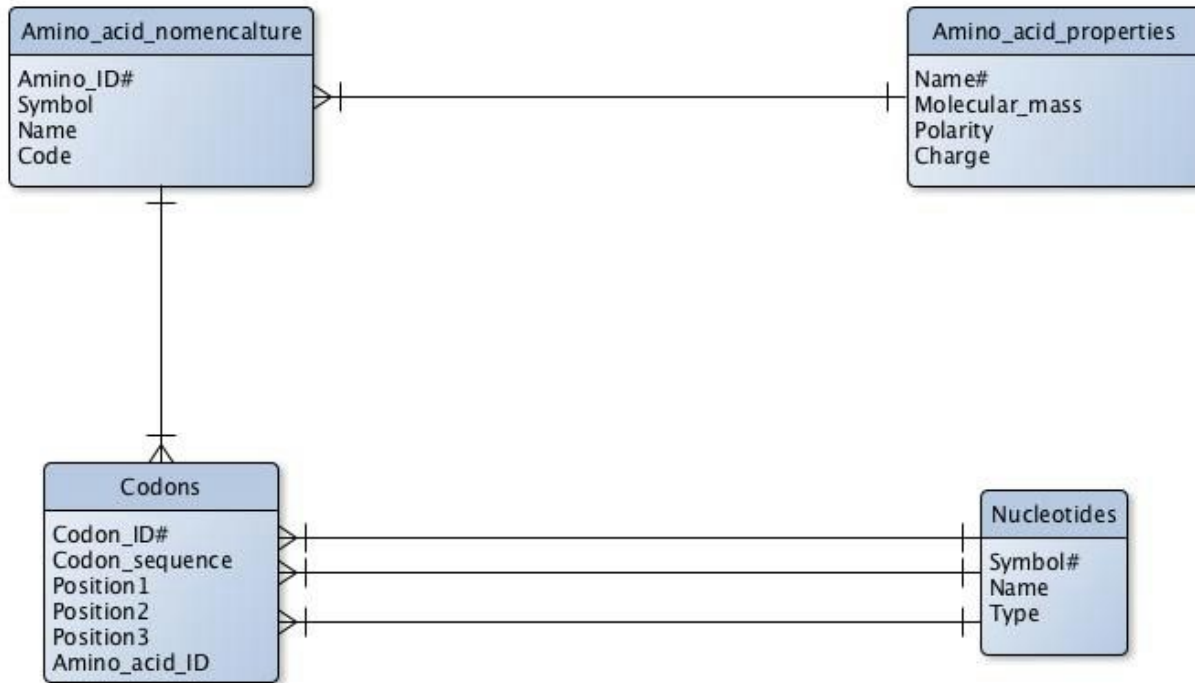
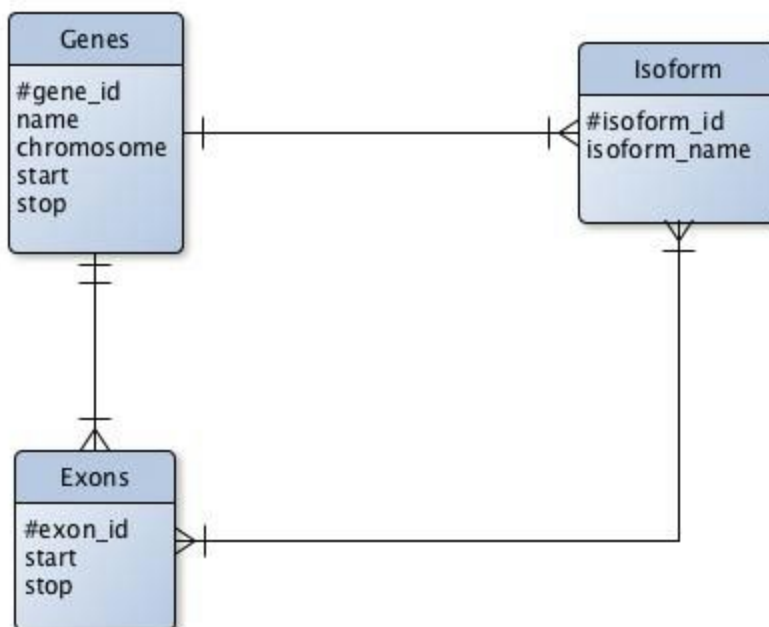


Oppgave 1**Oppgave 2.1**

Gene, Isoform, Exon

Oppgave 2.2

Oppgave 2.3

Tolkar oppgava som at både gene_id og gene_name er unike.

