

Завдання 1.

Створиння схеми pandemic create **schema pandemic**
схема за замовчуванням за допомогою **use**
Імпорт даних.
Позбувся за допомогою нормалізації даних.

```
insert into cases_details (entity_id, year, number_rabies, number_malaria)
select entity_id, Year,
       case when Number_rabies = '' then null else Number_rabies end as number_rabies,
       case when Number_malaria = '' then null else Number_malaria end as number_malaria
from infectious_cases
where Number_rabies not in ('') and Number_malaria not in ('');
```

Завдання 2.

Нормалізував таблицю infectious_cases до 3ї нормальної форми із заповнюємо дані в нову таблицю

```
create table if not exists cases_details (
  id serial primary key,
  entity_id int not null,
  year int not null,
  number_rabies int,
  foreign key (entity_id) references entities (id)
);
```

```
Insert into cases_details (entity_id, year, number_rabies)
select entity_id, Year, Number_rabies
from infectious_cases;
```

Завдання 3.

Проаналізував дані:

середнє, мінімальне, максимальне значення та суму

```
select
  entity_id,
  avg(number_rabies) AS avg_rabies,
  min(number_rabies) AS min_rabies,
  max(number_rabies) AS max_rabies,
  sum(number_rabies) AS sum_rabies
from
  cases_details
where
  number_rabies is not null
group by
  entity_id
order by
  avg_rabies desc
limit 10;
```

Завдання 4.

Побудув колонку різниці в роках.

```
set sql_safe_updates = 0;
update cases_details
set start_date = str_to_date(concat(year, '-01-01'), '%Y-%m-%d');
#where id > 0;

update cases_details
set current_date_column = curdate();
#where id > 0;

update cases_details
set year_difference = year(current_date) - year(start_date);
#where id > 0;
set sql_safe_updates = 1;

select id, entity_id, year, start_date, current_date_column, year_difference
from cases_details
limit 10;
```

Завдання 5.

Побудував функцію.

```
drop function if exists calculate_year_difference;

delimiter //

create function calculate_year_difference(input_year int)
returns int
deterministic
begin
    declare start_date date;
    declare year_differ int;

    set start_date = str_to_date(concat(input_year, '-01-01'), '%Y-%m-%d');
    set year_differ = year(curdate()) - year(start_date);

    return year_differ;
end //

delimiter ;

select id, year, calculate_year_difference(year) as year_difference
from cases_details
limit 10;

set sql_safe_updates = 0;

update cases_details
set year_difference = calculate_year_difference(year);
```

```
SET sql_safe_updates = 1;
```

```
select id, year, start_date, year_difference  
from cases_details  
limit 10;
```