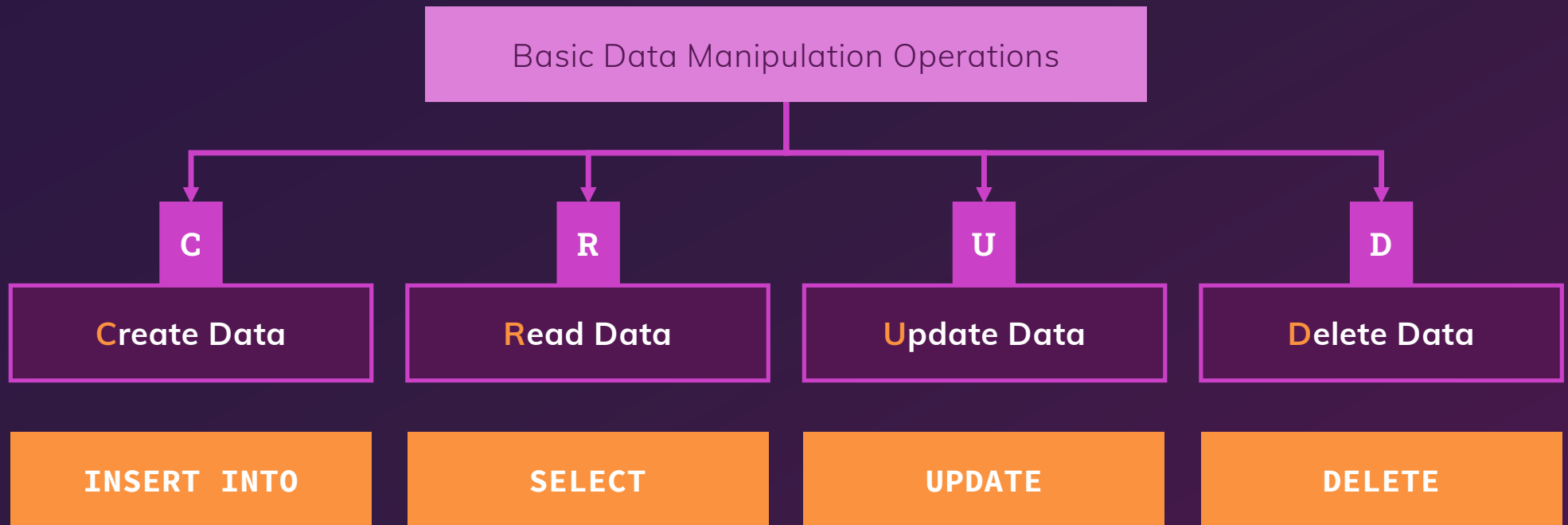


What Are “CRUD” Operations?



Inserting Data

```
INSERT INTO <table name> (<column names>)  
VALUES (<column values>);
```

Insert values into columns (*column names can be omitted*)

```
INSERT INTO <table name> (<column names>)  
VALUES  
    (<column values>), -- row 1  
    (<column values>); -- row 2
```

Insert multiple rows in one single command

```
INSERT INTO <table name> (<column names>)  
SELECT <query>;
```

Insert values returned by a query

Basic Data Fetching (Selecting Data)

```
SELECT <columns> FROM <table name>;
```

Fetch the values for the specified columns from the specified table

```
SELECT <columns> FROM <table name> WHERE <condition>;
```

Fetch the values for the specified columns from the specified table – but only for records (rows) where the condition is met

Updating Data

```
UPDATE <table name>  
SET <column name> = <new value>, ...  
WHERE <condition>;
```

Update all identified rows in a specified table and set the specified columns to new values

Multiple rows can be updated in one operation *(if the condition is met by multiple rows)*

Deleting Data

```
DELETE FROM <table name>  
WHERE <condition>;
```

Delete all identified rows in a specified table

Multiple rows can be delete in one operation
(if the condition is met by multiple rows)

Example Time!

