

Jawaban 16.11 Logical Data Model – Pertemuan 11 Exercises

Step 2 Build and validate logical data model [**lihat jawaban Step 1**]

Step 2.1 Derive relations for logical data model.

2.1.1. Strong entity types

| | |
|--------|--|
| Staff | staffNo, compite(fName, lName), Address, Job, salary, sex, dob PK staffNo |
| Office | officeNo, composite(Address, Postcode), TelNo PK officeNo |
| Cars | carsNo, brand, model, color, capacity PK carsNo |
| Client | clientNo, composite(fName, lName), composite(Address, Postcode), TelNo, sex, dob, licence PK clientNo |

2.1.2. Weak entity types

Tidak ada.

2.1.3 1:* binary relationship types

| | | |
|-----------|--------|--|
| work | Staff | staffNo, compite(fName, lName), Address, Job, salary, sex, dob, officeNo PK staffNo |
| | Office | officeNo, composite(Address, Postcode), TelNo PK officeNo |
| interview | Client | clientNo, composite(fName, lName), composite(Address, Postcode), TelNo, sex, dob, licence, staffNO , iDate , iTime , iRoom , iComments . PK clientNo FK staffNo references Staff(staffNo) |

Pada kasus relationship **interview** diketahui bahwa ada atribut yang dihasilkan dari relationship antara staff ke client, maka dapat/perlu dilakukan pemisahan terhadap relationshipnya dalam sebuah entity baru, yaitu **interview**. Sehingga entity interview seperti berikut:

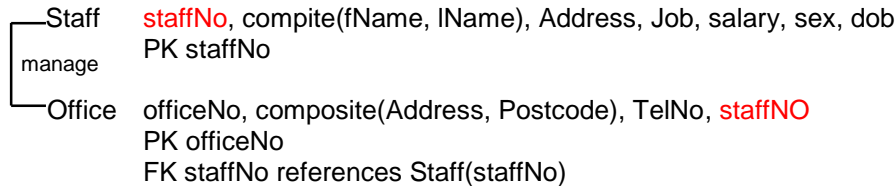
| | |
|-----------|---|
| Interview | staffNo , clientNo , iDate, iTime, iRoom, iComments PK clientNo FK staffNo references Staff(staffNo) FK clientNo reference Client(clientNo) AK staffNo, clientNo, iDate -- jika client dapat diinterveiw lebih dari sekali maka menjadi PK. |
|-----------|---|

| | | |
|----------|--------|--|
| have | Office | officeNo, composite(Address, Postcode), TelNo PK offieNo |
| | Cars | carsNo, brand, model, color, capacity, officeNO PK carsNo FK officeNo references Office(officeNo) |
| register | Client | clientNo, composite(fName, lName), composite(Address, Postcode), TelNo, sex, dob, licence, officeNo PK clientNo FK officeNo references Office(officeNo) |

2.1.4 1:1 binary relationship types

Mandatory participation on both sides of 1:1 relationship, tidak ada
optional participation on both sides of 1:1 relationship, tidak ada