Gene(#Gene_id, Name, Chromosome, Start, Stop)

Gene_name(#Gene_name, Gene_id*)

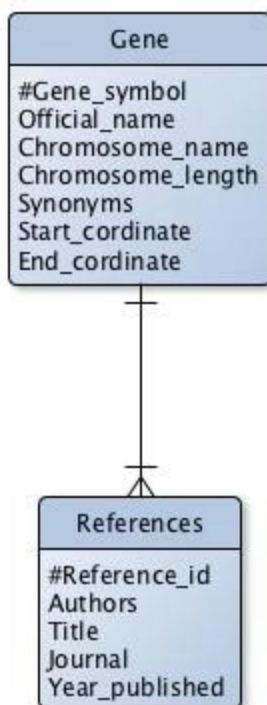
Gene_exons(#Isoform_id, Exon_id*)

Exon(#Exon_id, Start, Stop, Gene_id*)

Isoform(#Isoform_id, Isoform_name, Gene_id*)

Oppgave 3.1

Gene, synonyms, references

Oppgave 3.2**Oppgave 3.3**

Gene(#Gene_symbol, Official_name, Chromosome_name, Chromosome_length, Start_cordinate, End_cordinate)

Synonym(#(Synonym, Gene_symbol))

Reference(#Reference_id, #Gene_symbol*, Title, Journal, Year_published)

Authors(#Referance_id*, #Author_name)

Oppgave 3.4

3.3 med BCNF

Gene(#Gene_symbol, Start_cordinate, End_cordinate, Chromosome_name*)

Gene_name(#Official_name, Gene_symbol*)

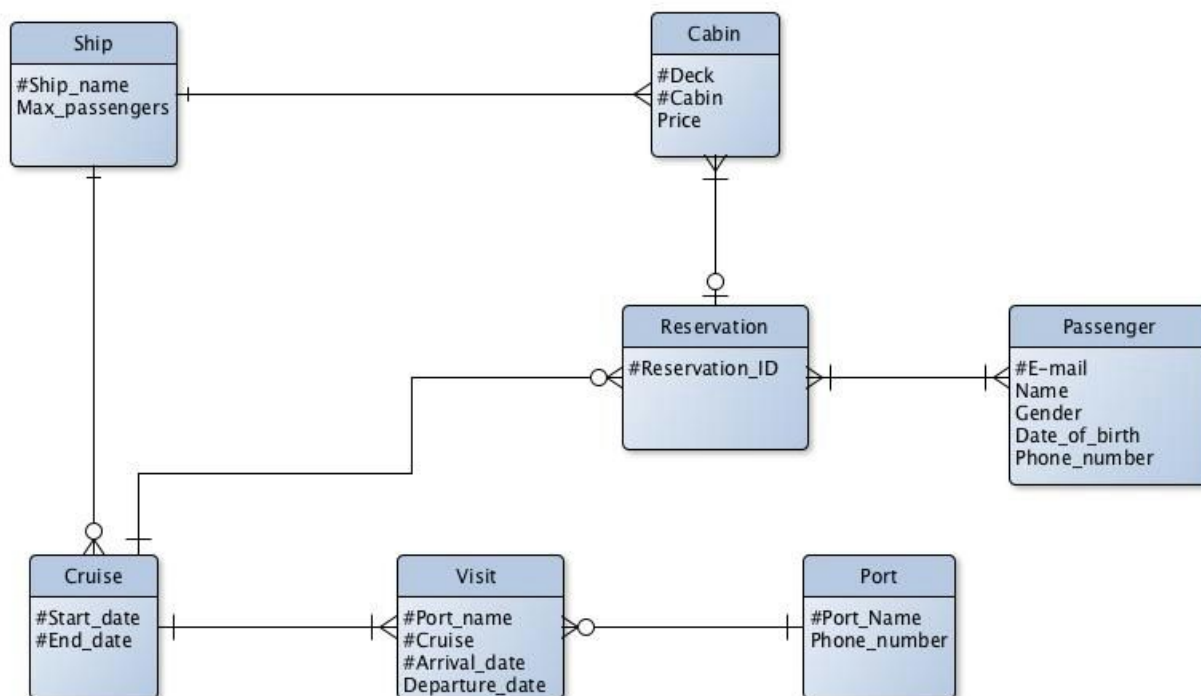
Chromosome(#Chromosome_name, Chromosome_length)

Synonyms(#(Synonym, Gene_symbol*))

Reference(#(Title, Journal, Year_published))

Gene_reference(#Reference_id, #Gene_symbol*)

Authors(#Referance_id*, #Author_name)

Oppgave 4**Oppgave 5.1**

Ein av grunnane til Truck tabellen er problematisk er fordi den ikkje har ein primary key.

Oppgave 5.2

Registration_number → Registration_year

Registration_number → Model

Registration_number → Maximum weight

Model → Maximum weight

Oppgave 5.3

Hadde ein hatt ein rein truck tabell, uten Assignment_number med i tabellen, så hadde Registration_number vore den einaste kandidatnøkkelen. Men slik den ser ut no, så treng ein både Registration_number og Assignment_number.

Oppgave 5.4

Container_type (#Type_id, Type_name, Max_weight, Cubic_quantity, Nightly_rate)

Container (#Container_number, Type_id*)

Customer (#Telephone_number, Address)

Assignment (#Assignment_number, Telephone_number*, Container_number*, Start_date, End_date)

Truck (#Registration_number, Registration_year, Model)

Truck_weight(#Registration_number*, Maximum_weight)

Delivery(#Assignment_number*, registration_number*)