

# IN2090 2022: Obligatorily assignment 1

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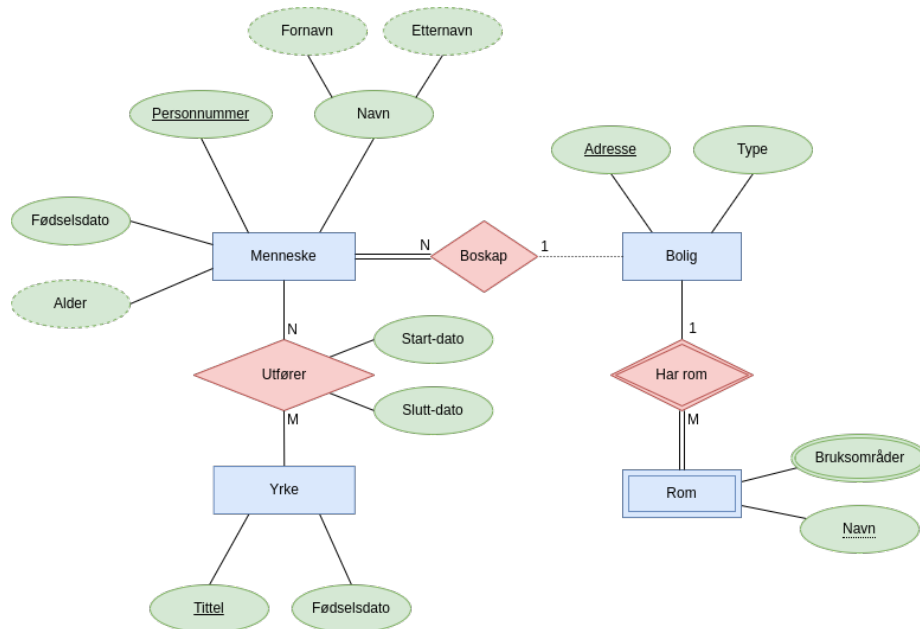
## Part 1

### Question 1

There are two entities, Bamle and Ymle. Bamle and Ymle have a relation, Zluff, that is one to many respectively. Every instance of Bamle must have single Zluff relation, and has a unique attribute named Blunk. Zluff is optional for Ymle, it also has the attributes Gru and Blipp; Blipp is unique.

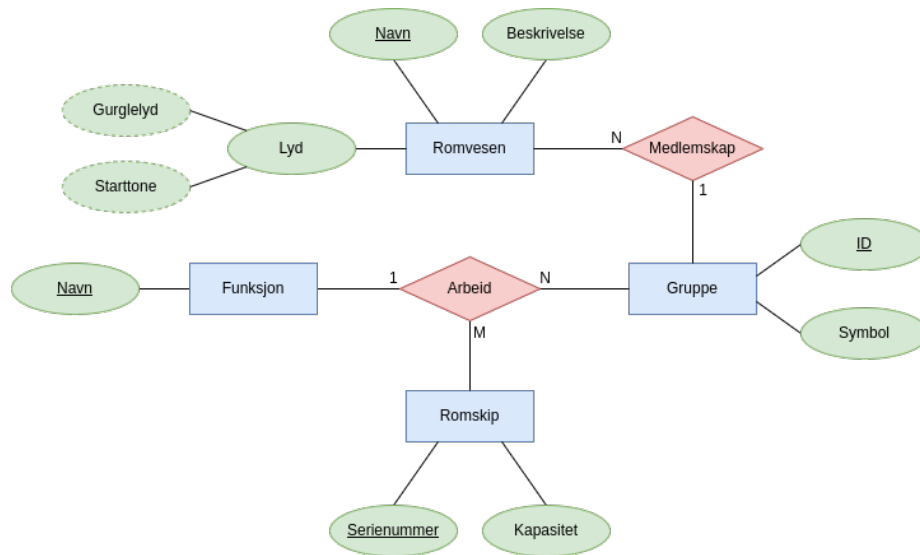
Note that the unique attributes identify each other in the Zluff relation.

### Question 2



## Part 2

### Question 3



### Question 4

#### Definitions

**PK** = primary key; **CK** = candidate key; **FK** = foreign key

#### Answer

- Mapping regular entity types
  - Menneske(Brukernavn, Personnummer, MNavn) where Brukernavn and Personnummer are CKs, I picked Personnummer as PK—it is recognized as an identifier.
  - Melding(ID, Diagram, Dato, Klokkeslett) where ID is the PK.
  - Romvesen(RNavn, Gruppe)
- Mapping of weak entity types: Vedlegg(Innhold, VNavn, ID) where ID is the PK of Melding
- Mapping of binary 1:N relationship types: I add the PK of Vedlegg, ID, as FK in Menneske: Menneske(Brukernavn, Personnummer, MNavn, ID)
- Mapping of binary N:M relationship types: We create a new table to store the relationship, the table stores the PKs of Melding and Romvesen as the composite PK → Medling\_Romvesen(ID, RNavn)

5. Mapping multi-variate attributes: Menneske\_\_Ansvarsområde(Ansvar, Personnummer)  
where Personnummer is the FK (the PK of Menneske).

### Result

Menneske(Brukernavn, Personnummer, MNavn, ID)

Menneske\_\_Ansvarsområde(Ansvar, Personnummer)

Melding(ID, Diagram, Dato, Klokkeslett)

Vedlegg(Innhold, VNavn, ID)

Medling\_Romvesen(ID, RNavn)

Romvesen(RNavn, Gruppe)

### Foreign keys

- The PK of Melding, **ID**, is FK in the relation between Melding and Menneske, Vedlegg and Romvesen
- The weak attribute key of Vedlegg, **Navn**, is FK in the Melding relation
- The PK of Romvesen, **Navn**, is FK in the Melding relation