Mandatory participation on one side of a 1:1 relationship



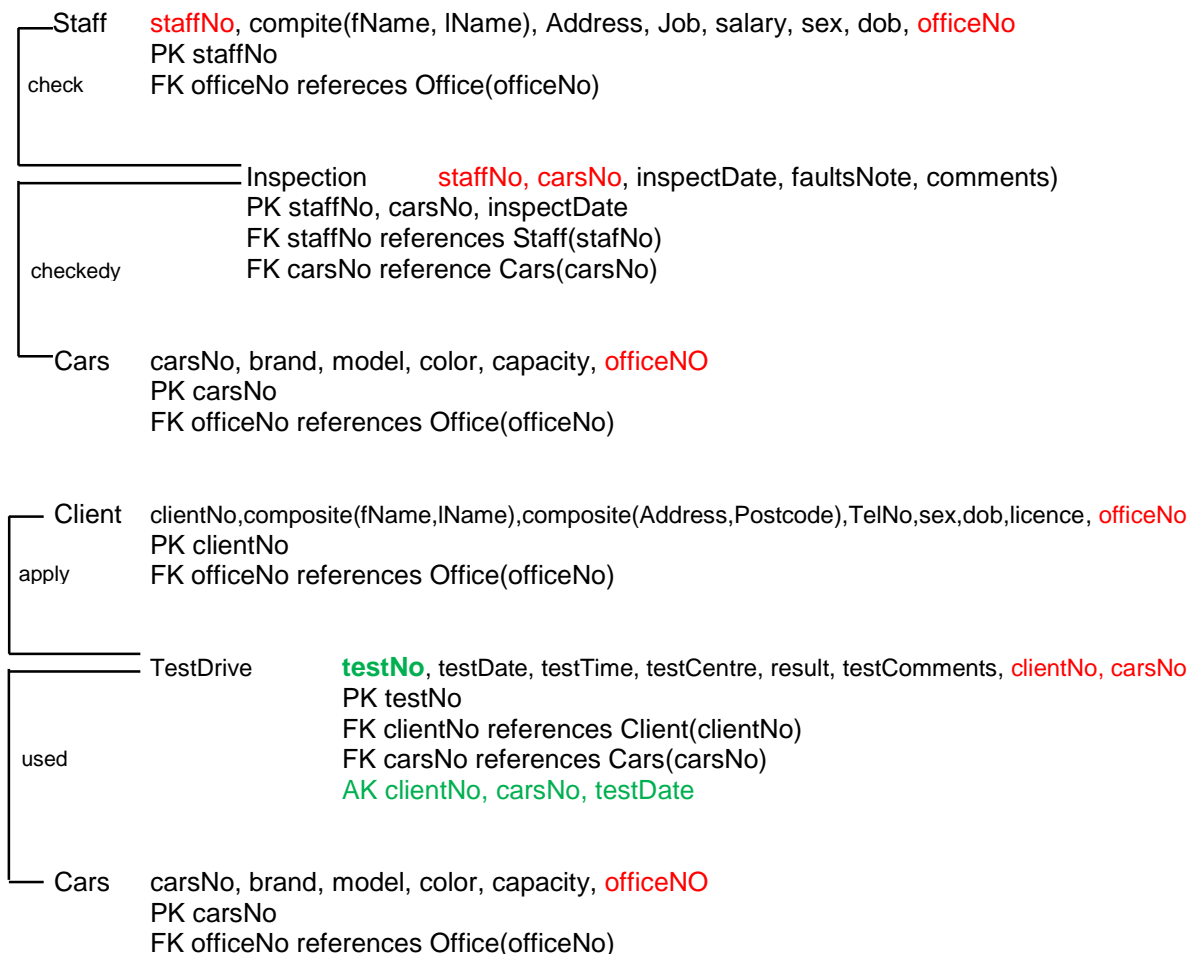
2.1.5 1:1 recursive relationships - follow rules for participation for a 1:1 relationship

Tidak ada

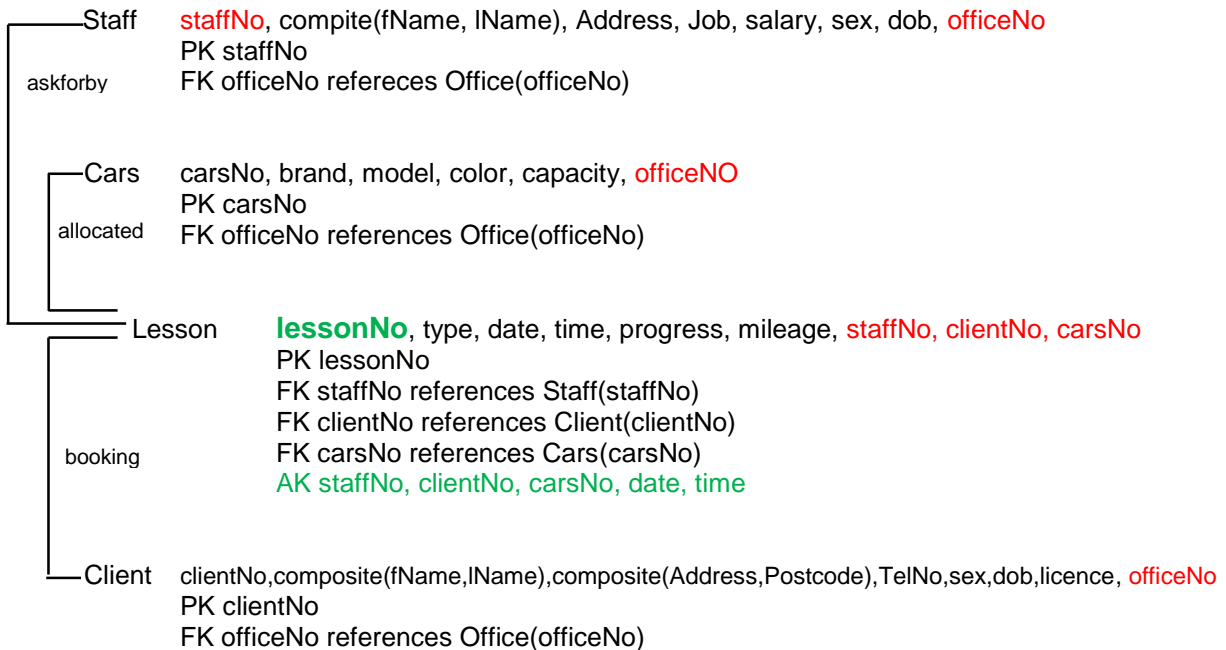
2.1.6 Superclass/subclass relationship types

