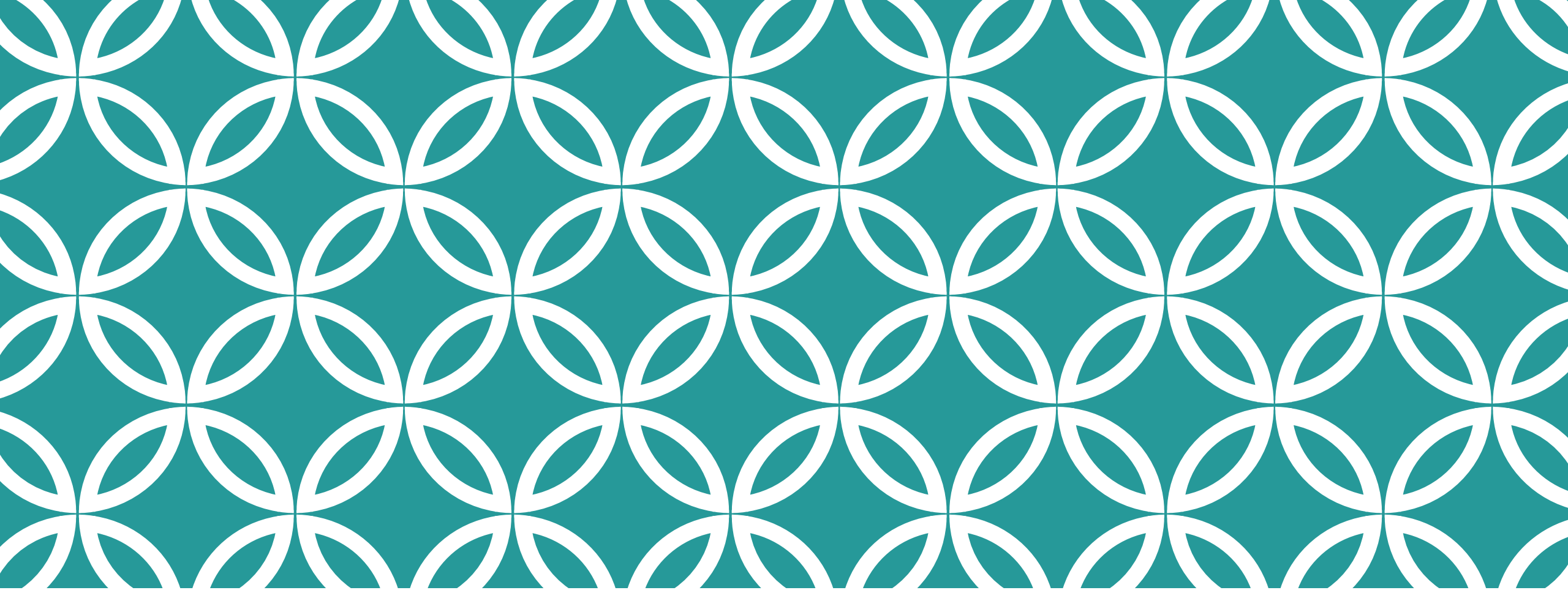

CHAPTER 15: CASES

2023

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Contents:

1. Introduction to cases
2. Cases with group by clause
3. Update clause with Cases.

CASE

The CASE statement is used to implement the logic where you want to set the value of one column depending upon the values in other columns.

The CASE Statement consists of at least one pair of WHEN and THEN statements. The WHEN statement specifies the condition to be tested. The THEN statement specifies the action if the WHEN condition returns TRUE.

The ELSE statement is *optional* and executes when none of the WHEN conditions return true.

The CASE statement ends with an END keyword.

CASE

The CASE statement goes through conditions and return a value when the first condition is met (like an IF-THEN-ELSE statement):

- So once a condition is true it will stop reading and return the result.
- If no conditions are true it will return the value in the ELSE clause.
  - If there is no ELSE part and no conditions are true it returns NULL.

