Team Trojans

Lab 3 Table relationships

Moves table has the move\_id as Primary key and a move name associated to each key. Move Id is an auto increment int and move\_name is the name itself which is a Varchar(50). Moves table is only associated with new moves table with a 1:N relationship. Move is mandatory whereas the existence of new move is optional for a move. The degree of participation is 0:4 and the deletion rule is deny since we do not want to delete new moves if a delete a move since a pokemon could have learnt that move before it was deleted. Moves table is the parent table

New moves table has an event\_id as FK from events table and move\_id as FK from moves table, they from a compound primary key. This table relates the events and moves with each other. It has a 1:1 relation with the events table as there can only be one event id associated with a move id in the table. However, it has a 1:N relation with moves. The deletion rule is cascade as this table does not have any child tables. The degree of participation is 0:4 since a pokemon can only learn 4 moves at once and having new moves on optional.

Levels ups is similar to new moves, as it has event\_ID as FK and PK referencing events table, along with this there is a level reached INT which keeps track of the level reached of the pokemon. A pokemon does not have to change level therefore it is optional. The relation is 1:1 with events, degree of participation is 0:1 and deletion rule is cascade since there are no child tables.

Eggs table is also associated with events with a 1:1 relationship with events. The events\_id acts as a primary and foreign key, we also have father\_Id and mother\_id to represent the parents of the egg these are referenced from the events table. The deletion rule is cascade and degree of participation is 0: 1. Eggs table also form a view which has the count of total eggs. This is optional since every pokemon does not need to have eggs.

Events table has event\_id as PK, this a auto increment int. Pokemon\_id referenced from pokemons and date the event took place. It is linked with eggs, new\_moves and level\_up in a 1:1 relationship and a 1:N relationship with pokemons. The deletion rule is restricted for this table since we do not want the event to be deleted if there are existing children in child table. The degree of participation is 0:N with pokemons and 0:1 with the rest of the tables. This has a optional relation with pokemons table and a mandatory relation with the rest of the table.

Pokemons table has a pokemon\_id as PK which is an auto increment int, pokemon\_name is a varchar(50) this will be the name of the pokemon. Species\_id is a FK relating to species table. Trainer\_id is also a fk relating to the trainers table. Pokemon\_level is an int which keeps track of the current level of the pokemon. And a is\_female Boolean which defines the gender of the pokemon. It has a mandatory relation with events and trainer, while species is optional. It has a 1:N relation with trainers and events while 1:1 species. The degree of participation with trainers and events is 1:N, and 0:1 with species table. Deny is the deletion rule used on this table.

Species table has a species\_ID as PK (auto-increment INT), and a species\_name (varchar(50)). It has a 1:1 relation with pokemons and 1:N with species\_type. It has a mandatory relation with both species\_type and pokemons. Degree of participation is 0:1 with pokemons and 1:2 with species\_types. The deletion rule is deny for this table.

Species\_types has species\_id as FK and type\_name as foreign key. Both of them act as a compound PK. It has a 1:N relation with species and types. The degree of participation is 1:2 with species and 0:1 with types. The deletion rule is deny. It has a mandatory relation with both the tables

Types table just has type\_names as PK which is a varchar(50). It has a 1:N relation with species\_type. The DOP is 0:1 and it is mandatory. The deletion rule is Deny.

Trainers table has trainer\_ID as PK (auto-increment INT). Phone number (varchar(50)), email (varchar(255)), and address (varchar(50)). It has a mandatory 1:N relation with pokemons. The dop is 1:10 and the deletion rule is restricted.