Tidak dibuat.

2.1.7 *:~ binary relationship types

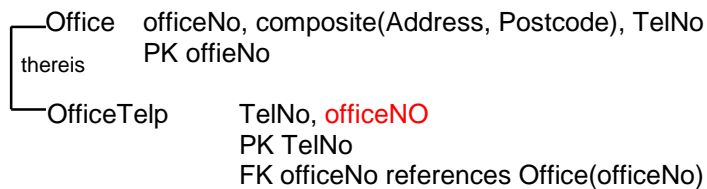


2.1.8. Complex relationship types



2.1.9 Multi-valued attributes

TelNo sebagai multivalued attributes? maka:



Step 2.2 Validate relations using normalization

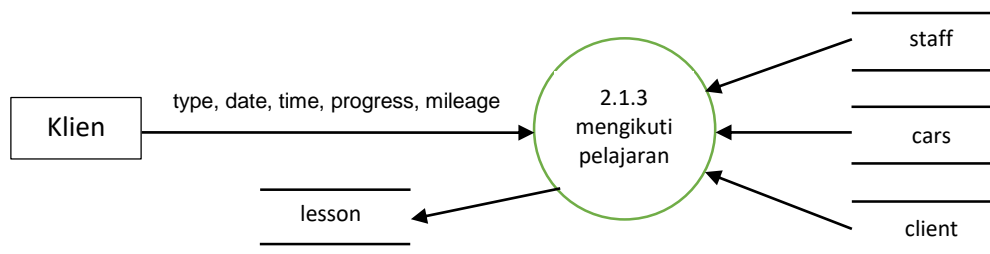
Sudah dalam bentuk normal ke-3

Step 2.3 Validate relations against user transactions

Relationship between logical data model and data flow diagrams.

Dipelajari pada mata kuliah Analysis and Design of IS.

Sebagai contoh untuk DFD proses client mengikuti pelajaran mengemudi (Lesson) seperti berikut:



Step 2.4 Check integrity constraints

Lihat kembali hasil dilangkah 1.2 sampai dengan 1.5 pada tahap design conceptual.

Berikut ini contoh batasan integritas referensial (referential integrity constraint).

Staff **staffNo**, compute(fName, lName), Address, Job, salary, sex, dob, **officeNo**
 PK staffNo
 FK officeNo refereces Office(officeNo) **ON update cascade ON delete set null.**

Artinya:

ON update cascade, apabila data pada parent (office) diperbaharui maka perubahan itu akan diteruskan ke child (staff).

ON delete set null, apabila data pada parent (office) dihapus maka data pada child (staff) yaitu FK nya diset secara otomatis dengan null.

