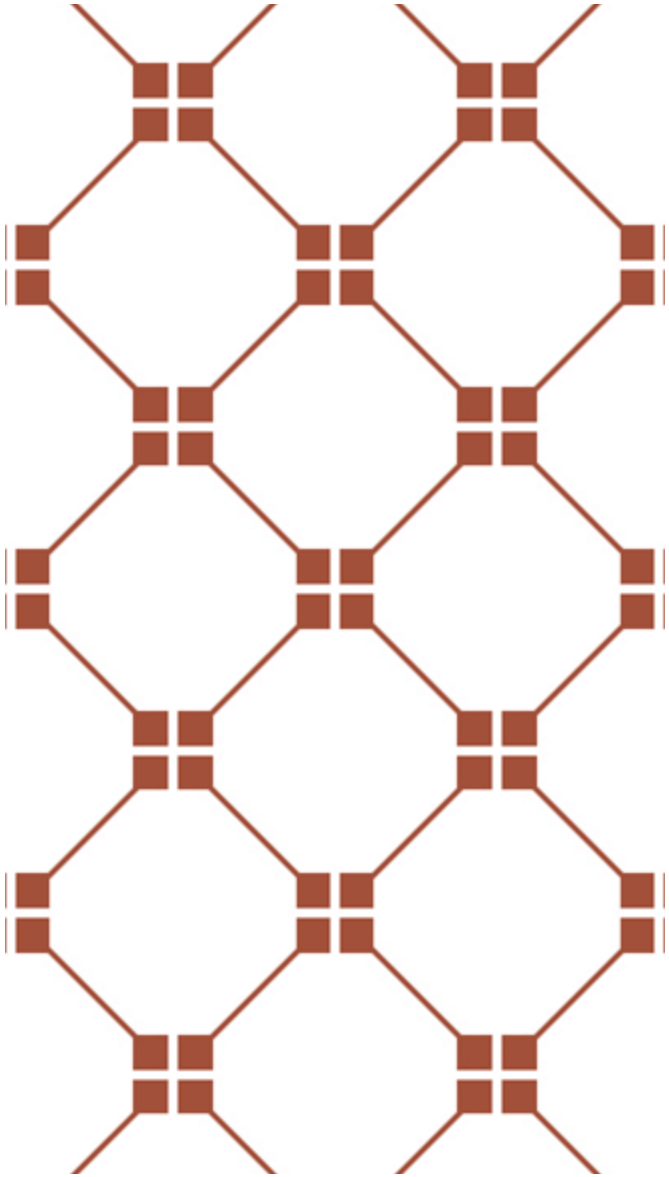


MANCHESTER 1824
The University of Manchester

PHYSICAL DATA MODEL

COMP23111 – Database Systems

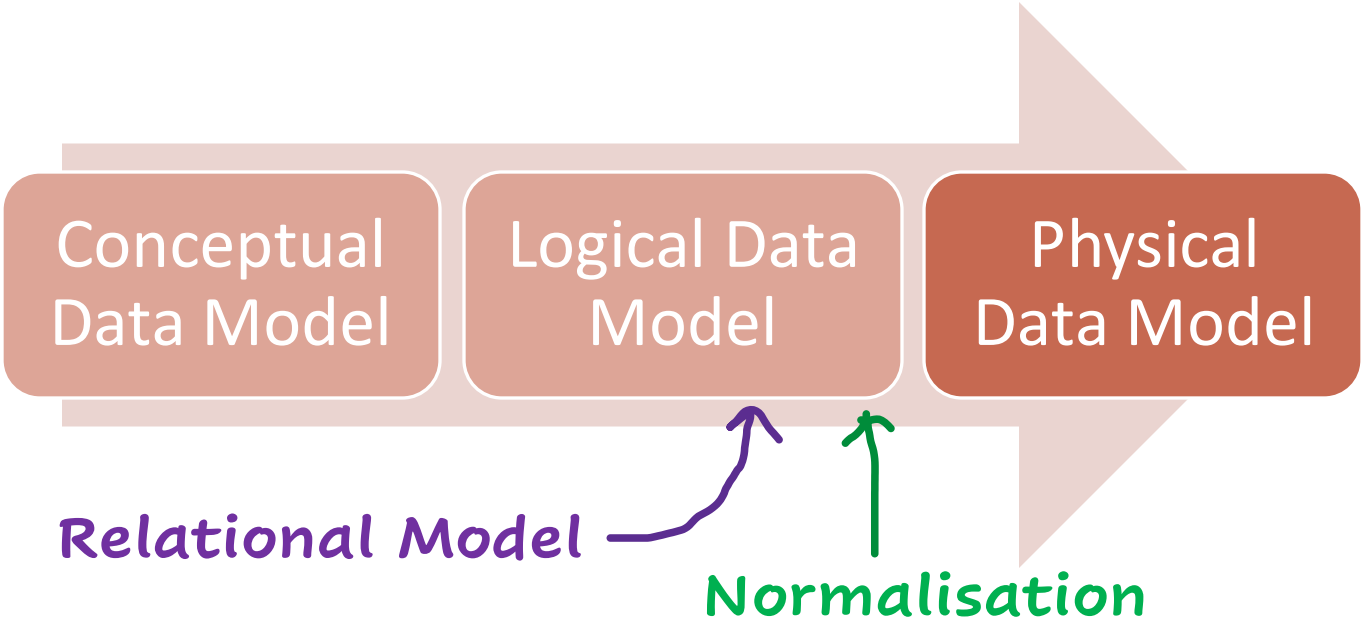
OUTLINE

Database Application Design Phases - Data Modelling

