SESSIONS 1

LIMIT, DISTINCT, COUNT, AVG, SUM

Data Science Program

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SELECT DISTINCT

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SELECT DISTINCT

- The SELECT DISTINCT statement is used to return only distinct (different) values.
- Inside a table, a column often contains many duplicate values; and sometimes you only want to list the different (distinct) values.

```
SELECT DISTINCT column1, column2, ...
FROM table_name;
```

SELECT DISTINCT

- The following SQL statement selects only the DISTINCT values from the “**Name**" column in the “City" table:

```
SELECT DISTINCT Name
FROM City;
```

```
+-----------------+
| name            |
+-----------------+
| Kabul           |
| Qandahar        |
| Herat           |
| Mazar-e-Sharif  |
| Amsterdam       |
+-----------------+
```

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SELECT DISTINCT

- The following SQL statement selects only the DISTINCT values from the “**District**" column in the “City" table:

```
SELECT DISTINCT District
FROM City;
```

```
+---------------+
| District      |
+---------------+
| Kabol         |
| Qandahar      |
| Herat         |
| Balkh         |
| Noord-Holland |
+---------------+
```

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LIMIT

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LIMIT

- The following SQL statement selects the first **three** records from the “City" table

```
SELECT * FROM City
LIMIT 3;
```

ID	Name	CountryCode	District	Population
1	Kabul	AFG	Kabol	1780000
2	Qandahar	AFG	Qandahar	237500
3	Herat	AFG	Herat	186800

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LIMIT

- The following SQL statement selects the first **five** records from the “City" table

```
SELECT * FROM City
LIMIT 5;
```

ID	Name	CountryCode	District	Population
1	Kabul	AFG	Kabol	1780000
2	Qandahar	AFG	Qandahar	237500
3	Herat	AFG	Herat	186800
4	Mazar-e-Sharif	AFG	Balkh	127800
5	Amsterdam	NLD	Noord-Holland	731200

COUNT

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COUNT

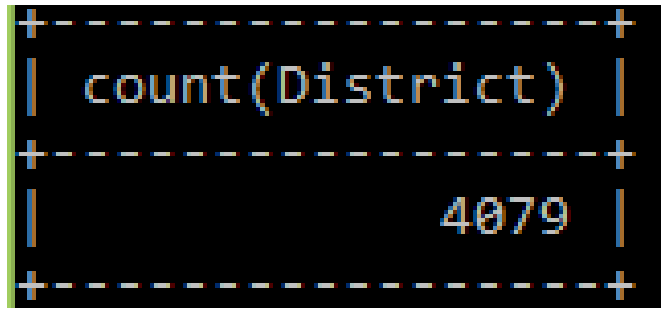
- The COUNT() function returns the number of rows that matches a specified criterion.

```
SELECT COUNT(column_name)
FROM table_name;
```

COUNT

- The following SQL statement finds the number of **District** from City table:

```
SELECT COUNT(District)
FROM City;
```



```
+-----------------+
| count(District) |
+-----------------+
|            4079 |
+-----------------+
```

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COUNT

- The following SQL statement finds the number of **Continent** from Country table:

```
SELECT COUNT(Continent)
FROM Country;
```

```
+--------------------+
| COUNT(Continent)   |
+--------------------+
|                239 |
+--------------------+
```

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AVG

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AVG

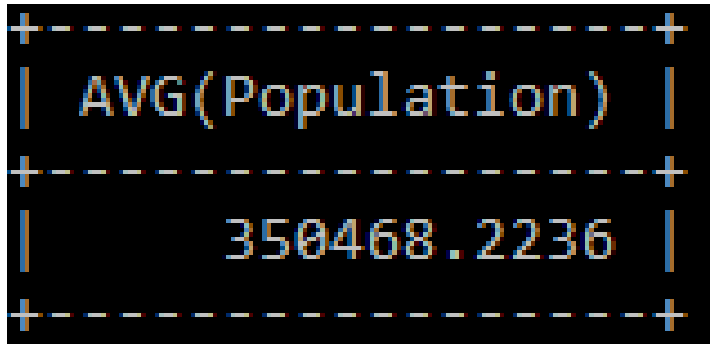
- The AVG() function returns the average value of a numeric column.

```
SELECT AVG(column_name)
FROM table_name;
```

AVG

- The following SQL statement finds the average **population** from city table:

```
SELECT AVG(Population)
FROM City;
```



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AVG

- The following SQL statement finds the average **Life Expectancy** from country table:

```
SELECT AVG(LifeExpectancy)
FROM Country;
```

```
+-----------------------+
| AVG(LifeExpectancy)   |
+-----------------------+
|              66.48604 |
+-----------------------+
```

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SUM

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SUM

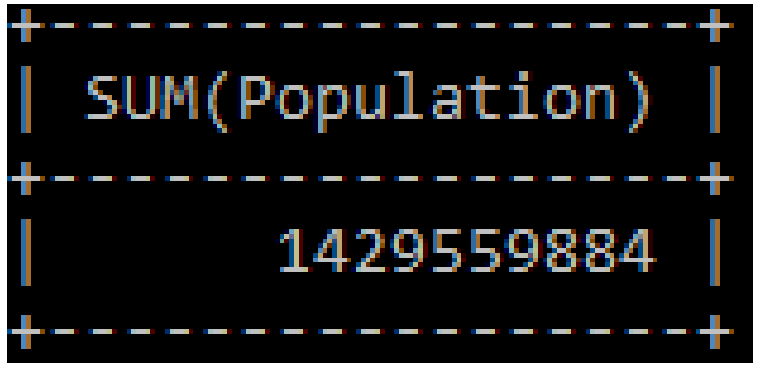
- The SUM() function returns the total sum of a numeric column.

```
SELECT SUM(column_name)
FROM table_name;
```

SUM

- The following SQL statement finds the total **population** from city table:

```
SELECT SUM(Population)
FROM City;
```



```
+-------------------+
| SUM(Population) |
+-------------------+
|      1429559884 |
+-------------------+
```

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SUM

- The following SQL statement finds the total **GNP** from country table:

```
SELECT SUM(GNP)
FROM Country;
```

```
+-------------+
| SUM(GNP)    |
+-------------+
| 29354907.90 |
+-------------+
```

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Reference

https://www.w3schools.com/sql/sql_top.asp

https://www.w3schools.com/sql/sql_count_avg_sum.asp

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