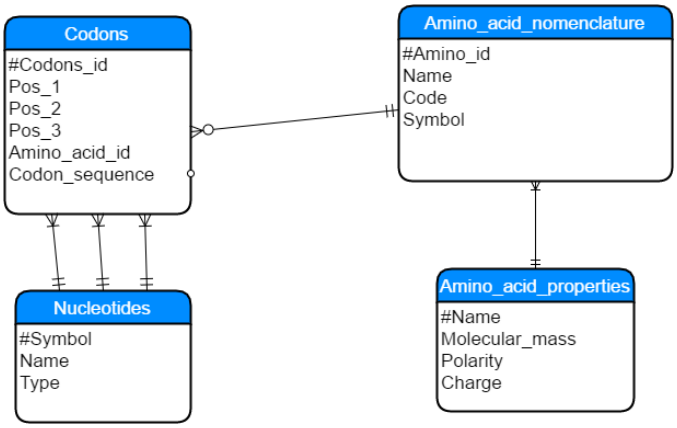
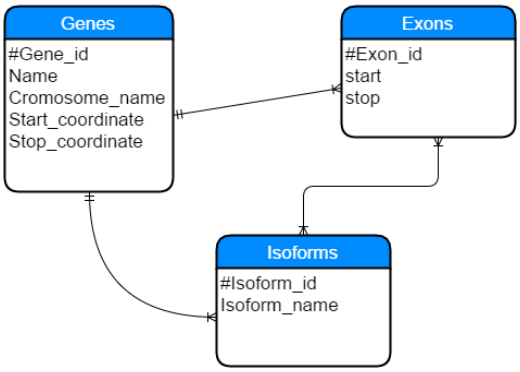
Oppgave 1:



Oppgave 2:

i) Enittetene er: Gene, Exons og Isoforms

ii)



iii)

Gene(#gene_id, Exon_id*, Isoform_id*, Gene_name, Chromosome_name)

Gene_Coordinate(#Gene_id*, Start_coordinate, Stop_coordinate)

Exon(#Exon_id, Start, Stop)

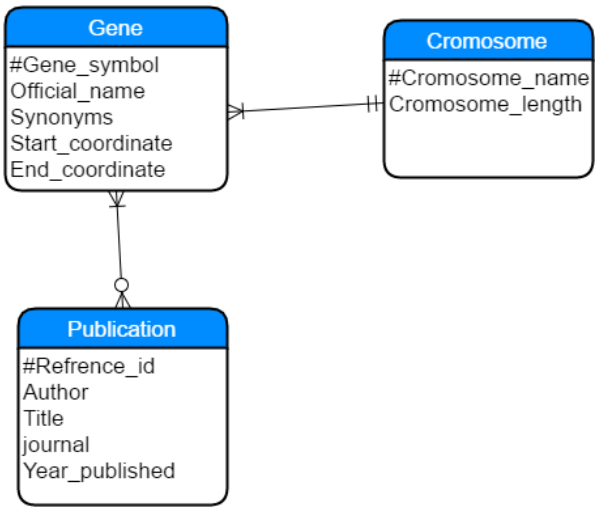
Isoform(#Isoform_id, Isoform_name)

Isoform_vaule(#Isoform_id*, Exon_id*)

Oppgave 3.

i) Entitenene er: Gene, Chromosome, Publication.

ii)



iii)

Gene(#Gene_symbol, Chromosome_name, Official_name, synonym, Start_coordinate, End_coordinate)

Chromosome(#Chromosome_name, Chromosome_length, Gene_symbol*)

Publication(#Refrence_id, Title, Journal, Author, Year_published, Gene_symbol*)

iv)

Gene(#Gene_symbol, Chromosome_name*, Official_name)

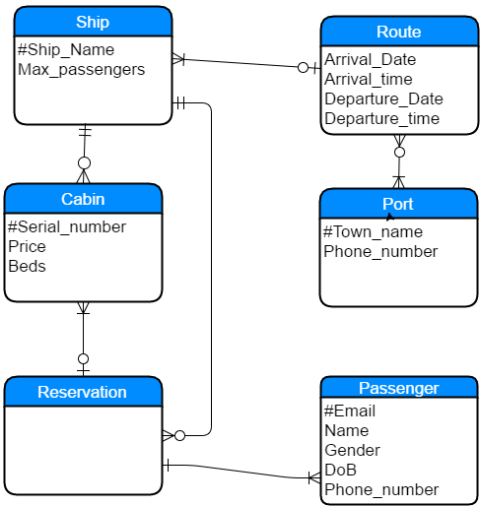
Gene_Coordinate(#Gene_symbol*, Start_coordinate, End_coordiante)

Gene_synonyms(#synonym, Gene_symbol*)

Chromosome(#Chromosome_name, Chromosome_lengt)

Publication(#Refrence_id, Title, Journal, Author, Year_published, Gene_symbol*)

Oppgave 4.



Oppgave 5.

i) The problem is that the table Truck does not contain any primary keys

ii) The functional dependencies of the Truck table is:

a) Registration_number bestemmer Registration_year

b) Model bestemmer max_weight

iii) The candidate key of the table Truck is:

Assignment_number + Registration_number

iv) 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, #Assignment_number*, Registration_year)

Model(#Model*, Maximum_weight)