Physical Data Model

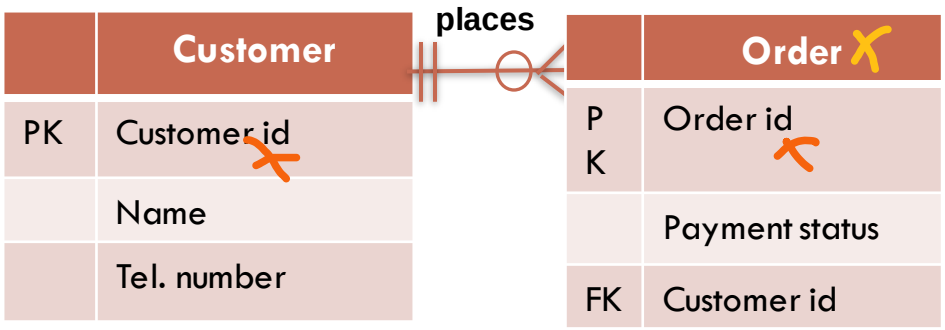
Physical Data Model - "auto"

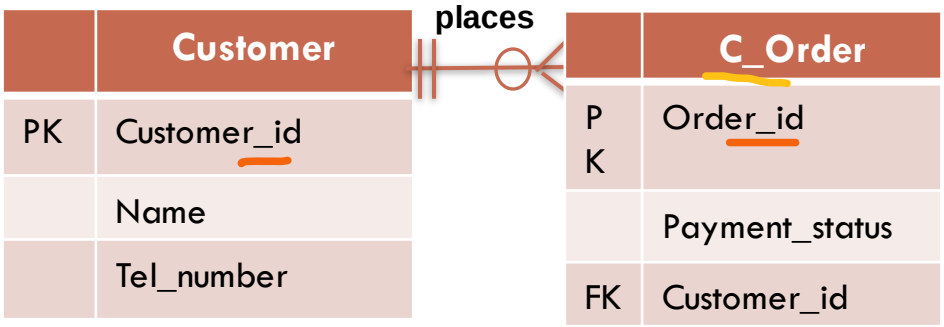
DATABASE APPLICATION DESIGN PHASES - *DATA MODELLING*



- Entity-Relationship Diagram (ERD)

