INSERT

Before   *During*   *After*

Trainers

Trainer ID	Name	Location
1	Ash	Pallet Town
2	Gary	NULL
3	Brock	Pewter City
4	Misty	Cerulean City
5	Lt. Surge	Vermilion City
6	Erika	Celadon City
7	Koga	Fuchsia City
8	Sabrina	Saffron City
9	Blaine	Route 1
10	Giovanni	NULL
11	John	Pallet Town
12	Joe	NULL
13	Amanda	NULL
14	Roman	NULL

Insert New Trainer

Trainer ID:

Enter Trainer ID

Name:

Enter Trainer Name

Location:

Enter Location (optional)

Insert Trainer

Insert New Trainer

Trainer ID:

15

Name:

Crash

Location:

Enter Location (optional)

Insert Trainer

Trainers

Trainer ID	Name	Location
1	Ash	Pallet Town
2	Gary	NULL
3	Brock	Pewter City
4	Misty	Cerulean City
5	Lt. Surge	Vermilion City
6	Erika	Celadon City
7	Koga	Fuchsia City
8	Sabrina	Saffron City
9	Blaine	Route 1
10	Giovanni	NULL
11	John	Pallet Town
12	Joe	NULL
13	Amanda	NULL
14	Roman	NULL
15	Crash	NULL

Insert New Trainer

Trainer ID:

Enter Trainer ID

Name:

Enter Trainer Name

Location:

Enter Location (optional)

Insert Trainer

Trainer inserted successfully!

DELETE

Trainers

Trainer ID	Name	Location
1	Ash	Pallet Town
2	Gary	NULL
3	Brock	Pewter City
4	Misty	Cerulean City
5	Lt. Surge	Vermilion City
6	Erika	Celadon City
7	Koga	Fuchsia City
8	Sabrina	Saffron City
9	Blaine	Route 1
10	Giovanni	NULL
11	John	Pallet Town
13	Amanda	NULL

Players

Trainer ID	Trainer Name	Money
1	Ash	5000
2	Gary	3000
11	John	5000
13	Amanda	5000

BADGE_INDEX	DIFFICULTY	SPECIALTY_TYPE_NAME	TRAINER_ID
1	1	Rock	3
2	2	Water	4
3	3	Electric	5
4	4	Grass	6
5	5	Poison	7
6	5	Psychic	8

Delete Trainer (Cascades to Player/Gym Leader)

Trainer ID:

11

Delete Trainer

Trainers

Trainer ID	Name	Location
1	Ash	Pallet Town
2	Gary	NULL
3	Brock	Pewter City
4	Misty	Cerulean City
5	Lt. Surge	Vermilion City
6	Erika	Celadon City
7	Koga	Fuchsia City
8	Sabrina	Saffron City
9	Blaine	Route 1
10	Giovanni	NULL
13	Amanda	NULL

Players

Trainer ID	Trainer Name	Money
1	Ash	5000
2	Gary	3000
13	Amanda	5000

BADGE_INDEX	DIFFICULTY	SPECIALTY_TYPE_NAME	TRAINER_ID
1	1	Rock	3
2	2	Water	4
3	3	Electric	5
4	4	Grass	6
5	5	Poison	7
6	5	Psychic	8

UPDATE

Before *During* *After*

Trainers

Trainer ID	Name	Location
1	Ash	Pallet Town
2	Gary	NULL
3	Brock	Pewter City
4	Misty	Cerulean City
5	Lt. Surge	Vermilion City
6	Erika	Celadon City
7	Koga	Fuchsia City
8	Sabrina	Saffron City
9	Blaine	Route 1
10	Giovanni	NULL
11	John	Pallet Town
12	Joe	NULL
13	Amanda	NULL

Update Trainer

Trainer ID:

12

New Name:

Enter New Name (optional)

New Location:

Pallet Town

Update Trainer

Trainers

Trainer ID	Name	Location
1	Ash	Pallet Town
2	Gary	NULL
3	Brock	Pewter City
4	Misty	Cerulean City
5	Lt. Surge	Vermilion City
6	Erika	Celadon City
7	Koga	Fuchsia City
8	Sabrina	Saffron City
9	Blaine	Route 1
10	Giovanni	NULL
11	John	Pallet Town
12	Joe	Pallet Town
13	Amanda	NULL

