








Somkiat

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Somkiat Puisungnoen

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When did you attend Ubon Ratchathani University?

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Status

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Live Video

Life Event


What's on your mind?


Public

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Intro

Software Craftsmanship


Software Practitioner at สยามชำนาญกิจ พ.ศ. 2556


Agile Practitioner and Technical at SPRINT3r


Software analyst at TARAD.com


Software Developer at True Corporation


Former Software Engineer at Opendream



Somkiat Puisungnoen
1 hr · Twitter ·

พรั่งนี้ไป share เรื่อง NoSQL ที่มหาวิทยาลัย


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Nuttachot Dusitanont, Chitpong Few Wuttanan and 50 others

บริษัท สยามชำนาญกิจ จำกัด และเพื่อนพ้องน้องพี่



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Write something...



Personal Blog

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What's a Boosted Post?

A boosted post is the easiest way to reach more people on Facebook.

SQL (Structured Query Language)

Pronounced:

se·quel ('sēkwəl/)



A **declarative** language for asking questions from a **relational** database, invented in *1974!*



SQL Standard

SQL 92

SQL 99

SQL 2013



SQL Statements

Data Definition Language (DDL)

Data Manipulation Language (DML)

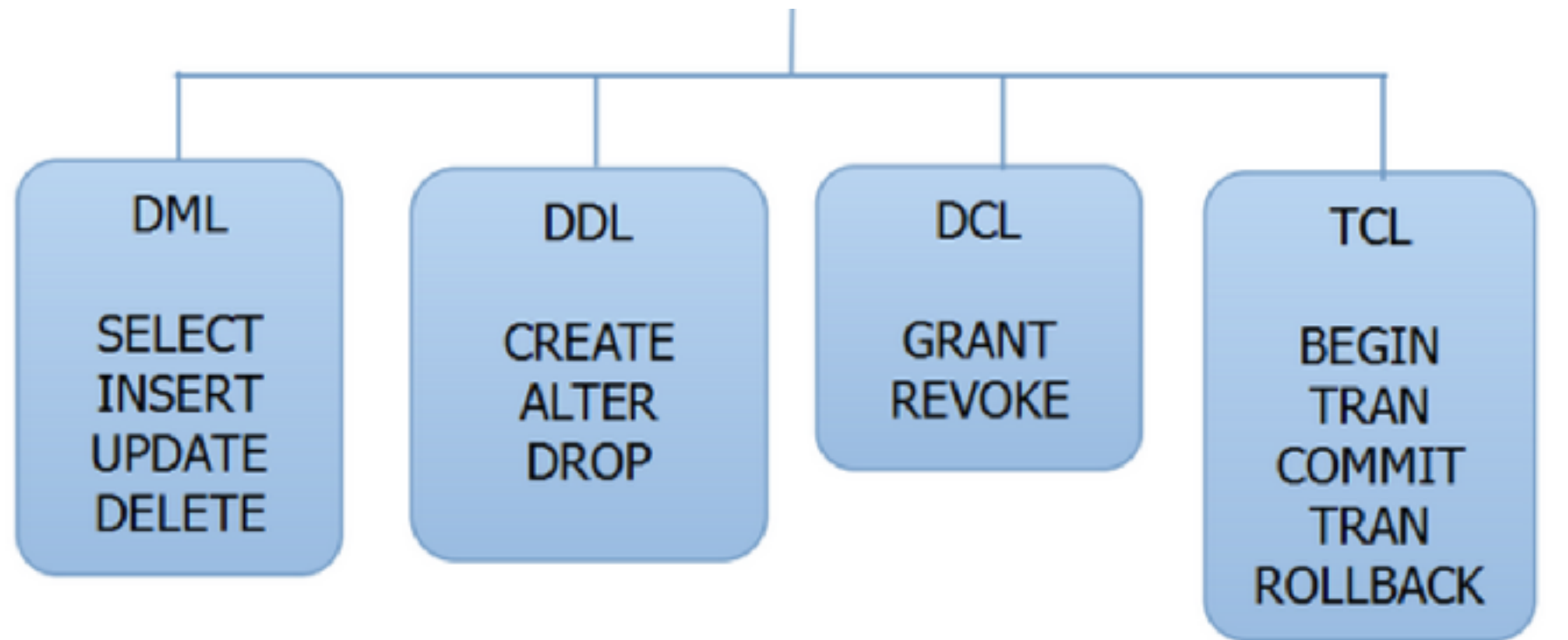
Data Control Language (DCL)

Transaction Control Language (TCL)

Data Retrieval Language (DRL)



SQL Statements



Data Definition Language (DDL)