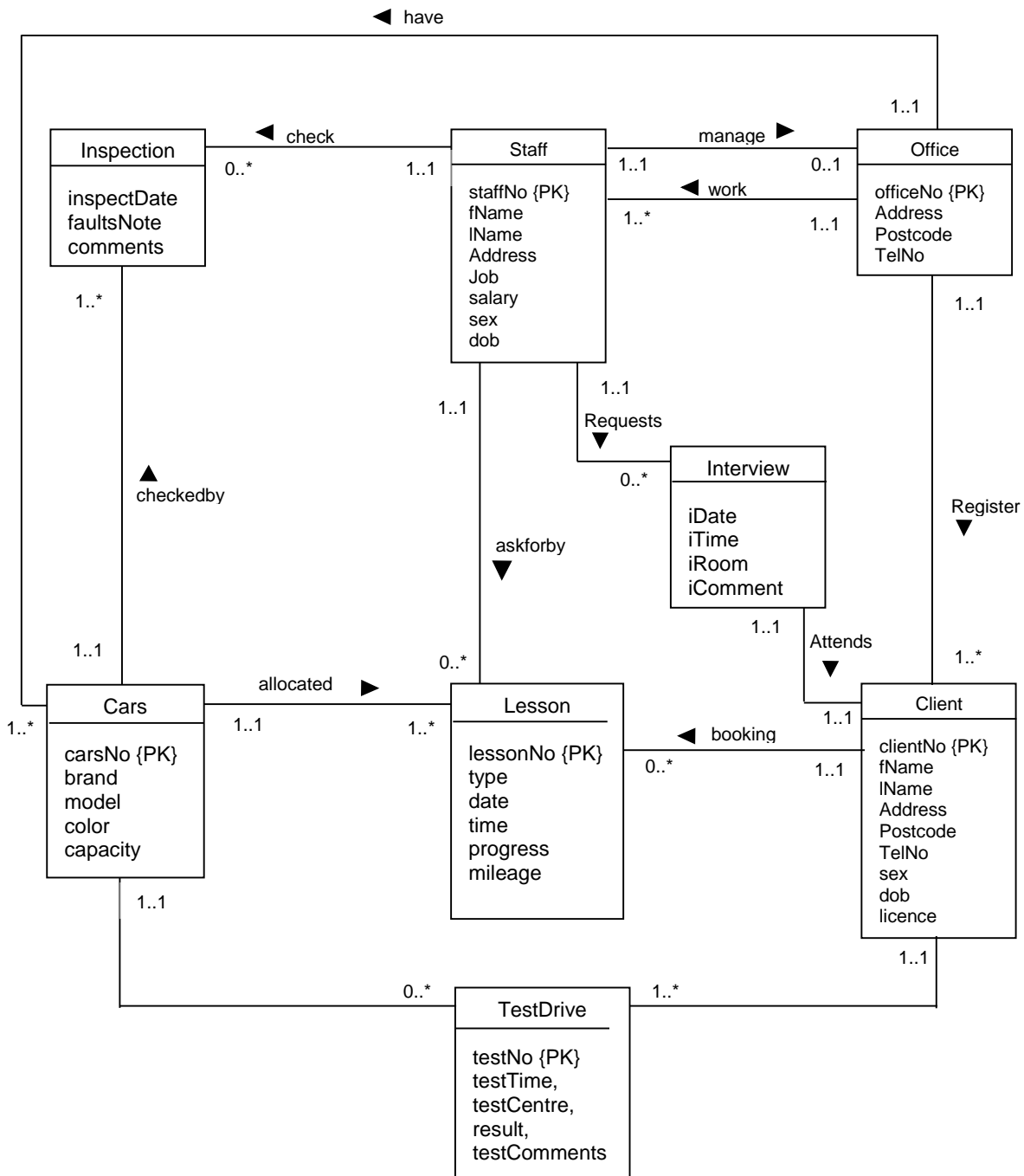
Inspection staffNo, carsNo, inspectDate, faultsNote, comments)
 PK staffNo, carsNo, inspectDate
 FK staffNo references Staff(stafNo) **ON update cascade ON delete no action.**
 FK carsNo reference Cars(carsNo) **ON update cascade ON delete cascade.**

Step 2.5 Review logical data model with user

Lakukan seperti langkah 1.8.

