S07-P01 Practice

Assignment

Create a function that will return distance between 2 coordinates in meters. Each coordinate is defined by `latitude` and `longitude`.

Pick 2 places on latlong.net http://www.latlong.net/, get their latitude & longitude, and use your newly created function to calculate distance between the 2 places.

```
Law of cosines
d = R · acos( sin ϕ1 · sin ϕ2 + cos ϕ1 · cos ϕ2 · cos Δλ )
```

...

...

...

SPOILER: Below are the results

...

...

Result

Calculations: http://www.movable-type.co.uk/scripts/latlong.html

```
DROP FUNCTION IF EXISTS `FC_GET_DISTANCE`;

DELIMITER //

CREATE FUNCTION `FC_GET_DISTANCE`(
        in_latitude_from FLOAT,
        in_longitude_from FLOAT,
```

```
        in_latitude_to FLOAT,
        in_longitude_to FLOAT
) RETURNS float
BEGIN
        RETURN
      ROUND(
              6371 * 1000 /* R is earth's radius in meters (6371km) */
              * ACOS(
                                                  COS(
RADIANS(in_latitude_from) )
                        * COS( RADIANS(in_latitude_to ) )
                        * COS( RADIANS(in_longitude_to ) -
RADIANS(in_longitude_from) )
                      + SIN( RADIANS(in_latitude_from) )
                        * SIN( RADIANS(in_latitude_to ) )
              )
      );
end;
//

DELIMITER ;

SELECT FC_GET_DISTANCE(13.756331, 100.501765, 13.756262, 100.505891) AS
distance_in_meters;
```