f763gwy','22','Female','Pro','norwegian','5ft6in','LW','67','RH','true');

INSERT INTO Players
VALUES ('ds12452','Dylan','Smith','5hdyer4','31','Male','Pro','american','5ft9in','C','11','RH','true');
INSERT INTO Players
VALUES
('rb92351','Richard','Bunton','5hdyer4','26','Male','Pro','candadian','6ft4in','RW','1','RH','true');
INSERT INTO Players
```

```
VALUES  
( 'za87125', 'Ziggy', 'Alberts', '5hdyer4', '22', 'Male', 'Pro', 'australian', '5ft11in', 'C', '4', 'RH', 'true');
```

```
/* coaches */
```

```
INSERT INTO Coaches  
VALUES ('Tony', 'Granato', '1jsgd56', 'Head', 'true');  
INSERT INTO Coaches  
VALUES ('Guy', 'Gadowsky', '1jsgd56', 'Assistant', 'true');
```

```
INSERT INTO Coaches  
VALUES ('Lisa', 'Simmons', 'f763gwy', 'Head', 'true');  
INSERT INTO Coaches  
VALUES ('Gary', 'Houser', 'f763gwy', 'Assistant', 'true');  
INSERT INTO Coaches  
VALUES ('Henry', 'Billochek', 'f763gwy', 'Volunteer', 'true');
```

```
INSERT INTO Coaches  
VALUES ('Blake', 'Tunnel', '5hdyer4', 'Head', 'true');  
INSERT INTO Coaches  
VALUES ('Mike', 'Frost', '5hdyer4', 'Assistant', 'true');
```

```
/* sponsors */
```

```
INSERT INTO Sponsors  
VALUES ('Nokia', '5hdyer4', '24000.00', '2016');  
INSERT INTO Sponsors  
VALUES ('Nokia', '5hdyer4', '24000.00', '2015');  
INSERT INTO Sponsors  
VALUES ('Nokia', '5hdyer4', '32000.00', '2014');  
INSERT INTO Sponsors  
VALUES ('UBS', 'f763gwy', '22000.00', '2016');  
INSERT INTO Sponsors  
VALUES ('UBS', 'f763gwy', '50000.00', '2015');  
INSERT INTO Sponsors  
VALUES ('UBS', 'f763gwy', '32000.00', '2014');  
INSERT INTO Sponsors  
VALUES ('Apple', '1jsgd56', '10000.00', '2016');  
INSERT INTO Sponsors  
VALUES ('Apple', '1jsgd56', '15000.00', '2015');  
INSERT INTO Sponsors
```

```
VALUES ('Apple','1jsgd56','30000.00','2014');
```

/* apparel */

```
INSERT INTO Apparel  
VALUES ('f763gwy', 'Short sleeve shirt', 'Red');  
INSERT INTO Apparel  
VALUES ('f763gwy', 'Long sleeve shirt', 'White');  
INSERT INTO Apparel  
VALUES ('f763gwy', 'polo', 'Red');
```

```
INSERT INTO Apparel  
VALUES ('1jsgd56', 'Short sleeve shirt', 'Blue');  
INSERT INTO Apparel  
VALUES ('1jsgd56', 'Long sleeve shirt', 'White');  
INSERT INTO Apparel  
VALUES ('1jsgd56', 'polo', 'White');
```

```
INSERT INTO Apparel  
VALUES ('5hdyer4', 'Short sleeve shirt', 'Black');  
INSERT INTO Apparel  
VALUES ('5hdyer4', 'Long sleeve shirt', 'White');  
INSERT INTO Apparel  
VALUES ('5hdyer4', 'polo', 'Black');
```

/* salaries */

```
INSERT INTO Salaries  
VALUES ('rd29016','100000.00','2');  
INSERT INTO Salaries  
VALUES ('rf39486','120000.00','6');  
INSERT INTO Salaries  
VALUES ('nc29463','115000.00','12');
```