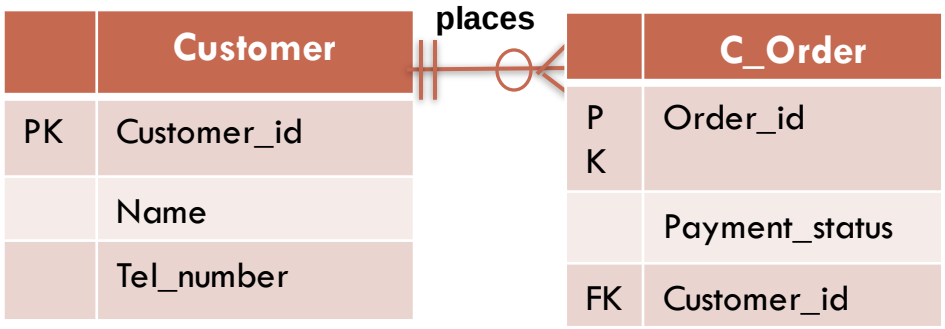
PHYSICAL DATA MODEL

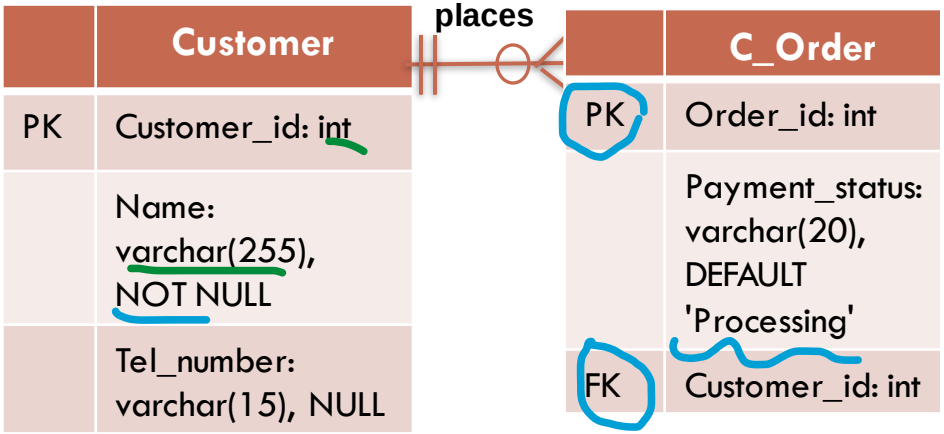




1. Naming conventions
2. Reserved keywords

PHYSICAL DATA MODEL





3. Data types
4. Constraints (nulls, defaults, keys...)

PHYSICAL DATA MODEL - "AUTO"

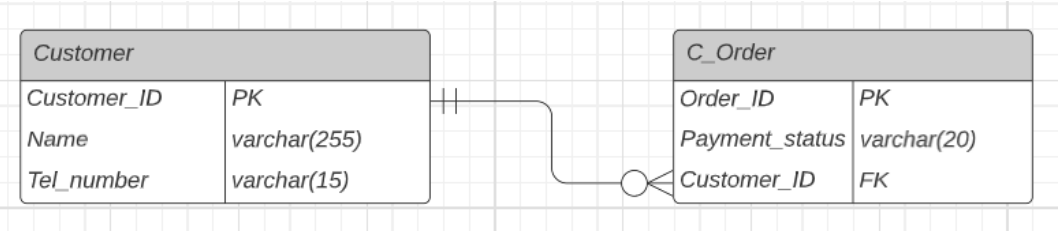
- Tools exist to **"auto"**-create the SQL definition of the DB schema.

Such as: lucidchart.com (free), erdplus.com (free), visual-paradigm.com (paid)...

But:

1. ERD must be sensible
2. Data types, constraints and keys must be given
3. Better for simple schemas
4. Some tools do not include relationships

PHYSICAL DATA MODEL - "AUTO"



Lucidchart.com

Export to ERD Data

Which system are you using?

- (•) MySQL
- ( ) PostgreSQL
- ( ) SQL Server
- ( ) Oracle SQL
- ( ) Quickbase ⓘ

Export

Copy and paste the commands below into your database or application. You may need to add data types, indices, or foreign keys.

```
CREATE TABLE `Customer` (
  `Customer_ID` PK,
  `Name` varchar(255),
  `Tel_number` varchar(15)
);

CREATE TABLE `C_Order` (
  `Order_ID` PK,
  `Payment_status` varchar(20),
  `Customer_ID` FK,
  FOREIGN KEY (`Customer_ID`) REFERENCES
`Customer`(`Customer_ID`)
```

Cancel Done