Sales Database

Sales Table

id

date_created

date_fulfilled

customer_name

product_name

volume

is_recurring

is_disputed

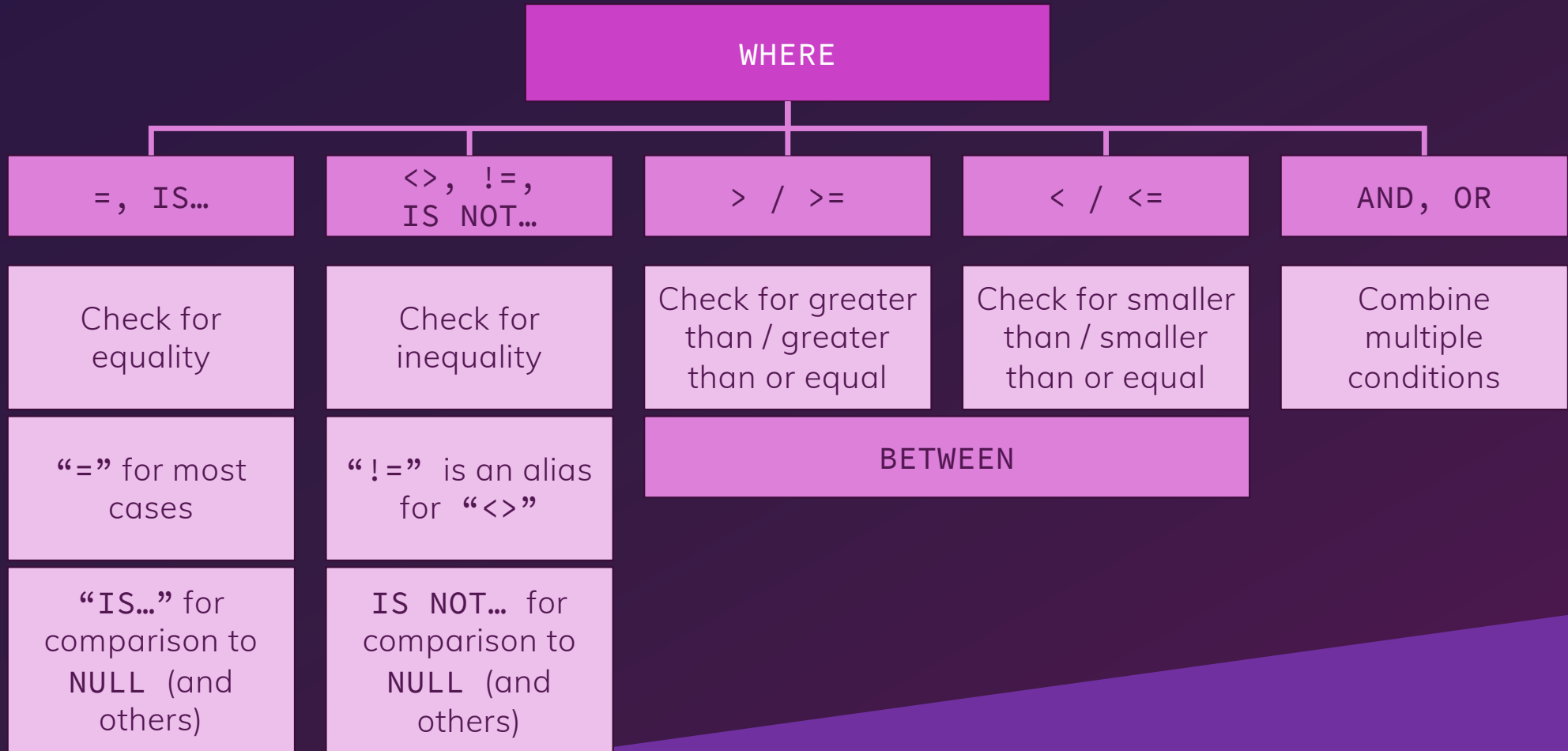
Tasks

1. Create database and table
2. Pick appropriate data types
3. Insert example data

Query Goals

1. Find all sales with volume > 1000
2. Find top 10 sales
3. Find bottom 10 sales
4. Find all recurring sales
5. Find disputed sales with volume > 5000
6. Find all sales created between two dates
7. Find all sales fulfilled \leq 5 days after creation date
8. Get a list of distinct customers
9. Get a list of distinct products

A Closer Look At Filtering



Sorting / Ordering Results

```
SELECT * FROM <table>  
ORDER BY <column name>;
```

Sort the selected data in ascending order

```
SELECT * FROM <table>  
ORDER BY <column name> DESC;
```

Sort the selected data in descending order *(you could specify ASC but that would be the default)*

LIMIT & DISTINCT

```
SELECT * FROM <table>  
LIMIT <number X>;
```

Select only the first X number of rows *(can be combined with sorting)*

```
SELECT * FROM <table>  
LIMIT <number X>  
OFFSET <offset number Y>;
```

Select X number of rows after skipping Y number of rows

```
SELECT DISTINCT * FROM <table>;
```

Drop any duplicates in the result set

**Some queries can also
contain other queries:
Subqueries**