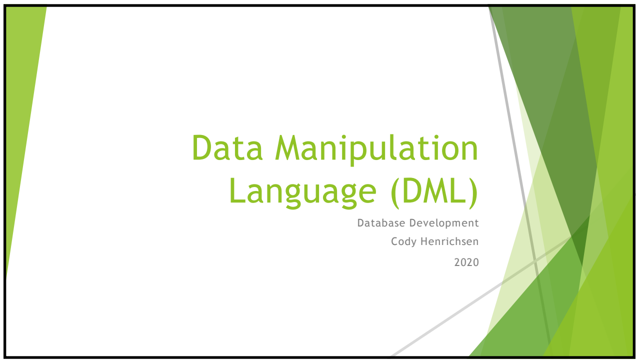
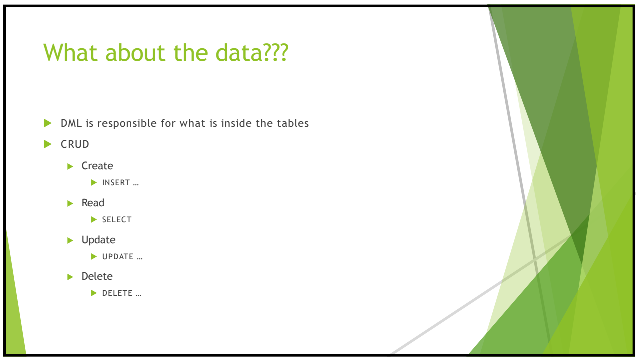


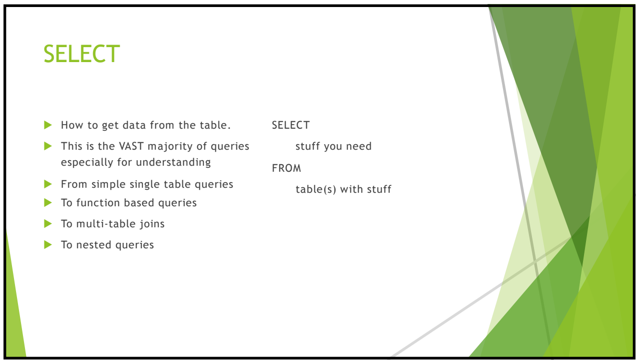
Data Manipulation Language (DML)

Database Development
Cody Henrichsen
2020



What about the data???

- DML is responsible for what is inside the tables
- CRUD
  - Create
    - INSERT …
  - Read
    - SELECT
  - Update
    - UPDATE …
  - Delete
    - DELETE …



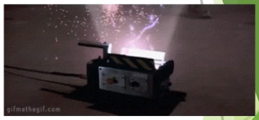
SELECT

- How to get data from the table.
- This is the VAST majority of queries especially for understanding
- From simple single table queries
- To function based queries
- To multi-table joins
- To nested queries

```
SELECT
    stuff you need
FROM
    table(s) with stuff
```

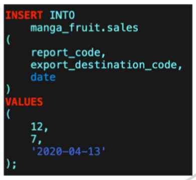
INSERT

- We need to put the stuff into the box
- Define the spots
- Define the data



INSERT Syntax

```
INSERT INTO
        table_name
(
        columns, separated,
        by, commas
)
VALUES
(
        matching values, separated,
        by, commas
);
```



```
INSERT INTO
    manga_fruit.sales
(
    report_code,
    export_destination_code,
    date
)
VALUES
(
    12,
    7,
    '2020-04-13'
);
```

UPDATE and DELETE

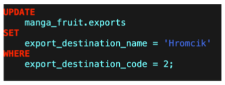
- Be careful!
- Lack of specificity leads to big problems
- The WHERE clause is KEY for these statements more so than others
  - Best Practice is using primary key
  - Clause can be as logically complex as needed using AND and OR statements
  - Ranges can also be used

UPDATE

- Change specific values
- Explicitly define the columns affected
- As many fields as needed can be updated separated by commas
- Without a WHERE clause EVERY SINGLE ROW IN THE TABLE WILL BE CHANGED!!!!!!

UPDATE Syntax

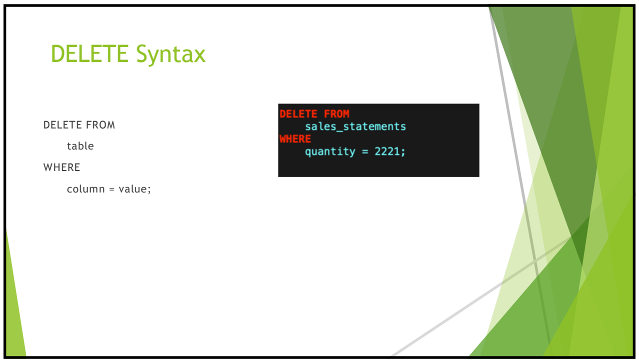
```
UPDATE
    table
SET
    column = value,
    additional = values_as_needed
WHERE
    column = specified_value;
```



```
UPDATE
    manga_fruit.exports
SET
    export_destination_name = 'Hromcik'
WHERE
    export_destination_code = 2;
```

DELETE

- Remove rows from the table
- Specify the table
- Does not delete columnar information it takes out a full row
- Without a WHERE clause EVERY SINGLE ROW IN THE TABLE WILL BE DELETED!!!!!!



DELETE Syntax

```
DELETE FROM
    table
WHERE
    column = value;
```

```
DELETE FROM
    sales_statements
WHERE
    quantity = 2221;
```