SELECTION

Before

During

After

Pokemon

Pokedex #	Pokemon ID	Name	Level	Nature	HP IV	Attack IV	Defense IV	Speed IV	Ability ID	Trainer ID
1	1	Bulbasaur	5	Modest	25	15	20	18	4	1
2	1	Ivysaur	10	Calm	28	18	25	20	4	1
3	1	Venusaur	15	Bold	31	20	31	22	4	2
4	1	Charmander	5	Jolly	22	25	18	28	5	3
5	1	Charmeleon	10	Adamant	26	30	20	25	5	4
6	1	Charizard	15	Adamant	31	31	22	28	5	5
7	1	Squirtle	5	Bold	24	18	28	20	6	5
8	1	Wartortle	10	Relaxed	28	20	30	18	6	6
9	1	Blastoise	15	Modest	31	15	31	25	6	7
25	1	Pikachu	10	Timid	20	18	15	31	2	8
25	2	Pikachu	5	Relaxed	1	31	9	6	11	8
26	1	Raichu	15	Jolly	25	25	20	31	2	9

Selection Query on Pokemon

Create a query to filter Pokemon based on specific criteria. Add multiple conditions using AND/OR logic.

pokemon_id =

2

OR Remove

nature =

Adamant

Remove

Add Condition   Run Selection Query

Found 3 Pokemon.

Pokedex #	Pokemon ID	Name	Level	Nature	HP IV	Attack IV	Defense IV	Speed IV	Ability ID	Trainer ID
5	1	Charmeleon	10	Adamant	26	30	20	25	5	4
6	1	Charizard	15	Adamant	31	31	22	28	5	5
25	2	Pikachu	5	Relaxed	1	31	9	6	11	8

PROJECTION

Before

Pokemon

Pokedex #	Pokemon ID	Name	Level	Nature	HP IV	Attack IV	Defense IV	Speed IV	Ability ID	Trainer ID
1	1	Bulbasaur	5	Modest	25	15	20	18	4	1
2	1	Ivysaur	10	Calm	28	18	25	20	4	1
3	1	Venusaur	15	Bold	31	20	31	22	4	2
4	1	Charmander	5	Jolly	22	25	18	28	5	3
5	1	Charmeleon	10	Adamant	26	30	20	25	5	4
6	1	Charizard	15	Adamant	31	31	22	28	5	5
7	1	Squirtle	5	Bold	24	18	28	20	6	5
8	1	Wartortle	10	Relaxed	28	20	30	18	6	6
9	1	Blastoise	15	Modest	31	15	31	25	6	7
25	1	Pikachu	10	Timid	20	18	15	31	2	8
25	2	Pikachu	5	Relaxed	1	31	9	6	11	8
26	1	Raichu	15	Jolly	25	25	20	31	2	9

During

Projection Query

Select specific attributes from any table in the database.

Select Table: POKEMON_1

- [x] ABILITY_ID
- [ ] ATTACK_IV
- [x] DEFENSE_IV
- [ ] HP_IV
- [x] NAME
- [ ] NATURE
- [ ] POKEDEX
- [x] POKEMON_ID
- [ ] SPEED_IV
- [ ] TOTAL_XP
- [ ] TRAINER_ID

After

Projection query executed successfully!

ABILITY_ID	DEFENSE_IV	NAME	POKEMON_ID
4	20	Bulbasaur	1
4	25	Ivysaur	1
4	31	Venusaur	1
5	18	Charmander	1
5	20	Charmeleon	1
5	22	Charizard	1
6	28	Squirtle	1
6	30	Wartortle	1
6	31	Blastoise	1
2	15	Pikachu	1
11	9	Pikachu	2
2	20	Raichu	1

