-- String functions

-- Help us to manipulate text and strings

-- Q1 count the number of characters in the column student name

-- Solution can be using the function Length or char\_length

**SELECT** student\_name,

**LENGTH**(student\_name) **AS** *name\_in\_bytes*,

**CHAR\_LENGTH**(student\_name) **AS** *name\_characters*

**FROM** students;

-- Remember what we had in the region column

**SELECT** \*

**FROM** regions

-- Q2 return the countries that starts with the letters "Li"

-- Solution using the function start with.

**SELECT** \*

**FROM** regions

**WHERE** STARTS\_WITH(country, 'Li');

-- Concatenation using concat function

-- Concat(string1, string 2)

**SELECT** **CONCAT**(country, region) **AS** *string\_concat*

**FROM** regions;

-- Seperate the concatenated text with space using the function concat\_ws

**SELECT** **CONCAT\_WS**(' ' , country, region) **AS** *string\_concat\_ws*

**FROM** regions;

-- Seperate the concatenated text and add a text with space using the function concat\_ws

**SELECT** **CONCAT\_WS**(' ', country, 'in', region) **AS** *string\_concat\_ws*

**FROM** regions;

**SELECT** **CONCAT\_WS**(',', country, 'in', region) **AS** *string\_concat\_ws*

**FROM** regions;

**SELECT** **CONCAT\_WS**(' ; ', country, 'in', region) **AS** *string\_concat\_ws*

**FROM** regions;

-- Convert string to lower case using the lower function

**CREATE** **VIEW** countries\_view **AS**

**SELECT** country, **lower**(country) country\_lower

**FROM** countries

-- Convert the first letter of each word to upper case and the rest to lower case.

**SELECT** country, **initcap**(country\_lower) *country\_Cap*

**FROM** countries\_view

-- String\_extraction by index

**SELECT** country, **LEFT**(country, 2) *AScountries\_from\_left*

**FROM** countries;

**SELECT** country, **Right**(country, 4) *AScountries\_from\_left*

**FROM** countries;

**SELECT** country, **SUBSTRING**(country **FROM** 1 **FOR** 3) **AS** string\_substring

**FROM** countries;

-- scroll down to see the result

**SELECT** country,

**SPLIT\_PART**(country, ' ', 2) **AS** *string\_split*

**FROM** regions;

------------------------------ Break 10 minutes --------------

--------------------------------------------------------------------

-- check the data type of each column within a table name

-- Asl students to take a screenshot of thier original data types

**SELECT** \* **FROM** flights

**SELECT** column\_name, data\_type

**FROM** information\_schema.columns

**WHERE** table\_name = 'flights';

-- Note that this is only temporary and it doesn't modify the original table.

**SELECT** **CAST**(flight\_number **AS** **VARCHAR**)

**FROM** flights;

**SELECT** **concat\_ws**(',',tail\_number, **CAST**(flight\_number **AS** **VARCHAR**)) *flight\_number\_string*

**FROM** flights;

**SELECT** **concat\_ws**(' ',tail\_number, flight\_number :: **VARCHAR**) *flight\_number\_string*

**FROM** flights;

-- CAST string to date type

**SELECT** flight\_date,

**CAST**(flight\_date **AS** **DATE**),

flight\_date::**DATE**

**FROM** flights

**SELECT** **LEFT**(flight\_date::**TEXT**, 7) **AS** *month\_year*

**from** flights

**SELECT** country,

**DATE** '2020-01-01' **AS** *one\_date*,

INT '2030' **AS** the\_year

**FROM** regions;

-- Since casting will ONLY CHANGE it TEMPORARY here IS how TO MODIFY a DATA TYPE INside the table

**ALTER** **TABLE** flights

**ALTER** **COLUMN** flight\_date

**SET** **DATA** **TYPE** **varchar**(35);

**ALTER** **TABLE** flights

**ALTER** **COLUMN** flight\_date

**SET** **DATA** **TYPE** **Date**

**USING** flight\_date::**Date**;