

# Week 1 Assessment Task

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## Part A - Design an operational database (5 marks)

### Question

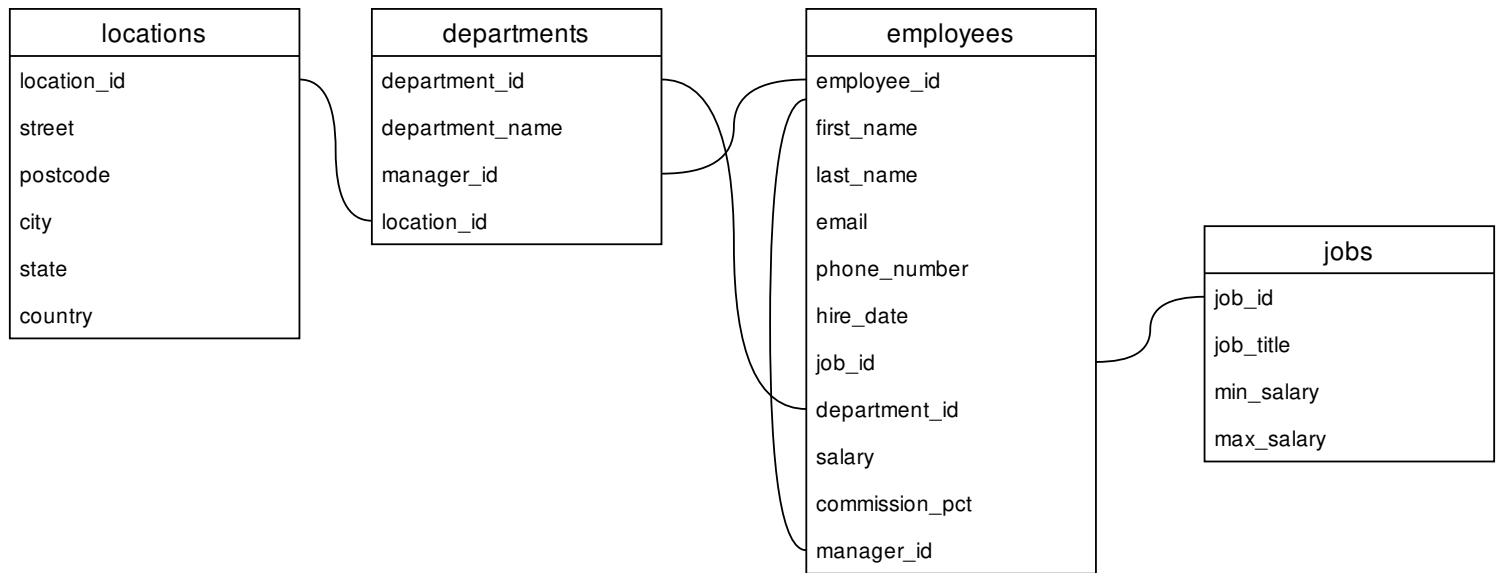


This question is worth 5 marks

Suppose you have several apartments that you're renting out on Airbnb. You've started to keep track of bookings in a spreadsheet but can see that it will quickly become unwieldy, and that you should keep this data in relational database. Here is what you have so far:

Your task is to **design this database** - produce a diagram of your tables and the connections between them. Your tables should be in at least 3NF.

Your diagram should be the same type of diagram that you have seen for the sample HR database. Here it is again:



You can use your favourite drawing software to make your diagram. If you don't already have one, [draw.io](https://draw.io) is very good.

Remember to design your database according to the good design principles that you have learned this week - make sure that your data values are atomic, and there is no redundancy.

You can upload your diagram using the box below.

You can assume that mobile numbers are unique.

