

CPSC 304 Project Cover Page

Milestone #: 4

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Group Number: 1

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your email address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

Project Link (.php and .sql) are both in the repo:

https://github.students.cs.ubc.ca/CPSC304-2021W-T1/project_j3j3b_n8q2b_o6j3b

Project description:

Our product is a creative imagining of a prototype Pokédex. In this Pokédex, there are a series of tables that represent the people, Pokémon, and other aspects of the Pokémon world that the user has learned. In our project implementation, we have several tabs you can select, which each contain their own example functions that each use different types of SQL Queries to interact with the Pokédex.

List of SQL Queries used:

INSERT - Insert a new pokemon

DELETE - Delete a retiring gym leader

UPDATE - Update a Gym's number of trainers display afterwards

SELECTION - See all Pokémons in a specific region

PROJECTION - Project a column from the Pokémon table

JOIN - Display the effects of an item a Pokémon is holding

GROUP BY - Group Pokémon by a column

HAVING - Group Pokémon by regions, only showing regions with a minimum population

NESTED GROUP BY - Find Pokémon which have a minimum number of moves

DIVISION - Display the Pokémon who holds every pokemon item

These queries are examples of types of functions that could be used in future Pokédex iterations, and future queries could be more generalized to different tables, eg. the ability to update all tables, not just one in particular.

A description of how your final schema differed from the schema you turned in:

Schema (key is underlined, **foreign keys are bolded**)

- Pokémon (pname, id, nickname, **region**)
 - PK changed from : {pname, nickname} to {id, nickname}
 - This is changed because we want to have different individual o
- Trainer (tname)
- Gym Leader (**tname**, gym, gym badges, gym number of trainers, **tyname**, **rname**)
 - Changed to Gym Leader (**tname**, gym, **tyname**, **rname**)
- Pokémon item (iname, effect)
- Generation (gname)
- MoveComesFrom (**mname**, **tyname**)
 - Changed to Moves(**mname**, **tyname**)
- Type (tyname)

- Changed to Typee (tyname)
- Trains (tname, id, nickname)
- Holds (id, nickname, iname)
- region (rname)
- AppearIn (id, nickname, gname)
 - Changed to Appear_in_Generation(id, nickname, gname, pname)
- hasMoves (id, nickname, tyname, mname)
- ineffectiveAgainst (tyname, tyname)
 - Changed key to (tyname_self, tyname_other)
- weakAgainst (tyname, tyname)
 - Changed key to (tyname_self, tyname_other)
- StrongAgainst (tyname, tyname)
 - Changed key to (tyname_self, tyname_other)

Screenshots:

Insert:

Add a new Pokémon to the Pokédex

Discovered a new Pokémon? Add it to the Pokédex!

New Pokémon ID:

Pokémon Species Name:

Pokémon Nickname:

Pokémon Region:

Kanto

Insert

Output

Pokemon

ID	NICKNAME	PNAME	RNAME
1	Bulburino	Bulbasaur	Kanto
1	Bulby	Bulbasaur	Kanto
5	Charmelon	Charmeleon	Kanto
25	Chu	Pikachu	Kanto
25	Pika	Pikachu	Kanto
37	Saiken	Alolan Vulpix	Alola
38	Kurama	Alolan Ninetales	Alola
52	MewMewMew	Meowth	Alola
79	Procrastinator	Slowpoke	Kanto

Add a new Pokémon to the Pokédex

Discovered a new Pokémon? Add it to the Pokédex!

