**-- 2. Find the temperature as Cold / hot by using the case and avg of values of the given data set**

SELECT

w.Avg\_Temperature,

w.Max\_Temperature,

w.Min\_Temperature,

n.`Normalized\_ Temperature\_Labels`,

CASE

WHEN (n.`Normalized\_ Temperature\_Labels` = 'Low') THEN 'Cold'

WHEN (n.`Normalized\_ Temperature\_Labels` = 'High') THEN 'Hot'

ELSE 'Normal'

END AS Temparature\_Label

FROM

weather\_data w

INNER JOIN

normalized\_labels n ON w.New\_Date = n.New\_Date;

**-- 5. Can you find the average of average humidity from the dataset**

-- ( NOTE: should contain the following clauses: group by, order by, date )

-- Year-wise

SELECT

New\_Year,

`Avg\_humidity%` AS Avg\_Humidity\_By\_Day,

ROUND(AVG(`Avg\_humidity%`), 3) AS Avg\_Humidity\_By\_Year

FROM

weather\_data

GROUP BY New\_Year

ORDER BY New\_Year;

-- Month-wise

SELECT

New\_Year,

Month,

`Avg\_humidity%` AS Avg\_Humidity\_By\_Day,

ROUND(AVG(`Avg\_humidity%`), 3) AS Avg\_Humidity\_By\_Month\_Year

FROM

weather\_data

GROUP BY New\_Year , Month

ORDER BY New\_Year , Month;

**-- 6. Use the GROUP BY clause on the Date column and make a query to fetch details for average windspeed ( which is now windspeed done in task 3**

**-- Year-wise**

SELECT

w.New\_Year,

n.`Normalized\_ Average windspeed (mph\_Labels`,

CASE

WHEN (n.`Normalized\_ Average windspeed (mph\_Labels` = 'Low') THEN ROUND(AVG(w.Avg\_windspeed), 3)

WHEN (n.`Normalized\_ Average windspeed (mph\_Labels` = 'High') THEN ROUND(AVG(w.Avg\_windspeed), 3)

ELSE 'Normal'

END AS Average\_Windspeed\_By\_Label

FROM

weather\_data w

INNER JOIN

normalized\_labels n ON w.New\_Date = n.New\_Date

GROUP BY New\_Year

ORDER BY New\_Year;

**-- Month-wise**

SELECT

w.New\_Year,

w.Month,

n.`Normalized\_ Average windspeed (mph\_Labels`,

CASE

WHEN (n.`Normalized\_ Average windspeed (mph\_Labels` = 'Low') THEN ROUND(AVG(w.Avg\_windspeed), 3)

WHEN (n.`Normalized\_ Average windspeed (mph\_Labels` = 'High') THEN ROUND(AVG(w.Avg\_windspeed), 3)

ELSE 'Normal'

END AS Average\_Windspeed\_By\_Label

FROM

weather\_data w

INNER JOIN

normalized\_labels n ON w.New\_Date = n.New\_Date

GROUP BY New\_Year , Month

ORDER BY New\_Year , Month;

**-- 10. Create another table with a “Foreign key” relation with the existing given data set**

CREATE TABLE `normalized\_labels` (

`New\_Date` VARCHAR(20) DEFAULT NULL,

`Normalized\_ Temperature\_Labels` TEXT,

`Normalized\_ Average humidity (%\_Labels` TEXT,

Normalized\_ Average dewpoint (Â°F\_Labels TEXT,

Normalized\_ Average barometer (in\_Labels TEXT,

Normalized\_ Average windspeed (mph\_Labels TEXT,

Normalized\_ Average gustspeed (mph\_Labels TEXT,

Normalized\_ Average direction (Â°deg\_Labels TEXT,

Normalized\_ Rainfall for month (in\_Labels TEXT,

Normalized\_Rainfall for year (in\_Labels TEXT,

Normalized\_ Maximum rain per minute\_Labels TEXT,

Normalized\_ Maximum temperature (Â°F\_Labels TEXT,

Normalized\_ Minimum temperature (Â°F\_Labels TEXT,

Normalized\_ Maximum humidity (%\_Labels TEXT,

Normalized\_ Minimum humidity (%\_Labels TEXT,

Normalized\_ Maximum pressure\_Labels TEXT,

Normalized\_ Minimum pressure\_Labels TEXT,

Normalized\_ Maximum windspeed (mph\_Labels TEXT,

Normalized\_ Maximum gust speed (mph\_Labels TEXT,

Normalized\_ Maximum heat index (Â°F\_Labels TEXT,

Normalized\_ diff\_pressure\_Labels TEXT,

KEY fk\_Date (New\_Date),

CONSTRAINT fk\_Date FOREIGN KEY (New\_Date)

REFERENCES weather\_data (New\_Date)

) ENGINE=INNODB DEFAULT CHARSET=UTF8MB4 COLLATE = UTF8MB4\_0900\_AI\_CI