Application Description Document

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Digital Hockey Trading Card System (DHTC)

Application Motivation

The goal of this document is to provide an overview and specifications of a Digital Hockey Trading Card System utilizing database design with a user-level interface. This document contains a functionality, requirements, and data description to give the user the necessary background to use the application.

The Digital Hockey Trading Card System is an application that can be used by card collectors to manage their collection. Our supply only includes the top 50 NHL players from the 2023-2024 season. The system allows the user to stay up to date with the player's current stats and track their progress throughout the season. Users can also trade cards with another user to boost their collection.

Functionality Description

DHTC includes many user-level features that allow them to make transactions and collect similar to what is experienced in the physical world with trading cards. These features are as follows:

- Sign In
  - Access to personal collection
- Account manager
  - Update account information
- Card viewer
  - View all relevant card information
- Collection management
  - Keep track of owned cards
  - Wishlist and favorites
- Currency
  - Utilize to buy packs and trades (start with 100 units)
- Pack Opening
  - Random card generator (1-50)
- Friends
  - Connect with other users and their collections

- Trading
    - Exchange cards with friends
- Fire Pit
    - Discard unwanted cards (gain currency)
- Level up
    - Combine duplicates to increase card level

Data Description

DHTC has two main types of data:

- Users
    - Username
    - Password
    - User x Cards - Owns
    - User x User - Friends
    - Currency amount
    - Transaction history
    - Wishlist
    - Favorites
- Cards
    - Name
    - Goals
    - Assists
    - Number
    - Games played
    - Plus/minus
    - Owns x Owns – Trades
    - Card Value

Requirement Analysis

DHTC requires a user-friendly interface backed by a data manager. The system should support the 50 unique player cards, their quantity, and what user owns them. The user interface should allow users to sign into their personal account to manage their collection of cards. Users should be allowed to friend other users to view their collections and trade with them.

Trading between users should be managed and able to be accepted or rejected. Trading should also allow currency to be used as compensation in trades. Users will start with currency that can be increased and decreased. Card packs should be able to be bought by users and be opened to receive a card. Currency can be increased through the Fire Pit, which should allow users to discard unwanted cards. Users should be allowed to level cards by merging duplicate cards together to increase card value.

The overall performance of the system should be efficient and operate in real-time when there are adjustments in the collections. System errors should be limited and user errors, such as insufficient funds or invalid fields, should be handled by the system and portrayed to the user.