IN2090 2022: Obligatorily assignment 1

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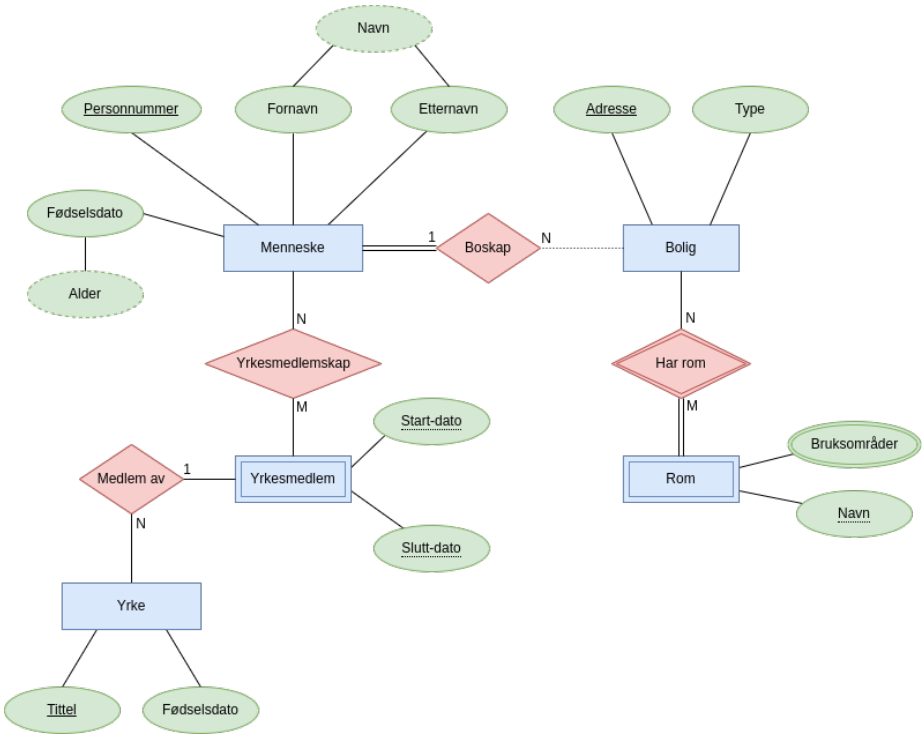
Part 1

Question 1

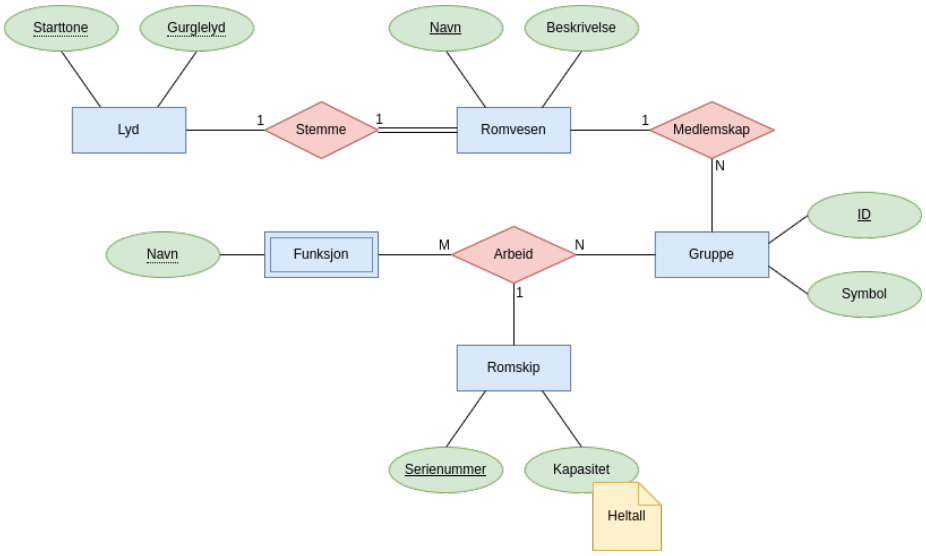
There are two entities, Bamle and Ymle. Bamle and Ymle have a relation, Zluff, that is one to many respectively. Every instance of Bamle must have a Zluff relation, and has a unique attribute named Blunk. Zluff is optional for Ymle, it also has the attributes Gru and Blipp; Blipp is unique.

Question 2



Part 2

Question 3



Question 4

Definitions

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

Answer

1. Mapping regular entity types
   - Menneske(Brukernavn, Personnummer, MNavn) where Brukernavn and Personnummer are CKs, I picked Personnumer as PK—it is recognized as an identifier.
   - Melding(ID, Diagram, Dato, Klokkeslett) where ID is the PK.
   - Romvesen(RNavn, Gruppe)
2. Mapping of weak entity types: Vedlegg(Innhold, VNavn, ID) where ID is the PK of Melding
3. Mapping of binary 1:N relationship types: I add the PK of Vedlegg, ID, as FK in Menneske: Menneske(Brukernavn, Personnummer, MNavn, ID)
4. 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)