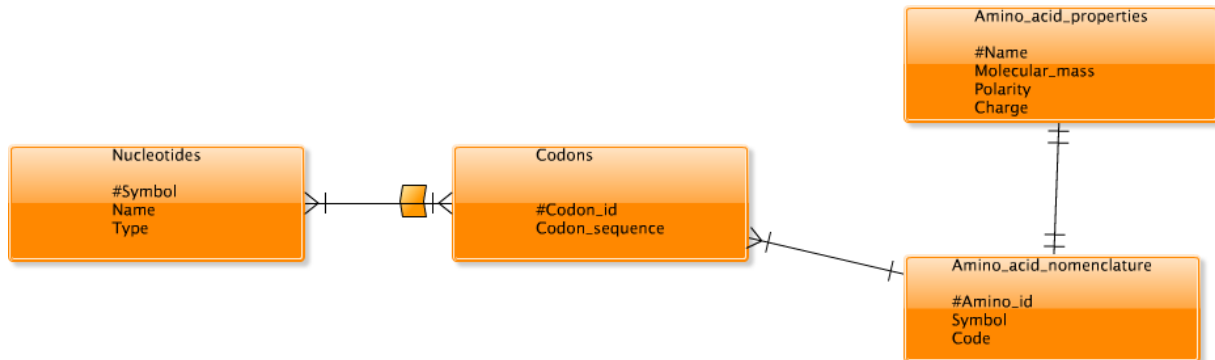


INF 115: Obligatorisk oppgave #2

Oppgave 1)



Oppgave 2)

i)

The following entities occur:

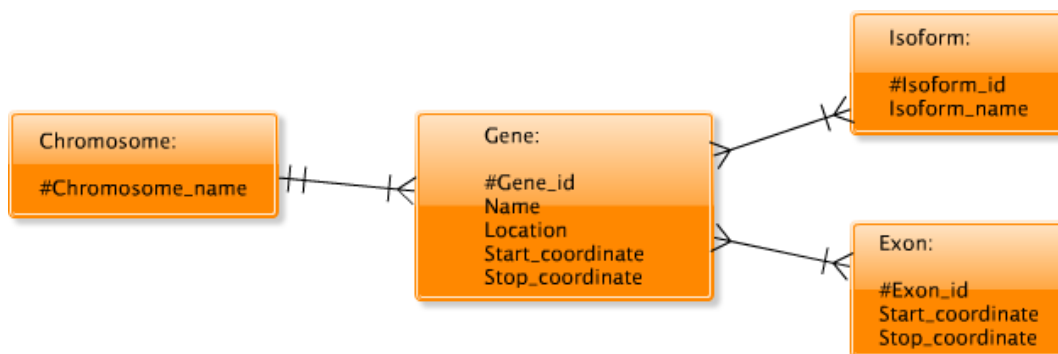
Chromosomes

Genes

Exons

Isoforms

ii)



iii)

Chromosomes(#Chromosome_name)

Genes(#Gene_id, Name,Location,Chromosome_name*,Start_coordinate,Stop_coordinate)

Exons(#Exon_id,Start_Coordinate,Stop_Coordinate)

Isoforms(#Isoform_id,Isoform_name)

Oppgave 3)

i)

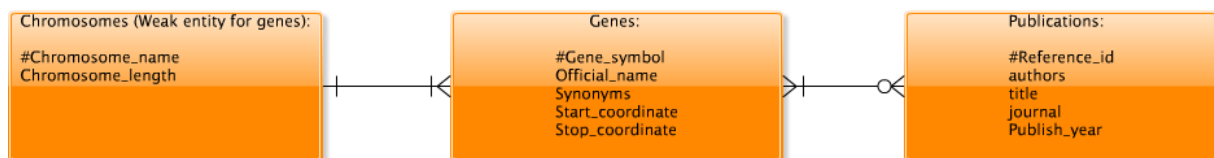
The following entities occur:

Genes

Chromosomes

Publications

ii)



iii)

Chromosomes(#Chromosome_name,Chromosome_length)

Genes(#Gene_symbol,Official_name,Synonyms,Start_coordinate,Stop_coordinate)

Publications(#Reference_id,authors,title,journal,Publish_year)

iv)

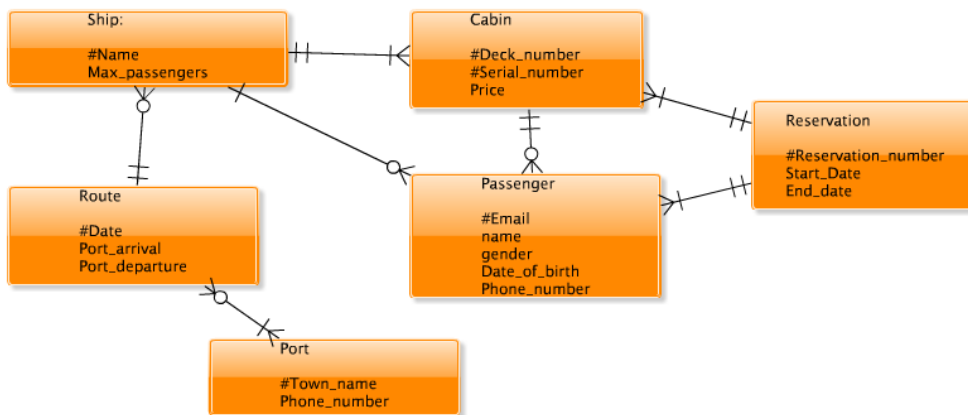
Chromosomes(#Chromosome_name,Chromosome_length)

Genes(#Gene_symbol, Start_coordinate,Stop_coordinate)

Genes_name(#Official_name,Synonyms)

Publications(#Reference_id,authors,title,journal,Publish_year)

Oppgave 4:



Oppgave 5:

i)

The suggested truck table lacks a primary key. Every truck has a unique registration number, so this serves well as a primary key. A correct table:

Truck (#Registration_number,Registration_year,Model,Maximum_weight,Assignment_number*)

ii)

The maximum weight of a truck is dependant on the truck model and registration year (because a 2013 model of Volvo XL could have been modified to carry extra weight, for instance).

Therefore, Registration_yearXModel --> Maximum_weight

iii)

The only candidate key for the Truck table is Registration number. This is because the company can have several trucks registered in the same year, and they can have multiples of the same truck model.

Furthermore, several trucks can have the same max weight and can be used in several assignments. So the only value guaranteed to be unique is the registration number.

iv)

Container_type(#Type_id, Type_name*, Nightly_rate)

Container1(#Container_number, Type_id*)

Container_measurements(#Type_name, Max_weight, Cubic_quantity)

Customer(#Telephone_number, Address)

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

Assignment_period(#Start_date, End_date)

Truck(#Registration_number, Registration_year, Model, Maximum_weight, Assignment_number*)