CSCI2141 Assignment Part 1

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Street Fighter 6 Database

Introduction to the Dataset (/5)

What are the data?

I will be working with data pulled from the video game Street Fighter 6, Specifically character information, frame data and attributes from each character , matchup information as in how do some character fare against other statistically, statistical data pertaining to how popular each character is and each characters current tier placement based on the fighting game current opinion.

Why are these data interesting?

These datasets are interesting since we essentially have any single character's complete information in and out of the game, meaning we can make comparisons between everyone in the roster in terms of determining which are more popular, stronger, weaker,etc.. and we can determine why this is the case by examining the characters in game. For example, determining if extreme popularity is caused by some specific attribute seen in all the popular characters moveset, stats, frame data, etc..

What kinds of information can be generated from these data?

With this data we can can make comparisons between all the characters, for example:

Which move from this character is fastest?
Which move from this character is only safe to use on hit?
Which move from this character is not safe when blocked?
Which character has the slowest move?
Which character has the most amount of safe moves on block?
Which characters have projectiles?
Which characters from the “rushdown” archetype have a 4 frame startup jab?
Which matchup is easiest for this character?
Are the highest tier characters the most popular?
Do the most popular characters have simpler movesets? (i.e less moves or less special moves)
Are the least popular characters considered “weak”?(in terms of tier placement) Do they tend to have a lot of moves?

Generation and Description of the Dataset (/10)

Description of the dataset.

Inside of our database we contain the stats associated with each of the characters in the game as well as the dataset containing all the moves associated to each individual character and all the frame data of each move. We will also have in our database each character's current tier list placement, their matchup score against every other character in the roster and their current level of popularity worldwide. This dataset will be stored in 5 separate tables:They will be all associated via the character_name which will be the primary key of the character_stat table. The first table, character_stat, will contain 9 attributes and the second table,move_list, will contain 12 attributes. The third table, tierPlacement ,will contain 5 attributes ,the fourth ,table character_matchups, will contain 3 attributes and the fifth table, character_popularity, will include 4 attributes.