Step 2.6 Merge logical data models into global model (optional step)

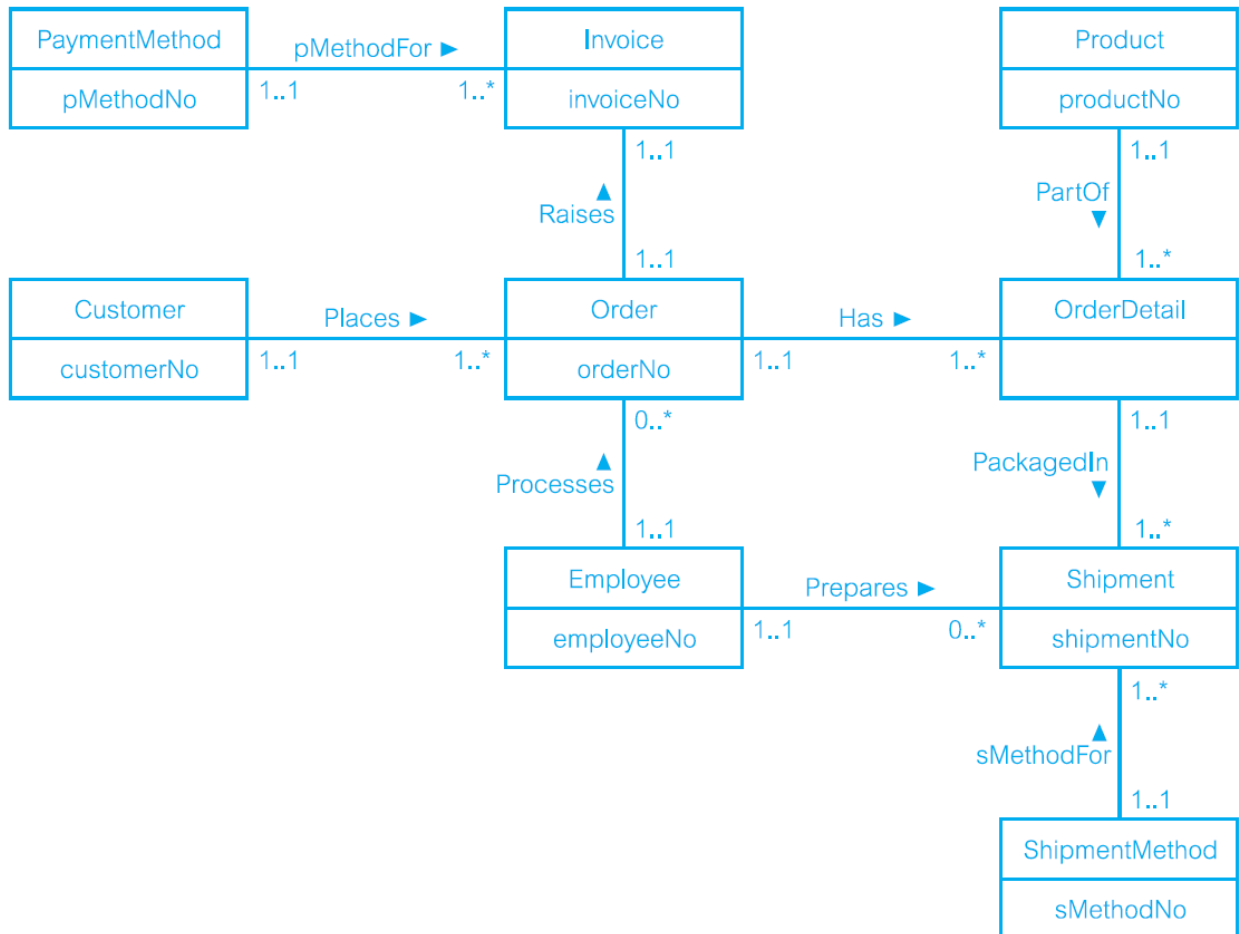
Tidak terdiri dari beberapa local conceptual, local logical design, sehingga model data logis yang dihasilkan adalah bersifat global seperti berikut.



Step 2.7 Check for future growth

**SOAL QUIZ UNTUK DIPRESENTASIKAN PADA PEREMUAN KE-12
PRESENTASI DAN TANYA JAWAB DALAM KELOMPOK
WAKTU 10 MENIT**

16.8 Derive relations from the following conceptual data model:



The *University Accommodation Office* case study

- 15.15 Provide a user's requirements specification for the *University Accommodation Office* case study documented in Appendix B.1.
- 15.16 Create a conceptual data model for the case study. State any assumptions necessary to support your design. Check that the conceptual data model supports the required transactions.

The *University Accommodation Office* case study

- 16.10 Create and validate a logical data model from the conceptual data model for the *University Accommodation Office* case study created in Exercise 15.16.

