Data Manipulation Language (DML)

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Data Manipulation Language

- ## Data Manipulation Language (DML)

  its statements allow us to manipulate the data in the tables of a database

- ## the SELECT statement

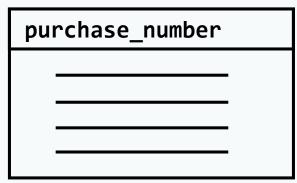 used to retrieve data from database objects, like tables

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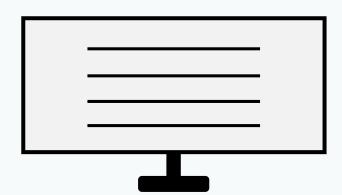# Data Manipulation Language

SQL

```
SELECT * FROM sales;
```

sales

purchase_number

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Data Manipulation Language

SQL

SELECT * FROM sales;

sales

purchase_number

Data Manipulation Language

SQL

SELECT… FROM sales;

sales

purchase_number

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Data Manipulation Language

SQL

SELECT… FROM sales;

sales

purchase_number

Data Manipulation Language

SQL

SELECT… FROM sales;

sales

purchase_number

Data Manipulation Language
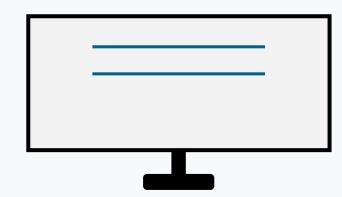
- **Why are we going to need just a piece of the table?**

  - imagine a table with 2 million rows of data

  - it can be helpful if you could extract only a portion of the table that satisfies given criteria

  - you should know how to use SELECT perfectly well

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Data Manipulation Language

- **the INSERT statement**

  used to insert data into tables

- **INSERT INTO… VALUES…;**

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Data Manipulation Language

SQL

```
INSERT INTO sales (purchase_number, date_of_purchase) VALUES
(1, '2017-10-11');
```

sales

purchase_number	date_of_purchase

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Data Manipulation Language

SQL

```
INSERT INTO sales (purchase_number, date_of_purchase) VALUES
(1, '2017-10-11');
```

sales

purchase_number	date_of_purchase
1	2017-10-11

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Data Manipulation Language

SQL

```
INSERT INTO sales VALUES
(1, '2017-10-11');
```

sales

purchase_number	date_of_purchase
1	2017-10-11

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Data Manipulation Language

SQL

```
INSERT INTO sales (purchase_number, date_of_purchase) VALUES
(1, '2017-10-11');


INSERT INTO sales VALUES
(1, '2017-10-11');
```

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Data Manipulation Language

SQL

```
INSERT INTO sales (purchase_number, date_of_purchase) VALUES
(2, '2017-10-27');
```

sales

purchase_number	date_of_purchase
1	2017-10-11
2	2017-10-27

Data Manipulation Language

- **the UPDATE statement**

  allows you to renew existing data of your tables

Data Manipulation Language

SQL

sales

purchase_number	date_of_purchase
1	2017-10-11
2	2017-10-27

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Data Manipulation Language

SQL

```
UPDATE sales
SET date_of_purchase = '2017-12-12'
WHERE purchase_number = 1;
```

sales

purchase_number	date_of_purchase
1	2017-10-11
2	2017-10-27

Data Manipulation Language

SQL

```
UPDATE sales
SET date_of_purchase = '2017-12-12'
WHERE purchase_number = 1;
```

sales

purchase_number	date_of_purchase
1	2017-12-12
2	2017-10-27

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Data Manipulation Language

- **the DELETE statement**

  - functions similarly to the TRUNCATE statement

- **TRUNCATE vs. DELETE**

  TRUNCATE allows us to remove all the records contained in a table

  vs.

  with DELETE, you can specify precisely what you would like to be removed

Data Manipulation Language

SQL

```
DELETE FROM sales;
```

sales

purchase_number	date_of_purchase
1	2017-10-11
2	2017-10-27

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Data Manipulation Language

SQL

`DELETE FROM sales;`   `TRUNCATE TABLE sales;`

sales

purchase_number	date_of_purchase
1	2017-10-11
2	2017-10-27

Data Manipulation Language

SQL

DELETE FROM sales;   TRUNCATE TABLE sales;

sales

purchase_number	date_of_purchase
1	2017-10-11
2	2017-10-27

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Data Manipulation Language

```
DELETE FROM sales
WHERE
    purchase_number = 1;
```

SQL

sales

purchase_number	date_of_purchase
1	2017-10-11
2	2017-10-27

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Data Manipulation Language

```sql
DELETE FROM sales
WHERE
    purchase_number = 1;
```

sales

purchase_number	date_of_purchase
1	2017-10-11
2	2017-10-27

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Data Manipulation Language

Data Manipulation Language (DML)

- SELECT… FROM…

- INSERT INTO… VALUES…

- UPDATE… SET… WHERE…

- DELETE FROM… WHERE…

Next:

Data Control Language (DCL)