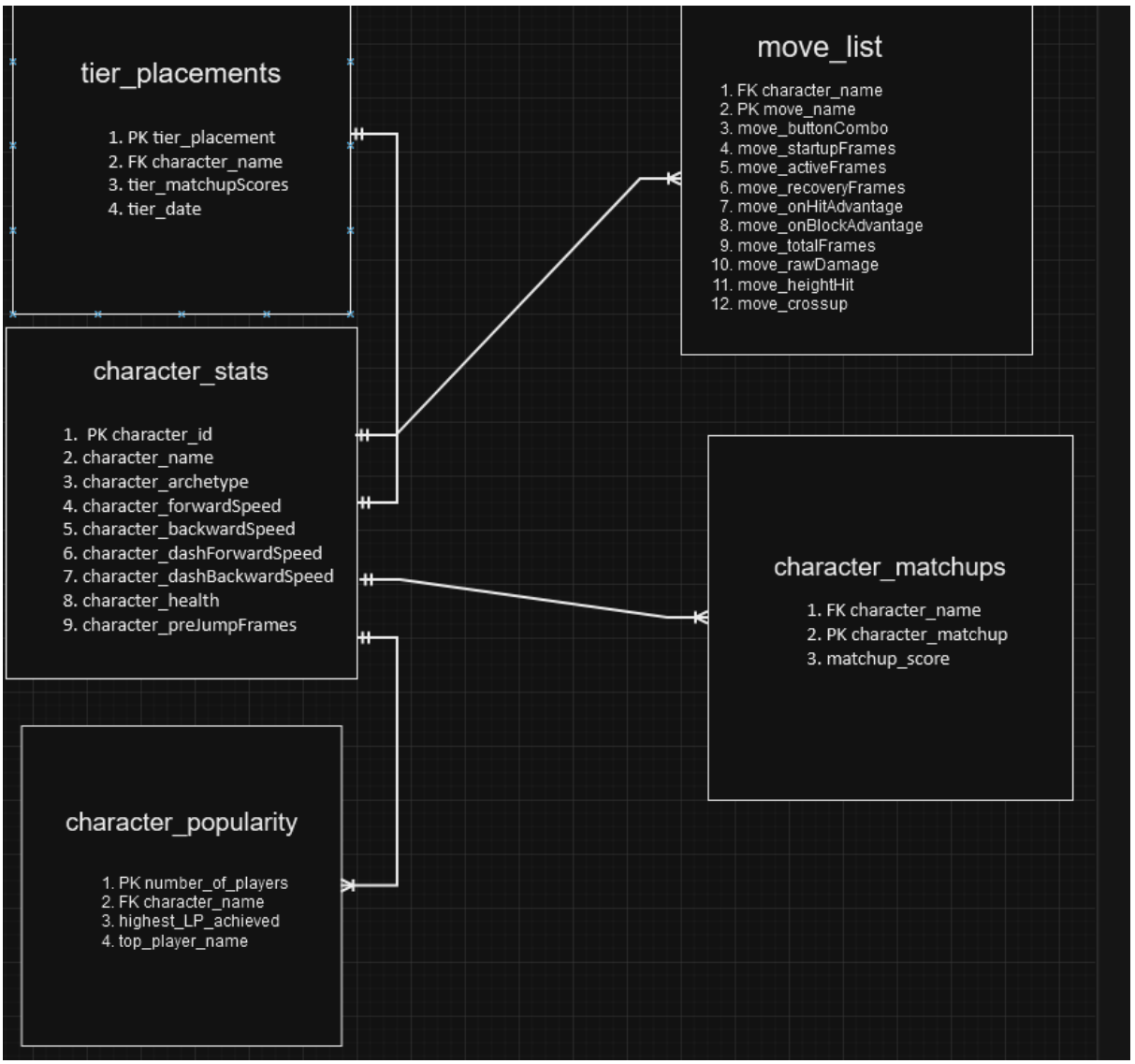
The dataset was generated from: In game information ,the website https://ultimateframedata.com/sf6/ ,the website https://www.eventhubs.com/tiers/sf6/ and the website https://www.streetfighter.com/6/buckler/ranking/league .

- Table 1 (character_stats).
- Table 2 (move_list).
- Table 3(tier_placements)
- Table 4(character_matchups)