JOIN

Before

Available Pokemon Species

Pokedex #	Species Name	Description
1	Bulbasaur	It carries a seed on its back right from birth. As its body grows larger, the seed does too.
2	Ivysaur	The bulb on its back grows as it absorbs nutrients. The bulb gives off a pleasant aroma when it blooms.
3	Venusaur	By spreading the broad petals of its flower and catching the sun's rays, it fills its body with power.
4	Charmander	The flame on its tail shows the strength of its life-force. If Charmander is weak, the flame also burns weakly.
5	Charmeleon	It is very hotheaded by nature, so it constantly seeks opponents to battle against. Its aggression will not be quelled if it doesn't win.
6	Charizard	The flame inside its body burns hotter than 3,600 degrees Fahrenheit. When Charizard roars, that temperature climbs even higher.
7	Squirtle	Its shell is soft immediately after it is born. In no time at all, the shell becomes so resilient that a prodding finger will bounce right off it.
8	Wartortle	It often hides in water to stalk unwary prey. While swimming quickly, it moves its ears to maintain balance.
9	Blastoise	It has jet nozzles on its shell. This impressive Pokémon uses these jets to charge toward foes with all the force of a rocket.
25	Pikachu	When several of these Pokémon gather, their electricity can build and cause lightning storms.
26	Raichu	Its tail discharges electricity into the ground, protecting it from getting shocked.

During

Join Query: Species Located In

Find Pokemon species and their locations (or all species in a certain location) using JOIN operation.

Filter by Location (optional): [Pallet Town ▼]

Run Join Query

After

Found 3 species-location combinations.

Pokedex #	Species Name	Description	Location	Climate	Terrain Type
1	Bulbasaur	It carries a seed on its back right from birth. As its body grows larger, the seed does too.	Pallet Town	Temperate	Grassland
4	Charmander	The flame on its tail shows the strength of its life-force. If Charmander is weak, the flame also burns weakly.	Pallet Town	Temperate	Grassland
7	Squirtle	Its shell is soft immediately after it is born. In no time at all, the shell becomes so resilient that a prodding finger will bounce right off it.	Pallet Town	Temperate	Grassland

Aggregation with Group By

Before

During

After

Pokemon

Pokedex #	Pokemon ID	Name	Level	Nature	HP IV	Attack IV	Defense IV	Speed IV	Ability ID	Trainer ID
1	1	Bulbasaur	5	Modest	25	15	20	18	4	1
2	1	Ivysaur	10	Calm	28	18	25	20	4	1
3	1	Venusaur	15	Bold	31	20	31	22	4	2
4	1	Charmander	5	Jolly	22	25	18	28	5	3
5	1	Charmeleon	10	Adamant	26	30	20	25	5	4
6	1	Charizard	15	Adamant	31	31	22	28	5	5
7	1	Squirtle	5	Bold	24	18	28	20	6	5
8	1	Wartortle	10	Relaxed	28	20	30	18	6	6
9	1	Blastoise	15	Modest	31	15	31	25	6	7
25	1	Pikachu	10	Timid	20	18	15	31	2	8
25	2	Pikachu	5	Relaxed	1	31	9	6	11	8
26	1	Raichu	15	Jolly	25	25	20	31	2	9

Aggregation with GROUP BY

Group Pokemon by trainer and analyze statistics.

Pokemon Defense IV by Trainer

Minimum Defense IV (optional):

Enter minimum Defense IV

[Show Pokemon by Defense IV]

Trainer ID	Trainer Name	Pokemon Name	Defense IV

Trainer Pokemon Statistics

[Show Trainer Statistics]

Trainer ID	Trainer Name	Pokemon Count	Average Defense IV	Max Defense IV

Minimum Defense IV (optional):

26

[Show Pokemon by Defense IV]

Found 4 Pokemon records.

Trainer ID	Trainer Name	Pokemon Name	Defense IV
2	Gary	Venusaur	31
5	Lt. Surge	Squirtle	28
6	Erika	Wartortle	30
7	Koga	Blastoise	31

Trainer Pokemon Statistics

[Show Trainer Statistics]

Showing statistics for 12 trainers.

Trainer ID	Trainer Name	Pokemon Count	Average Defense IV	Max Defense IV
1	Ash	2	22.5	25
5	Lt. Surge	2	25	28
8	Sabrina	2	12	15
2	Gary	1	31	31
3	Brock	1	18	18
4	Misty	1	20	20
6	Erika	1	30	30
7	Koga	1	31	31
9	Blaine	1	20	20
10	Giovanni	0	NULL	NULL
11	John	0	NULL	NULL
13	Amanda	0	NULL	NULL

Aggregation with Having

Before

NAME	POKEDEX	POKEMON_ID	TOTAL_XP	TRAINER_ID
Bulbasaur	1	1	1000	1
Ivysaur	2	1	3000	1
Venusaur	3	1	6000	2
Charmander	4	1	1000	3
Charmeleon	5	1	3000	4
Charizard	6	1	6000	5
Squirtle	7	1	1000	5
Wartortle	8	1	3000	6
Blastoise	9	1	6000	7
Pikachu	25	1	3000	8
Pikachu	25	2	1000	8
Raichu	26	1	6000	9

During

Aggregation with HAVING

Find trainers with multiple Pokemon and analyze their highest XP Pokemon.