CASE

```
CASE
    WHEN condition1 THEN result1
    WHEN condition2 THEN result2
    WHEN conditionN THEN resultN
    ELSE result
END;
```

```
SELECT OrderID  Quantity
CASE
    WHEN Quantity > 30 THEN  'The quantity is greater than 30'
    WHEN Quantity = 30 THEN  'The quantity is 30'
    ELSE  'The quantity is under 30'
END AS QuantityText
FROM OrderDetails;
```

CASE

```
SELECT
  CASE
    WHEN score < 70 THEN  failed
    WHEN score BETWEEN 70 AND 80 THEN  passed
    WHEN score BETWEEN 81 AND 90 THEN  very good
    ELSE  outstanding
  END AS performance
FROM test_scores;
```

```
SELECT
  CASE grade
    WHEN A THEN 'Excellent'
    WHEN B THEN 'Good'
    WHEN C THEN 'Needs Improvement'
    ELSE  'Failed'
  END AS 'grade_interpretation'
FROM grades;
```

CASE

```
SELECT name  model
        CASE
        WHEN model > 2010 THEN  'New'
        WHEN model > 2000 THEN  'Average'
         ELSE  'Old'
         END AS condition
 FROM Cars
```

Results | Messages

	id	name	company	power	color	model
1	1	Corrolla	Toyota	1800	red	1995
2	2	City	Honda	1500	black	2015
3	3	C200	Mercedez	2000	white	1992
4	4	Vitz	Toyota	1300	blue	2007
5	5	Baleno	Suzuki	1500	white	2012
6	6	C500	Mercedez	5000	grey	1994
7	7	800	BMW	8000	blue	2016
8	8	Mustang	Ford	5000	red	1997
9	9	208	Peugeot	5400	black	1999
10	10	Prius	Toyota	3200	red	2003

CASE

```
SELECT name,
      color,
        model,
        CASE WHEN model > 2010 AND color = 'white' THEN 'New White'
       WHEN model > 2010 THEN 'New'
       WHEN model > 2000 AND model <2010 THEN 'Average'
       WHEN model > 1990 AND model <2000 THEN 'Old'
              ELSE 'Old' END AS condition
  FROM Cars
```

```
SELECT OrderID  Quantity
CASE
    WHEN Quantity > 30 THEN "The quantity is greater than 30"
    WHEN Quantity = 30 THEN "The quantity is 30"
    ELSE "The quantity is under 30"
END
FROM OrderDetails;
```

```
select id  order_date
case when amount<100 then  “less than 100”
     when amount>100 and amount<300 then  “100 to 300”
     when amount>300 then  “greater than 300”
     end as bucket
from sales;
```

id	order_date	bucket
1	2021-01-01	100 to 300
1	2021-01-02	100 to 300
1	2021-01-03	NULL
1	2021-01-04	100 to 300
1	2021-01-05	greater than 300

```
SELECT
SUM(CASE WHEN OrderStatus = 'Success' THEN 1 ELSE 0 END) AS Success Count
SUM(CASE WHEN OrderStatus = 'On Hold' THEN 1 ELSE 0 END) AS Hold Count
SUM(CASE WHEN OrderStatus = 'In Process' THEN 1 ELSE 0 END) AS Processing
SUM(CASE WHEN OrderStatus = 'Shipped' THEN 1 ELSE 0 END) AS Shipping count
SUM(CASE WHEN OrderStatus = 'Cancelled' THEN 1 ELSE 0 END) AS Cancellation Count
COUNT(*) AS Sum Total
FROM
Orders;
```

CASE (WITH GROUP BY)

```
SELECT
        CASE WHEN model > 2000 THEN 'New'
             ELSE 'Old' END AS condition,
      COUNT(1) AS count
  FROM Cars
  GROUP BY CASE WHEN model > 2000 THEN 'New'
             ELSE 'Old' END
```

Results | Messages

	condition	count
1	New	5
2	Old	5

CASE (WITH UPDATE)

Update tbl

Set Grade =

- Case
- When score >=90 then A+
- When score >=80 then A
- When score >=70 then B
- Else Fail

End

Practice CASE / JOINS

1. Create a report showing the customers, first name and last name a "NumOrders" column with a count of the orders taken and a conditional column called "Shipped" that displays "On Time" if the order shipped on time and "Late" if the order shipped late.

2. Group records by contact first name and last name and then by the "Shipped" status. Order by employee last name then by the first name and then by descending by the number of orders.

3. Use the simple CASE expression to create the work anniversaries column for the employees anniversaries starting from 2 to 5 years old and for everybody hired before the year 2000 show a status "'Hired before 2000"

4. Create the column to evaluate the salary of the employees if the salary is less than 3000 then the salary should be labelled as "Low". If the salary is between 3000 and 5000 then it should be labelled as "average". When the salary is greater than 5000 then it is "High"