

Suppose we have this table:

Table: student			
	name	class	mark
	Filter	Filter	Filter
1	A	Math	78
2	A	English	67
3	A	Chemistry	83
4	B	Math	89
5	B	Chemistry	93
6	C	English	75
7	D	Biology	78
8	C	French	66

Avg:

- The AVG function returns the average value of a numeric column.
- If we do **select avg(mark) from student;** we get this:

	avg(mark)
1	78.625

- However, if we use AVG in conjunction with GROUP BY, it gets the average value of a numeric column for each grouping.
- If we do **select name, avg(mark) from student group by name;** we get this:

	name	avg(mark)
1	A	76.0
2	B	91.0
3	C	70.5
4	D	78.0

Count:

- The COUNT function returns the number of rows that matches a specified criteria.
- If we do **select count(class) from student;** we get this:

	count(class)
1	8

- The COUNT function with the DISTINCT clause eliminates the repetitive appearance of the same data.
- If we do **select count(distinct class) from student;** we get this:

	count(distinct class)
1	5

- However, if we use COUNT in conjunction with GROUP BY, it gets the number of rows that matches a specified criteria for each grouping.

CSCB20 Count, Sum, Avg, Min, Max Notes

- If we do **select name, count(class) from student group by name;** we get:

	name	count(class)
1	A	3
2	B	2
3	C	2
4	D	1

Max:

- The MAX function returns the largest value of the selected column.
- If we do **select max(mark) from student;** we get:

	max(mark)
1	93

- However, if we use MAX in conjunction with GROUP BY, it gets the largest value of the selected column for each grouping.
- If we do **select name, max(mark) from student group by name;** we get:

	name	max(mark)
1	A	83
2	B	93
3	C	75
4	D	78

Min:

- The MIN function returns the smallest value of the selected column.
- If we do **select min(mark) from student;** we get:

	min(mark)
1	66

- However, if we use MIN in conjunction with GROUP BY, it gets the smallest value of the selected column for each grouping.
- If we do **select name, min(mark) from student group by name;** we get:

	name	min(mark)
1	A	67
2	B	89
3	C	66
4	D	78

Sum:

- The SUM function returns the total sum of a numeric column.
- If we do **select sum(mark) from student;** we get:

	sum(mark)
1	629

CSCB20 Count, Sum, Avg, Min, Max Notes

- However, if we use SUM in conjunction with GROUP BY, it gets the sum of a numeric column for each grouping.
- If we do **select name, sum(mark) from student group by name;** we get:

	name	sum(mark)
1	A	228
2	B	182
3	C	141
4	D	78