Trainers with Highest XP Pokemon (Having Multiple Pokemon)

Minimum Pokemon Count:

2	⏶⏷

Find Trainers with High XP Pokemon

Trainer ID	Trainer Name	Highest XP	Pokemon Count

After

Aggregation with HAVING

Find trainers with multiple Pokemon and analyze their highest XP Pokemon.

Trainers with Highest XP Pokemon (Having Multiple Pokemon)

Minimum Pokemon Count:

2

Find Trainers with High XP Pokemon

Found 3 trainers with at least 2 Pokemon.

Trainer ID	Trainer Name	Highest XP	Pokemon Count
5	Lt. Surge	6000	2
1	Ash	3000	2
8	Sabrina	3000	2

Nested Aggregation with Group By

Before

NAME	POKEDEX	POKEMON_ID	TOTAL_XP	TRAINER_ID
Bulbasaur	1	1	1000	1
Ivysaur	2	1	3000	1
Venusaur	3	1	6000	2
Charmander	4	1	1000	3
Charmeleon	5	1	3000	4
Charizard	6	1	6000	5
Squirtle	7	1	1000	5
Wartortle	8	1	3000	6
Blastoise	9	1	6000	7
Pikachu	25	1	3000	8
Pikachu	25	2	1000	8
Raichu	26	1	6000	9

During

Nested Aggregation with GROUP BY

Complex aggregation queries with nested subqueries.

Trainers with Above-Average Pokemon XP

Find Trainers Above Average XP

Trainer ID	Trainer Name	Pokemon Count	Average XP

After

Nested Aggregation with GROUP BY

Complex aggregation queries with nested subqueries.

Trainers with Above-Average Pokemon XP

Find Trainers Above Average XP

Found 4 trainers with above-average Pokemon XP.

Trainer ID	Trainer Name	Pokemon Count	Average XP
7	Koga	1	6000
2	Gary	1	6000
9	Blaine	1	6000
5	Lt. Surge	2	3500

Division

Before

Pokedex #	Species Name	Types
1	Bulbasaur	Grass, Poison
2	Ivysaur	Grass, Poison
3	Venusaur	Grass, Poison
4	Charmander	Fire
5	Charmeleon	Fire
6	Charizard	Fire, Flying
7	Squirtle	Water
8	Wartortle	Water
9	Blastoise	Water
25	Pikachu	Electric
26	Raichu	Electric

During

Division Query: Species Has Type

Find all species that have specific types or combinations of types.

Find Species with Specific Types (Division)

Select Types (species must have ALL selected types):

- ☐ Bug
- ☐ Dark
- ☐ Dragon
- ☐ Electric
- ☐ Fairy
- ☐ Fighting
- ☐ Fire
- ☐ Flying
- ☐ Ghost
- ☑ Grass
- ☐ Ground
- ☐ Ice
- ☐ Normal
- ☐ Poison
- ☐ Psychic
- ☐ Rock
- ☐ Steel
- ☐ Water

After

Division Query: Species Has Type

Find all species that have specific types or combinations of types.

Find Species with Specific Types (Division)

Select Types (species must have ALL selected types):

- ☐ Bug
- ☐ Dark
- ☐ Dragon
- ☐ Electric
- ☐ Fairy
- ☐ Fighting
- ☐ Fire
- ☐ Flying
- ☐ Ghost
- ☑ Grass
- ☐ Ground
- ☐ Ice
- ☐ Normal
- ☐ Poison
- ☐ Psychic
- ☐ Rock
- ☐ Steel
- ☐ Water

[Find Species with Selected Types] [Show All Species and Their Types]

Found 3 species with types: Grass.

Pokedex #	Species Name	Types
1	Bulbasaur	Grass, Poison
2	Ivysaur	Grass, Poison
3	Venusaur	Grass, Poison