Define the db structure or schema

Create

Alter

Drop

Truncate

Rename



Data Manipulation Language (DML)

Manage data with in schema objects

Insert

Delete

Update

Merge



Data Control Language (DCL)

Control the level of access that user have

Grant

Revoke

Deny

Constraints



Transaction Control Language (TCL)

Control and manage transaction to
maintain the integrity of data

Begin

Commit

Rollback

Savepoint

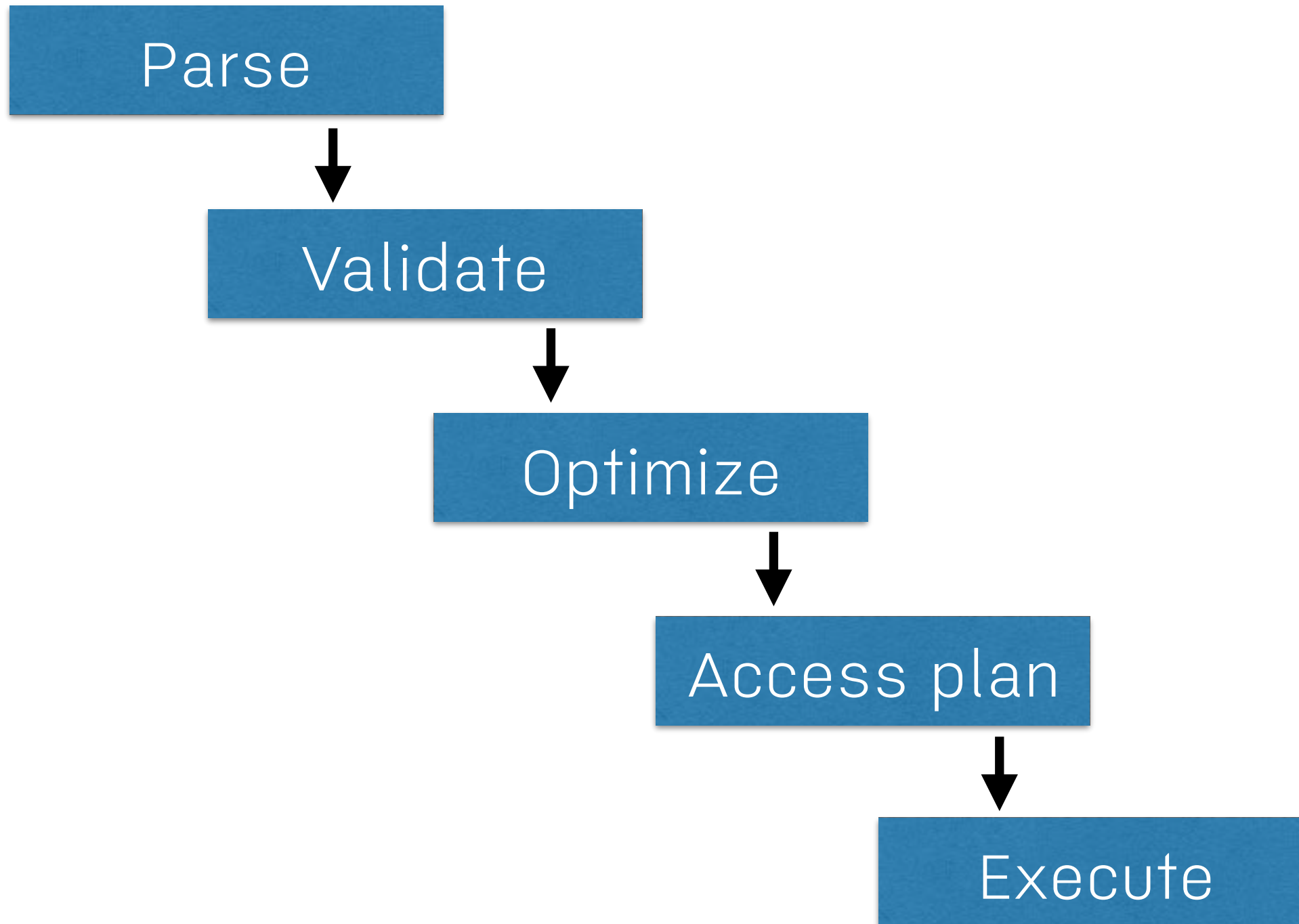


Data Retrieval Language (DRL)

Select



SQL Statement Processing



Data Definition Language (DDL)



