

Deanna Soukhaseum and [REDACTED]

IS465 C1

Team 6

Project Phase I

Part A - Database Application Description

Our proposed database is for the National Hockey League (NHL), which is the professional ice hockey league in North America composed of 32 teams. Our entities include but are not limited to team, player, game, and season. We did not find any unique or particularly difficult aspects in our proposed application.

Part B - ERD

ERD attached on page 4.

Part C - Entities & Relationships

Each of our 12 entities is listed below along with their primary keys and a short description of what one instance of each entity will be.

1. **Team** - A team is a professional ice hockey team composed of a group of players in the NHL. The primary key of the Team entity will be Team_num. An example of a team is the Boston Bruins.
2. **Player** - A player is a professional hockey athlete that competes in the NHL. The primary key of the Player entity will be Player_num. An example of a hockey player would be Brad Marchand.
3. **Staff Member** - A staff member helps with the league's operations, helping to contribute different aspects like management, marketing, analytics, etc. The primary key of the Staff Member entity will be Staff_id. An example of a staff member is a medic, who helps injured players.
4. **Coach** - A NHL coach is responsible for guiding and managing a team, developing different strategies to help maximize team and player performance, and ensuring success on and off the ice. The primary key of the Coach entity will be Staff_id as it is a type of Staff Member. An example of a coach would be Joe Sacco for the Boston Bruins.
5. **Manager** - A NHL manager oversees the operations of the team, including recruitment, contracts, and overall team management. They are the ones who help create a competitive roster, and oversee the trades from one team to another. The

primary key of a Manager will be Staff_id as it is a type of Staff Member. An example of the manager would be Don Sweeney of the Boston Bruins

6. **Game** - A game is a hockey match between two teams, a home and away team, that showcase their skills and strategies in order to win. Each team is scheduled to play 82 regular games with 41 on the road and 41 at home, not accounting for the additional playoff games. The primary key of the Game entity will be Game_num. An example of a game would be when the Boston Bruins (home team) plays against the Toronto Maple Leafs (away team) at TD Garden.
7. **Season** - A season is a journey of 82 games, that takes months mostly ranging from October to mid-April, where teams are competing in regular-season games to secure a spot in the playoffs. The primary key of the Season entity will be Season_num. It culminates in the Stanley Cup Finals, which is the ultimate championship series that determines which hockey team is the best.
8. **Arena** - An arena is where hockey teams face off. The primary key of the Arena entity will be Arena_num. An example of an arena is TD Garden, an arena used to host the Boston Bruins.
9. **Forward** - A NHL forward is a type of position a player is responsible for scoring goals and creating offensive opportunities. There are different types of forwards, such as centers, left wings, or right wings, who use speed, skill and strategy to pressure the other team. The primary key of the Forward entity will be Player_num as it is a type of Player. An example of a forward would be Matt Poitras.
10. **Defenseman** - In the NHL, a defenseman is a type of position where a player is responsible for protecting their team's goal and disrupting the opposing team's offensive plays. They are known for their strong skating and big build, contributing to giving the puck to the forwards. The primary key of the Defenseman entity will be Player_num as it is a type of Player. An example of a defensive player is Charlie McAvoy.
11. **Goaltender** - A goaltender is the last line of defense, they have the most important job to which they are responsible with stopping pucks and preventing goals. As they are usually known for their agility, flexibility, focus, and quick reflexes, they are crucial to a team's success. The primary key of the Goaltender entity will be Player_num as it is a type of Player. An example of a goalie would be Jeremy Swayman for the Boston Bruins.

12. **Referee** - A referee is responsible for enforcing the NHL rules of the game, ensuring fair play, and maintaining order on the ice. They are the ones who give out major or minor penalties when it is necessary, as well help determine if it was a goal or not. The primary key of a Referee will be Referee_id. An example of a NHL referee is Darcy Burchell.

