INFSCI 1022 Final Project

Chrisean Nichols

Prof. Robert Perkoski

4/16/2020

INTRO:

For my final project I decided to create a pro boxing database that consist of the most commonly know boxers in the heavy, middle, and lightweight divisions. This database would be ideally useful for boxing fanatics. Being able to keep track of the statistics of each pro boxer can make it possible to make decisions about the possible outcomes of future fights or to be able to rank boxers, trainers, gyms, etc. accordingly. The database will keep track of a handful of entities related to pro boxers. Some of which include gyms, fight locations, bouts, trainers, promoters, belt titles. With this data accessible a pro boxer would be to make decisions about who they want to train them or where they want to train at.

BUSINESS RULES:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity 1 | Entity 2 | Cardinality on  Entity 1 Side | Cardinality on  Entity 2 Side | Business Rule(s) |
| Boxer | Promoter | 1..1 | 0..\* | A boxer can have only 1 promoter at a time. A promoter can have anywhere from none to many boxers. |
| Boxer | Trainer | 1..1 | 0..\* | A boxer can only have 1 trainer at a time. A trainer can have anywhere from none to many boxers. |
| Boxer | Belt | 0..\* | 1..1 | A boxer can hold anywhere from none to many title belts. A belt can only belong to 1 boxer at a time. |
| Boxer | Bout | 0..\* | 2..2 | A boxer can have anywhere from 0 to many bouts. Every bout must consist of 2 boxers. |
| Trainer | Gym | 1..1 | 1..\* | A trainer can belong to only 1 gym at a time. A gym can have anywhere from 1 to many trainers. |
| Bout | Fight Location | 1..1 | 0..\* | A bout can happen at only one location. A fight location can host many bouts. |

ENTITY/ATTRIBUTE DESCRIPTIONS:

|  |  |  |
| --- | --- | --- |
| Boxer | | |
| pk\_boxer\_id | INT | Primary key id of boxer |
| boxer\_name | VARCHAR(45) | The boxers first and last name |
| weight\_class | VARCHAR(45) | The weight class the boxer is in |
| wingspan | DECIMAL | The reach of the boxer |
| nationality | VARCHAR(45) | the boxers home country |
| age | INT | The boxer’s age |
| fk\_promoter\_id | INT | Id of the boxer’s promoter |
| fk\_trainer\_id | INT | Id of the boxer’s trainer |

|  |  |  |
| --- | --- | --- |
| Bout | | |
| pk\_bout\_id | INT | Primary key id of bout |
| fk\_fighter1\_id | INT | The id of one of the fighters |
| fk\_fighter2\_id | INT | The id of the other fighter |
| fk\_winner\_id | INT | The id of the fighter who won |
| ko | BOOLEAN | If the fight ended by ko |
| date | DATE | The date of the bout |
| fight\_location\_id | INT | Id of the fight location |

|  |  |  |
| --- | --- | --- |
| Fight\_Location | | |
| pk\_location\_id | INT | Primary key of the fight location |
| st\_address | VARCHAR(45) | The fight location st. address |
| city | VARCHAR(45) | The fight location city |
| country | VARCHAR(45) | The fight location country |
| location\_name | VARCHAR(45) | The name of the fight location |

|  |  |  |
| --- | --- | --- |
| Gym | | |
| pk\_gym\_id | INT | Primary key of the fight location |
| st\_address | VARCHAR(45) | The gym’s st. address |
| city | VARCHAR(45) | The gym’s city |
| country | VARCHAR(45) | The gym’s country |
| location\_name | VARCHAR(45) | The name of the gym |

|  |  |  |
| --- | --- | --- |
| Trainer | | |
| pk\_trainer\_id | INT | Primary key of the trainer |
| trainer\_name | VARCHAR(45) | Trainer’s first and last name |
| fk\_gym\_id | INT | Id of the trainer gym |

|  |  |  |
| --- | --- | --- |
| Belt | | |
| pk\_belt\_id | INT | Primary key of the belt |
| belt\_title | VARCHAR(45) | The belt associated organization |
| weight\_class | VARCHAR(45) | Weight class variation of belt |

|  |  |  |
| --- | --- | --- |
| Promoter | | |
| pk\_promoter\_id | INT | Primary key of the promoter |
| trainer\_name | VARCHAR(45) | Promoter’s first and last name |
| age | INT | Age of the promoter |

|  |  |  |
| --- | --- | --- |
| Boxer\_Belt | | |
| pk\_boxer\_belt\_id | INT | Primary key of boxer belt |
| fk\_belt\_id | INT | The belt id that the boxer has |
| fk\_boxer\_id | INT | The boxer id that has the belt |

LIST OF QUESTIONS:

1. Can be used to find a specific fight event and then bring back a list of what fighters fought on the fight card and who they fought against.
2. Can be used to find the records and win percentage of each fighter and can be used to rank fighters based off their records
3. Can be used to search for what boxer hold what belts and can determine who a fighter needs to fight to get that belt.
4. Can be used to find how many fighters a trainer has, as well as the trainer’s boxers win record to determine what trainers are better than others.
5. Can find and compare the reach of boxers in a weight class to see who has the reach advantage over others.
6. Can be used to see what gyms fighters train from and helps set a reputation for a gym bases off how many pro fighters they have
7. Find what fighters compete under the same promoter and rank popularity of the promoter in the boxing world
8. Can see how many belts that belong to a gym from there boxers and can be used as another metric to determine the gym quality.
9. Can be used to find a boxer most recent fights as well as their recent wins and losses.
10. Can find how much more likely a specific weight class is to have a winner based on KO than not.

CLOSING STATEMENT:

This final project was very interesting because it gave me a chance to apply MySQL to a topic the I personally found interesting. Also, it brought together topics from both the beginning and end of the semester to help solidify my skills. In addition, by setting my goals for the queries I wanted to produce I had to look outside the box to make them work. I utilized W3Schools to help me learn the syntax to using things like variables within a query. Lastly, I got practice with making an effective database that used keys and relationships to return results.