Manage Database Structure

Create

Alter

Drop

Truncate

Rename



Working with MySQL



Working with MySQL

```
$mysql -u <user> -p <password>
```



Working with MySQL

`$show databases;`

`$use <database name>;`

`$show tables;`

`$desc <table name>;`

`$show create table <table name>`



1. Create Table

Use **create** statement

Specify **columns** with data type
and columns constraints

Specify **table constraints**

- Primary key (PK)
- Foreign key (FK)



Basic Syntax

```
CREATE TABLE <table name>
(
    <column name> <data type> <constraints>
    , <column name> <data type> <constraints>
    ...
    <table constraints>
);
```



SQL Data Type

Data type	Access	SQLServer	Oracle	MySQL	PostgreSQL
<i>boolean</i>	Yes/No	Bit	Byte	N/A	Boolean
<i>integer</i>	Number (integer)	Int	Number	Int Integer	Int Integer
<i>float</i>	Number (single)	Float Real	Number	Float	Numeric
<i>currency</i>	Currency	Money	N/A	N/A	Money
<i>string (fixed)</i>	N/A	Char	Char	Char	Char
<i>string (variable)</i>	Text (<256) Memo (65k+)	Varchar	Varchar Varchar2	Varchar	Varchar
<i>binary object</i>	OLE Object Memo	Binary (fixed up to 8K) Varbinary (<8K) Image (<2GB)	Long Raw	Blob Text	Binary Varbinary



Summary table

Column name	Column type	Column Constraints
isbn	varchar(20)	primary key



Create summary table

```
create table summary(  
    isbn varchar(20) primary key  
);
```



2. Modify Table

Add columns

Delete columns

Rename columns

Add column constraints

Add table constraints



Basic Syntax

```
ALTER TABLE <table name>  
ADD <column name>,  
ADD <table constraint>  
MODIFY <column name>
```



Summary table

Column name	Column type	Column Constraints
isbn	varchar(20)	primary key
amount	decimal(5,2)	



Create column amount

```
ALTER TABLE summary  
ADD amount decimal(5,2);
```



Summary table

Column name	Column type	Column Constraints
isbn	varchar(20)	primary key
amount	int	



Change data type of column

```
ALTER TABLE summary  
MODIFY amount init;
```



Summary table

Column name	Column type	Column Constraints
isbn	varchar(20)	primary key
amount2	int	



Change name of column

```
ALTER TABLE summary  
CHANGE amount amount2 int;
```



Column Constraints

Primary key

Not NULL

CHECK clause

Default

Unique



Summary table

Column name	Column type	Column Constraints
isbn	varchar(20)	primary key
amount2	int	≥ 0



Add column constraints

```
ALTER TABLE summary  
ADD constraint check (amount2 >= 0);
```



Table Constraints

Primary key
Foreign Key
Index



Summary table

Column	Column type	Column Constraints	Table Constraints
isbn	varchar(20)	primary key	FK to isbn of book
amount2	int	≥ 0	



Book table

Column	Column type	Column Constraints	Table Constraints
isbn	varchar(20)	primary key	



Add column constraints

```
CREATE TABLE book(  
    isbn varchar(20) primary key  
);
```

```
ALTER TABLE summary  
ADD CONSTRAINT fk_isbn  
FOREIGN KEY (isbn) REFERENCES book(isbn);
```



Add column constraints

// 1. Add Primary KEY

```
ALTER TABLE summary  
ADD PRIMARY KEY(isbn);
```

// 2. Add FOREIGN KEY

```
ALTER TABLE summary  
ADD CONSTRAINT fk_isbn  
FOREIGN KEY (isbn) REFERENCES book(isbn);
```

// 3. Add INDEX

```
ALTER TABLE `table`  
ADD INDEX `index name` (`product_id`)
```



Delete column constraints

// 1. Delete Primary KEY

```
ALTER TABLE summary  
DROP PRIMARY KEY;
```

// 2. Delete Foreign KEY

```
ALTER TABLE summary  
DROP FOREIGN KEY fk_isbn;
```

