Database Project Assignment 3: Entity Relationship Diagram & Documentation

# ERD

A picture containing text, screenshot, receipt

Description automatically generated

# Documentation

The “**DOTA\_PLAYER**” table of TangoTwo consists of all of the Dota 2 players that have been registered in TangoTwo’s database. Each player record will consist of the player’s ID, first name, last name, their in-game handle, whether they are a team captain, whether they are a team coach, their tournament earnings, their in-game position (role) ID, and their team ID. The primary key for this table would be the player ID, as it would be able to uniquely identify each player record. This table also includes three foreign keys, consisting of the position ID from the “DOTA\_POS” table, the team ID from the “DOTA\_TEAM” table, and the top hero ID from the “DOTA\_TOP\_HERO” table. The relationship with “DOTA\_POS” is 1:M and represents the player’s position they play in their Dota 2 team. A player can only have one position at a time and a position can have many players playing it. Next, the relationship with “DOTA\_TEAM” is 1:M and represents the player’s team they are currently on. A player can only be on one team at a time and a team can have many players. Lastly, the relationship with “DOTA\_TOP\_HERO” is 1:M and represents a top hero combination relating to the player and a Dota 2 hero. A player can have many top heroes, but a top hero combination can only have one player.

The “**DOTA\_POS**” table consists of all Dota 2 positions, also known as roles, that players play during Dota 2 matches. Each position will consist of the position’s ID and name. The primary key for this table would be the position ID. This table also includes one foreign key: the player ID from the “DOTA\_PLAYER” table. The relationship with “DOTA\_PLAYER” is 1:M and represents the position the respective play plays. A position can have many players playing it and a player can only have one position at a time.

The “**DOTA\_HERO**” table consists of all Dota 2 heroes (characters) that have been registered in TangoTwo’s database. Each hero record will consist of the hero’s ID, name, and attribute. The primary key for this table would be the hero ID. This table also includes one foreign key: the top hero ID from the “DOTA\_TOP\_HERO” table. The relationship with “DOTA\_TOP\_HERO” is 1:M and represents a top hero combination relating to the hero and a Dota 2 player. A hero can have many top hero combinations, but a top hero combination can only have one hero.

The “**DOTA\_TOP\_HERO**” table consists of Dota 2 top hero combinations between Dota 2 players and heroes. Each top hero combination will consist of the combination’s ID, the player’s total matches played with the hero, the player’s total wins with the hero, the player’s win rate with the hero, the hero’s ID, and the player’s ID. The primary key for this table would be the top hero combination ID. This table also includes two foreign keys, consisting of the hero ID from the “DOTA\_HERO” table and the player ID from the “DOTA\_PLAYER” table. The relationship with “DOTA\_HERO” is 1:M and represents the respective hero that is a part of the top hero combination with the player. Similarly, the relationship with “DOTA\_PLAYER” is 1:M and represents the respective player that is also a part of the top hero combination with the hero.

The “**DOTA\_TEAM**” table consists of all the Dota 2 teams that have been registered in TangoTwo’s database. Each team record will consist of the team’s ID, name, and tournament earnings. The primary key for this table would be the team ID. This table also includes four foreign keys, consisting of the series ID from the “DOTA\_SERIES” table, the match ID from the “DOTA\_MATCH” table, the competing team ID from the “COMPETING\_TEAM” table, and the player ID from the “DOTA\_PLAYER” table. The relationship with “DOTA\_SERIES” is 1:M and represents the team’s win for the respective Dota 2 series. Next, the relationship with “DOTA\_MATCH” is 1:M and represents the team’s win for the respective Dota 2 match. The relationship with “COMPETING\_TEAM” is 1:M and represents the team’s participation in a series. Lastly, the relationship with “DOTA\_PLAYER” is 1:M and represents the current Dota 2 players on the team. A team can have many players, but a player can only be on one team at a time.

The “**DOTA\_SERIES**” table consists of all registered Dota 2 series that have taken place. Essentially, a series is a set of Dota 2 matches that make up a series, where the two competing teams play each other multiple times in the same series over multiple matches. Each series record will consist of the series’ ID, the number of matches in the series, and a team ID. The primary key for this table would be the series ID. This table also includes three foreign keys, consisting of the team ID from the “DOTA\_TEAM” table, the match ID from the “DOTA\_MATCH” table, and the competing team ID from the “COMPETING\_TEAM” table. The relationship with “DOTA\_TEAM” is 1:M and represents the team that won the series. A series can only have one winner, but a team can have many series wins. Next, the relationship with “DOTA\_MATCH” is 1:M and represents the respective matches that make up the series. A series can have many matches, but a match can only be a part of one series. Lastly, the relationship with “COMPETING\_TEAM” is 1:M and represents the respective competing teams of the series. A series can have many teams competing in a series, but a competing team can only take part in one series at a time.

The “**COMPETING\_TEAM**” table consists of the competing Dota 2 teams from all registered Dota 2 series. Each competing team record will consist of the competing team’s ID (not to be confused with the team’s actual ID), the series ID, and the team’s ID. The primary key for this table would be the competing team’s ID. This table also includes two foreign keys, consisting of the series ID from the “DOTA\_SERIES” table and the team ID from the “DOTA\_TEAM” table. The relationship with “DOTA\_SERIES” is 1:M and represents the series that the competing team is participating in. Lastly, the relationship with “DOTA\_TEAM” is 1:M and represents the team that is participating (competing) in a series.

The “**DOTA\_MATCH**” table consists of all registered Dota 2 matches that have taken place. Each match record will consist of the match’s ID, the date it took place, the elapsed time of the match, the total kills of the match, a series ID, and a team ID. The primary key for this table would be the match ID. This table also includes two foreign keys, consisting of the series ID from the “DOTA\_SERIES” table and the team ID from the “DOTA\_TEAM” table. The relationship with “DOTA\_SERIES” is 1:M and represents the respective series the match is a part of. A match can only be a part of one series, but a series can have many matches. Lastly, the relationship with “DOTA\_TEAM” is 1:M and represents the team that won the match. A match can only have one winner, but a team can have many match wins.