```
INSERT INTO Salaries  
VALUES ('sm18263','35000.00','3');  
INSERT INTO Salaries  
VALUES ('ja78263','40000.00','1');  
INSERT INTO Salaries  
VALUES ('lh78432','50000.00','5');
```

```
INSERT INTO Salaries
VALUES ('ds12452','90000.00','8');
INSERT INTO Salaries
VALUES ('rb92351','150000.00','7');
INSERT INTO Salaries
VALUES ('za87125','200000.00','9');
```

/* equipment */

```
INSERT INTO Equipment
VALUES ('rd29016','1jsgd56','Helmet','Red');
INSERT INTO Equipment
VALUES ('rf39486','1jsgd56','Helmet','Red');
INSERT INTO Equipment
VALUES ('nc29463','1jsgd56','Helmet','Red');
```

```
INSERT INTO Equipment
VALUES ('sm18263','f763gwy','Helmet','Blue');
INSERT INTO Equipment
VALUES ('ja78263','f763gwy','Helmet','Blue');
INSERT INTO Equipment
VALUES ('lh78432','f763gwy','Helmet','Blue');
```

```
INSERT INTO Equipment
VALUES ('ds12452','5hdyer4','Helmet','Black');
INSERT INTO Equipment
VALUES ('rb92351','5hdyer4','Helmet','Black');
INSERT INTO Equipment
VALUES ('za87125','5hdyer4','Helmet','Black');
```

/* statistics */

```
INSERT INTO Statistics
VALUES ('rd29016','1jsgd56','2016','12','2','26','87','0','18.00','34','0','45');
INSERT INTO Statistics
VALUES ('rf39486','1jsgd56','2016','18','5','41','34','0','18.00','34','0','45');
INSERT INTO Statistics
VALUES ('nc29463','1jsgd56','2016','0','0','0','0','0.8','0.00','34','123','45');
```

```
INSERT INTO Statistics
VALUES ('rd29016','1jsgd56','2015','12','10','34','182','0','18.00','12','0','45');
INSERT INTO Statistics
```

VALUES ('rf39486','1jsgd56','2015','12','13','35','123','0','18.00','45','0','45');
INSERT INTO Statistics
VALUES ('nc29463','1jsgd56','2015','0','0','0','0','1.2','0.00','22','87','45');

INSERT INTO Statistics
VALUES ('rd29016','1jsgd56','2014','12','11','33','89','0','18.00','23','0','45');
INSERT INTO Statistics
VALUES ('rf39486','1jsgd56','2014','15','14','44','23','0','18.00','56','0','45');
INSERT INTO Statistics
VALUES ('nc29463','1jsgd56','2014','0','0','0','0','0.6','0.00','34','198','45');

INSERT INTO Statistics
VALUES ('sm18263','f763gwy','2016','12','4','26','45','0','16.00','34','0','45');
INSERT INTO Statistics
VALUES ('ja78263','f763gwy','2016','14','8','30','67','0','18.34','34','0','45');
INSERT INTO Statistics
VALUES ('lh78432','f763gwy','2016','26','2','54','198','0','23.40','34','0','45');

INSERT INTO Statistics
VALUES ('sm18263','f763gwy','2015','23','4','50','99','0','23.00','12','0','45');
INSERT INTO Statistics
VALUES ('ja78263','f763gwy','2015','43','17','105','43','0','18.00','15','0','45');
INSERT INTO Statistics
VALUES ('lh78432','f763gwy','2015','12','14','38','123','0','18.40','45','0','45');

INSERT INTO Statistics
VALUES ('sm18263','f763gwy','2014','24','16','64','86','0','22.00','46','0','45');
INSERT INTO Statistics
VALUES ('ja78263','f763gwy','2014','34','9','77','28','0','23.00','25','0','45');
INSERT INTO Statistics
VALUES ('lh78432','f763gwy','2014','14','34','62','112','0','12.00','34','0','45');

INSERT INTO Statistics
VALUES ('ds12452','5hdyer4','2016','34','12','86','134','0','18.00','35','0','45');
INSERT INTO Statistics
VALUES ('rb92351','5hdyer4','2016','36','15','97','136','0','17.00','23','0','45');
INSERT INTO Statistics
VALUES ('za87125','5hdyer4','2016','23','23','69','178','0','123.00','56','0','45');