*No response*

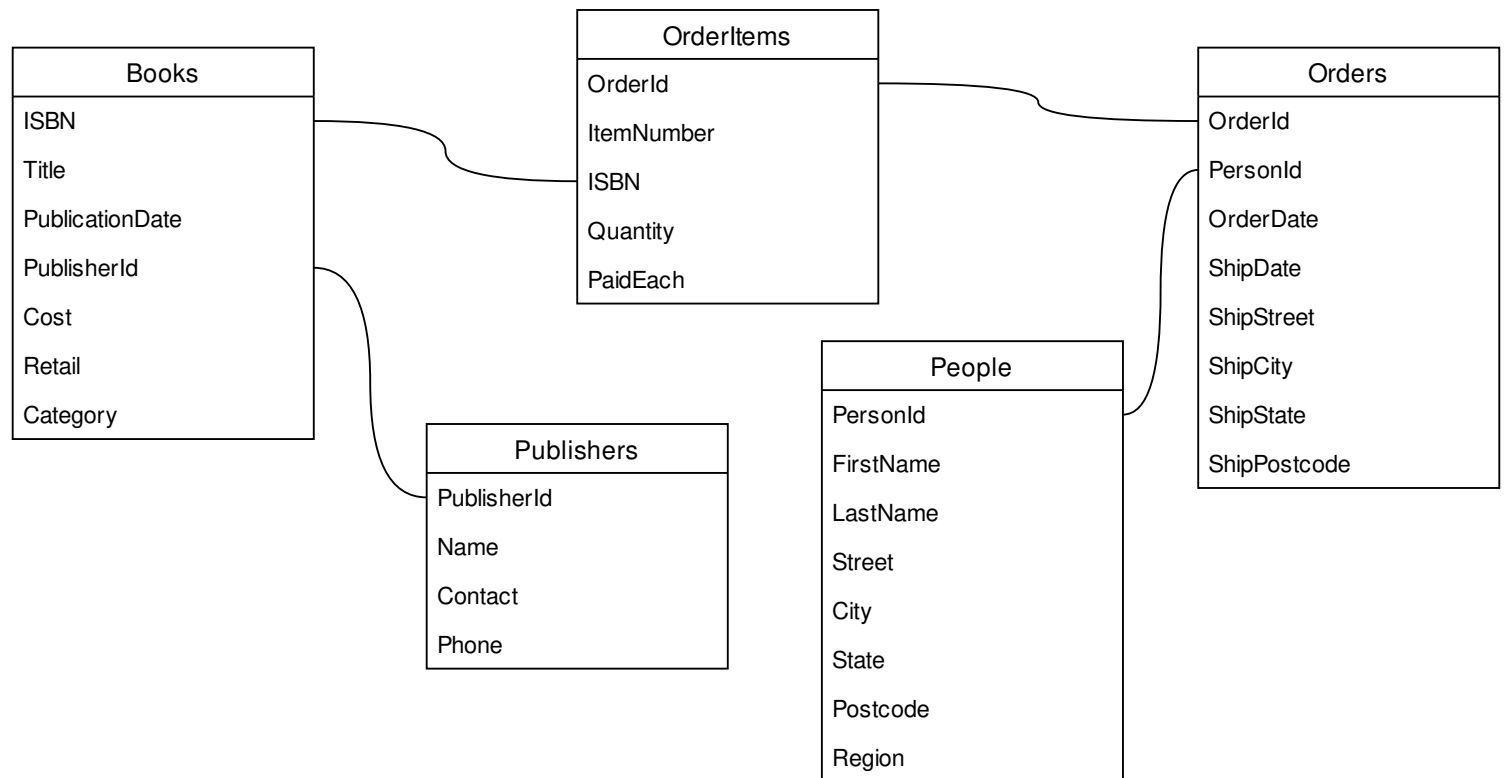
## Part B - Design a data warehouse (5 marks)

### Question



This question is worth 5 marks.

A fictitious company called JustLeeBooks has an operational database whose schema is as follows:



The database stores data about books and their orders. An order is made by a person, and consists of one or more order items. Each order item involves a quantity of a certain book (i.e. a certain number of copies of that book). It should be clear from the table and column names what particular pieces of data are stored in the database.

You've been asked to design a data warehouse for JustLeeBooks, in the form of a star schema. Your task here is to **design one of stars in the star schema**, one that focuses on facts about **order items**. You should design it according to the principles that are explained in this week's content slides.

You can use your favourite drawing software to make your diagram. If you don't already have one, [draw.io](https://draw.io) is very good.

You can upload your diagram using the box below.

*No response*