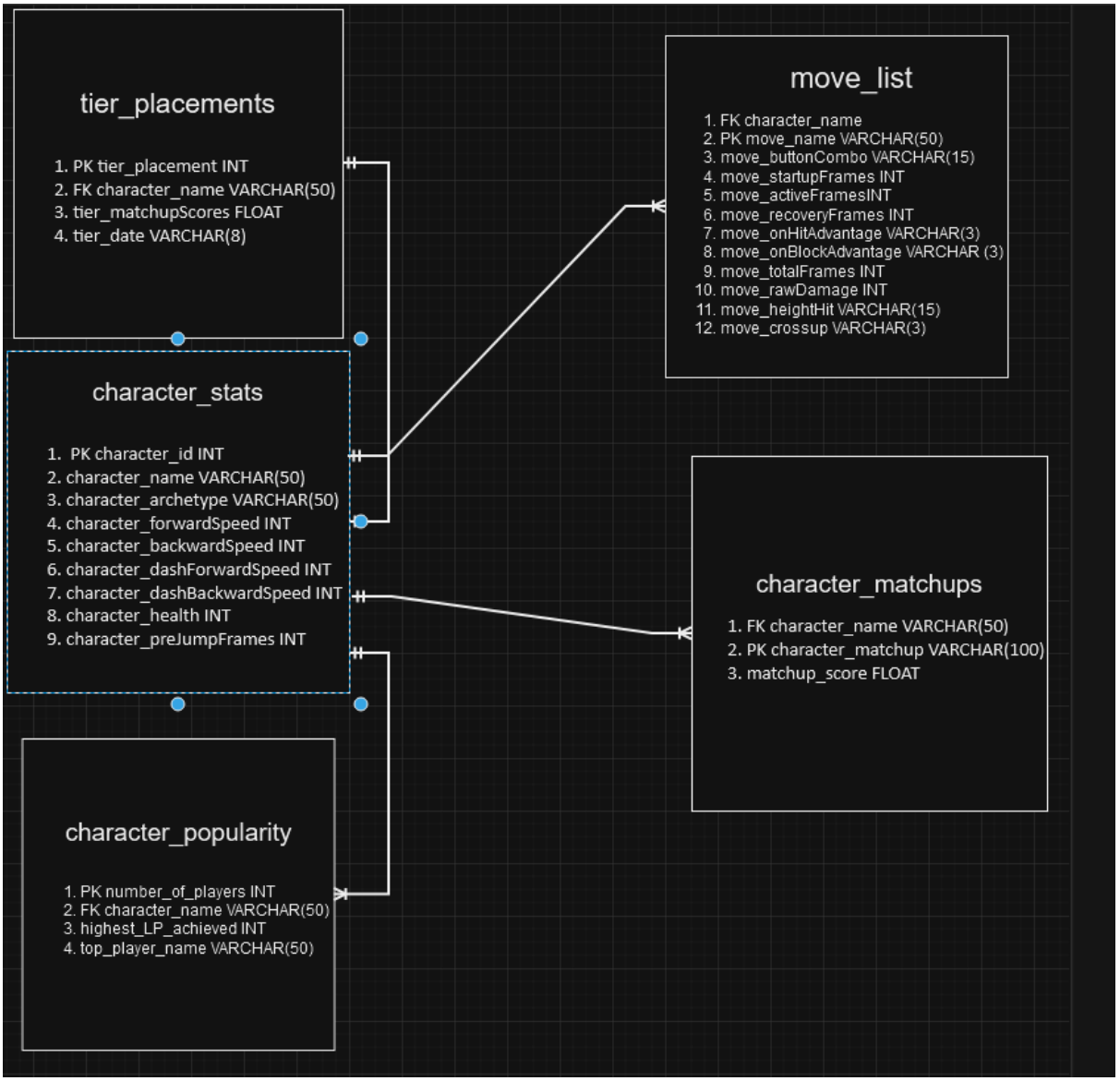
_table 5(character_popularity)

Models (/5)

Conceptual Model



Internal Model


tier_placements
1. PK tier_placement INT
2. FK character_name VARCHAR(50)
3. tier_matchupScores FLOAT
4. tier_date VARCHAR(8)
move_list
1. FK character_name
2. PK move_name VARCHAR(50)
3. move_buttonCombo VARCHAR(15)
4. move_startupFrames INT
5. move_activeFramesINT
6. move_recoveryFrames INT
7. move_onHitAdvantage VARCHAR(3)
8. move_onBlockAdvantage VARCHAR (3)
9. move_totalFrames INT
10. move_rawDamage INT
11. move_heightHit VARCHAR(15)
12. move_crossup VARCHAR(3)
character_stats
1. PK character_id INT
2. character_name VARCHAR(50)
3. character_archetype VARCHAR(50)
4. character_forwardSpeed INT
5. character_backwardSpeed INT
6. character_dashForwardSpeed INT
7. character_dashBackwardSpeed INT
8. character_health INT
9. character_preJumpFrames INT
character_matchups
1. FK character_name VARCHAR(50)
2. PK character_matchup VARCHAR(100)
3. matchup_score FLOAT
character_popularity
1. PK number_of_players INT
2. FK character_name VARCHAR(50)
3. highest_LP_achieved INT
4. top_player_name VARCHAR(50)