```
INSERT INTO Statistics
VALUES ('ds12452','5hdyer4','2015','14','17','43','145','0','34.00','34','0','45');
INSERT INTO Statistics
VALUES ('rb92351','5hdyer4','2015','17','19','56','312','0','12.00','23','0','45');
INSERT INTO Statistics
VALUES ('za87125','5hdyer4','2015','23','25','71','134','0','21.00','67','0','45');
```

```
INSERT INTO Statistics
VALUES ('ds12452','5hdyer4','2014','25','43','87','213','0','34.00','12','0','45');
INSERT INTO Statistics
VALUES ('rb92351','5hdyer4','2014','12','32','46','243','0','21.00','3','0','45');
INSERT INTO Statistics
VALUES ('za87125','5hdyer4','2014','18','12','43','125','0','10.00','14','0','45');
```

/* affiliations */

```
INSERT INTO Affiliations
VALUES ('Ducks','Wolcott','5hdyer4','Robert Smith','true');
INSERT INTO Affiliations
VALUES ('Rays','Bristol','f763gwy','Kelly Slater','true');
INSERT INTO Affiliations
VALUES ('Dragons','Canton','1jsgd56','Nick Hughes','true');
```

/* awards */

```
INSERT INTO Awards
VALUES ('Stanley Cup','2016','5hdyer4','Championship Title');
INSERT INTO Awards
VALUES ('Stanley Cup','2015','5hdyer4','Championship Title');

INSERT INTO Awards
VALUES ('Richardson Cup Runner Up','2014','f763gwy','Championship Game Runner Up');
INSERT INTO Awards
VALUES ('Richardson Cup Runner Up','2016','f763gwy','Championship Game Runner Up');
```

```
INSERT INTO Awards
VALUES ('Stanley Cup','2014','1jsgd56','Championship Title');
```

/* records */

```
INSERT INTO Records
VALUES ('5hdyer4','National Hockey League','2016','44','1','0','88','1');
INSERT INTO Records
```

VALUES ('5hdyer4','National Hockey League','2015','40','5','0','80','1');

INSERT INTO Records

VALUES ('5hdyer4','National Hockey League','2014','38','7','0','76','3');

INSERT INTO Records

VALUES ('f763gwy','Canadian Womens Hockey League','2016','32','13','0','96','2');

INSERT INTO Records

VALUES ('f763gwy','Canadian Womens Hockey League','2015','12','33','0','24','8');

INSERT INTO Records

VALUES ('f763gwy','Canadian Womens Hockey League','2014','34','11','0','68','2');

INSERT INTO Records

VALUES ('1jsgd56','National Hockey League','2016','24','21','0','48','4');

INSERT INTO Records

VALUES ('1jsgd56','National Hockey League','2015','30','15','0','60','5');

INSERT INTO Records

VALUES ('1jsgd56','National Hockey League','2014','42','3','0','84','1');

/* venues */

INSERT INTO Venues

VALUES ('Hope Arena','Pittsburgh','true','5hdyer4');

INSERT INTO Venues

VALUES ('Doris Stadium','Calgary','true','f763gwy');

INSERT INTO Venues

VALUES ('Veteran Arena','Montreal','true','1jsgd56');

/* games */

INSERT INTO Games

VALUES ('2016-12-12', '16:00:00','1jsgd56','5hdyer4','Exhibition','Veteran Arena','1','3');

INSERT INTO Games

VALUES ('2016-12-13', '18:00:00','1jsgd56','5hdyer4','Exhibition','Veteran Arena','2','1');

INSERT INTO Games

VALUES ('2017-02-23', '16:00:00','5hdyer4','1jsgd56','Exhibition','Hope Arena','n/a','n/a');

INSERT INTO Games

VALUES ('2017-02-25', '18:00:00','5hdyer4','1jsgd56','Exhibition','Hope Arena','n/a','n/a');