New Pokémon ID:

Pokémon Species Name:

Pokémon Nickname:

Pokémon Region:

Choose a region

Insert

Output

ID	NICKNAME	PNAME	RNAME
1	Bulburino	Bulbasaur	Kanto
1	Bulby	Bulbasaur	Kanto
5	Charmelon	Charmeleon	Kanto
19	Ratt	Rattata	Kanto
25	Chu	Pikachu	Kanto
25	Pika	Pikachu	Kanto
37	Saiken	Alolan Vulpix	Alola
38	Kurama	Alolan Ninetales	Alola
52	MewMewMew	Meowth	Alola
79	Procrastinator	Slowpoke	Kanto

Detete:

Delete a retired Gym Leader from the pokedex

The values are case sensitive and if you enter in the wrong case, it will not do :

Gym Leader's name:

Gym Leader's Gym:

Rustboro

Delete

Output

gym_leader

TNAME	GYM	RNAME	TYNAME
Misty	Cerulean	Kanto	Water
Roxanne	Rustboro	Hoenn	Rock
Cilan	Striaton	Unova	Grass
Chili	Striaton	Unova	Fire
Blue	Viridian	Kanto	

Delete a retired Gym Leader from the pokedex

The values are case sensitive and if you enter in the wrong case, it will not do anything.

Gym Leader's name:

Gym Leader's Gym:

Delete

Output

TNAME	GYM	RNAME	TYNAME
Misty	Cerulean	Kanto	Water
Cilan	Striaton	Unova	Grass
Chili	Striaton	Unova	Fire
Blue	Viridian	Kanto	

Update:

Update a Gym's number of trainers in the Pokédex.

The values are case sensitive and if you enter in the wrong case, the update stater

Gym name:

New number:

Output

gym		
GYM	GYM_BADGE	GYM_NUMBER_OF_TRAINERS
Cerulean Cascade		10
Rustboro Stone		5
Striaton Unova		4
Viridian Kanto		0

Update a Gym's number of trainers in the Pokédex.

The values are case sensitive and if you enter in the wrong case, the update statement will not

Gym name:

New number:

Output

gym		
GYM	GYM_BADGE	GYM_NUMBER_OF_TRAINERS
Cerulean Cascade		10
Rustboro Stone		5
Striaton Unova		9
Viridian Kanto		0

Selection:

See all Pokémons in a specific generation.

Which generation would you want to select?

Output

See all Pokémons in a specific generation.

Which generation would you want to select?

Output

ID	PNAME
387	Turtwig
390	Chimchar
393	Piplup
439	Mime Jr.

Projection:

Project a column from Pokemon table

Which column would you want to project on?

Output

Project a column from Pokemon table

Which column would you want to project on?

Output

RNAME
Alola
Hoenn
Sinnoh
Unova
Kalos
Kanto
Johto

Joins:

Display effects of items that a Pokémon is holding.

The values are case sensitive and if you enter in the wrong case, it will not do anything.

Pokémon ID: 25

Pokémon nickname: Pika

Display

Output

Display effects of items that a Pokémon is holding.

The values are case sensitive and if you enter in the wrong case, it will not do anything.

Pokémon ID:

Pokémon nickname:

Display

Output

INAME	EFFECT
Focus Band	An item to be held by a Pokémon. The holder may endure a potential KO attack, leaving it with just 1 HP.

Group By:

Group by region in table Pokemon

Which column would you want to project on?

Note choose Region to get the best group by result

Region

Select

Output

Group by region in table Pokemon

Which column would you want to project on?

Note choose Region to get the best group by result

Choose a Column to Group By

Select

Output

RNAME	COUNT(*)
Alola	8
Hoenn	7
Sinnoh	5
Unova	4
Kalos	5
Kanto	9
Johto	5

Division

Display Pokemon who holds all Pokemon Items

Display

Output

NICKNAME	PNAME
Kurama	Alolan Ninetales
Tiannes snorlax	Snorlax

Having:

Group by region where Pokemon count is greater than a number

Group by region where Pokemon count is greater than:

Output

RNAME COUNT(*)
Alola 8
Hoenn 7
Sinnoh 5
Unova 4
Kalos 5
Kanto 9
Johto 5

Group by region where Pokemon count is greater than a number

Group by region where Pokemon count is greater than:

Output

RNAME COUNT(*)
Alola 8
Hoenn 7
Kanto 9

Nested Group by:

Find the pokémon with at least as many moves as this number.

At least moves.

Output

Find the pokémon with at least as many moves as this number.

At least moves.

Output

ID NICKNAME MOVECOUNT
1 Bulby 3
250 Santa 3
390 Chimchim 5
791 Sol 4