// 3. Delete INDEX

```
ALTER TABLE `table_name`  
DROP INDEX `id_name_fk`;
```



3. Create View

Named query is stored in the database
Can be read like a table



Basic Syntax

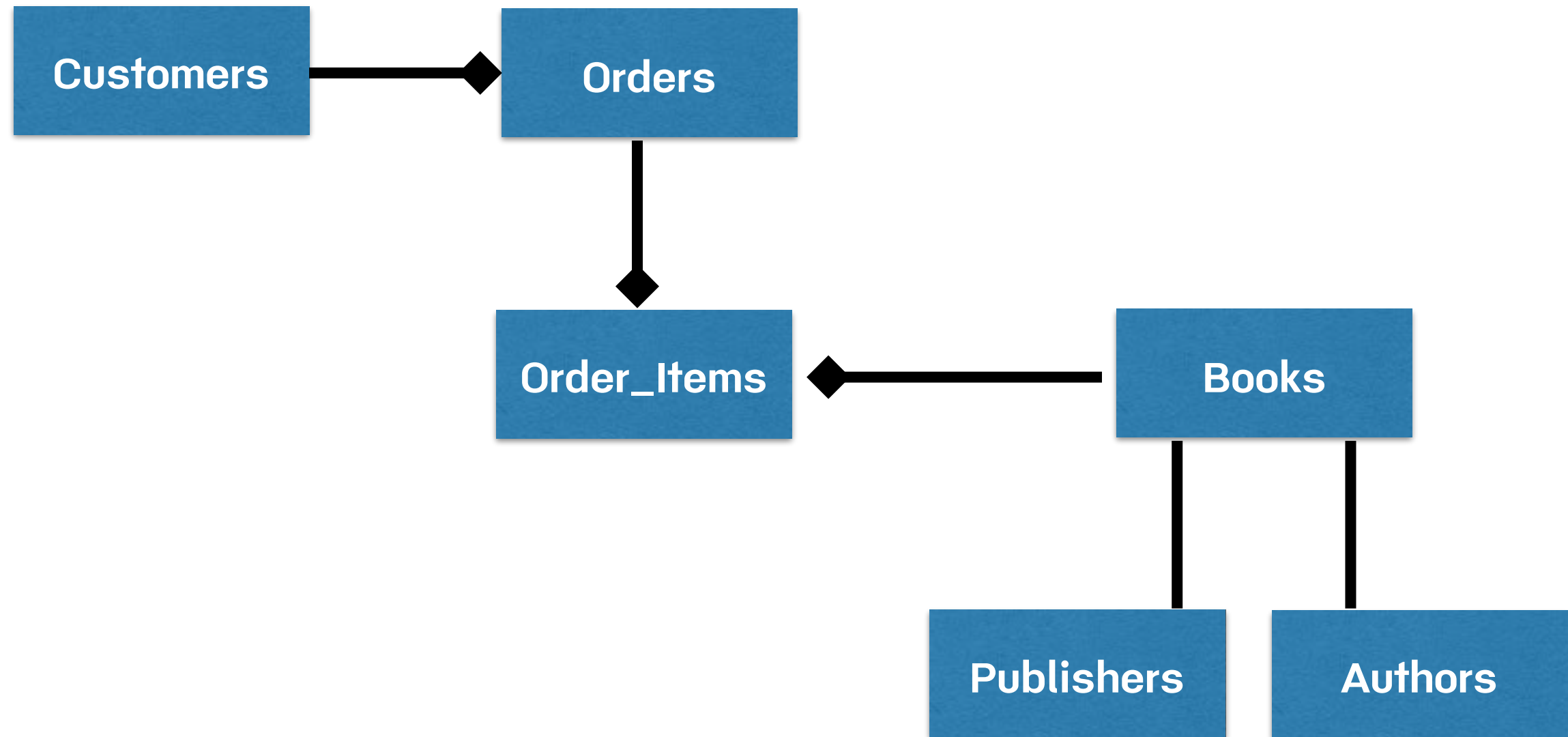
```
CREATE VIEW <view name>  
( <column name>, <column name>, ... )  
AS  
<Select stetment>
```



Workshop



E-commerce :: Book Store



Customers

Column name	Column type	Column Constraints	Table Constraints
id	int	primary key	
first_name	varchar(20)	NULL	
last_name	varchar(50)	NULL	
address	varchar(100)	NULL	
phone_no	varchar(20)	NULL	



Books

Column name	Column type	Column	Table Constraints
id	int	primary key	
isbn	varchar(20)	primary key	
title	varchar(200)	NULL	
price	decimal(10, 2)	NULL	
publisher_year	int	NULL	
publisher_id	int	NOT NULL	FK refer to Publishers
author_id	int	NOT NULL	FK refer to Authors



Orders

Column name	Column type	Column Constraints	Table Constraints
id	int	primary key	
customer_id	int	NOT NULL	FK refer to customer
total_price	decimal(10, 2)	NULL	
order_status	int	NULL	
create_datetime	datetime	NOT NULL	



Order_items

Column name	Column type	Column Constraints	Table Constraints
id	int	primary key	
order_id	int	NOT NULL	FK refer to orders
quantity	int	NULL	
unit_price	decinal(10,2)	NULL	
create_datetime	datetime	NOT NULL	



Workshop with CRUD

