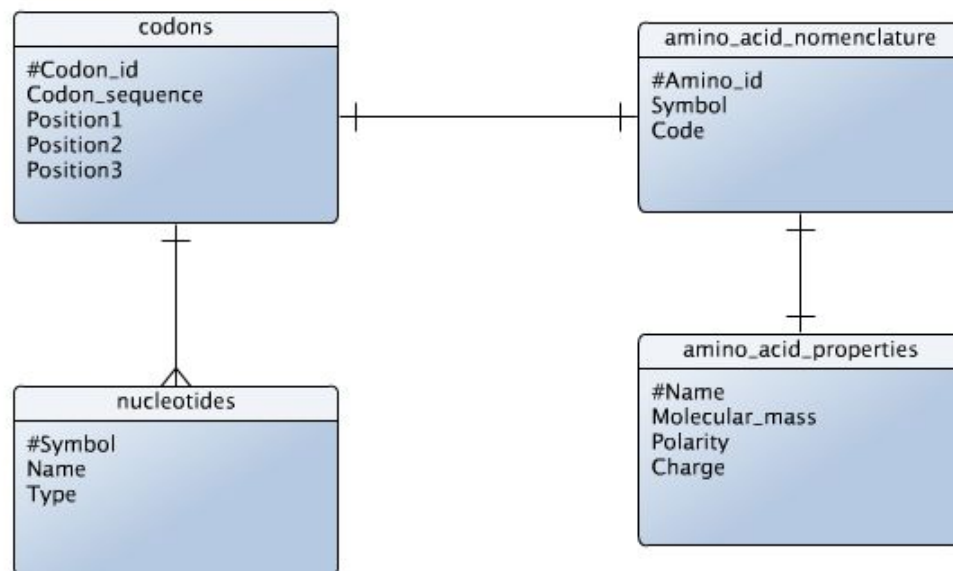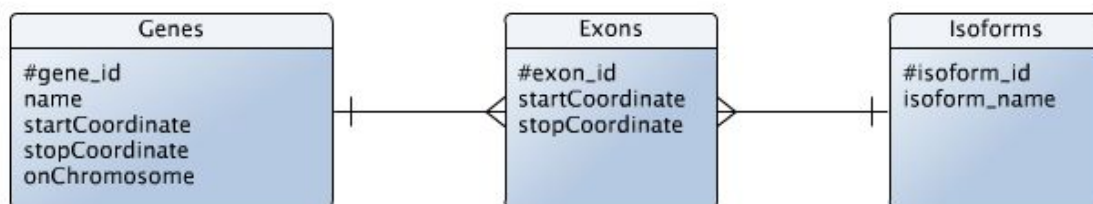# INF115 Oblig 2

OPPGAVE 1

OPPGAVE 2 i

Entities: Genes, Exons, Isoforms

OPPGAVE 2 ii

OPPGAVE 2 iii

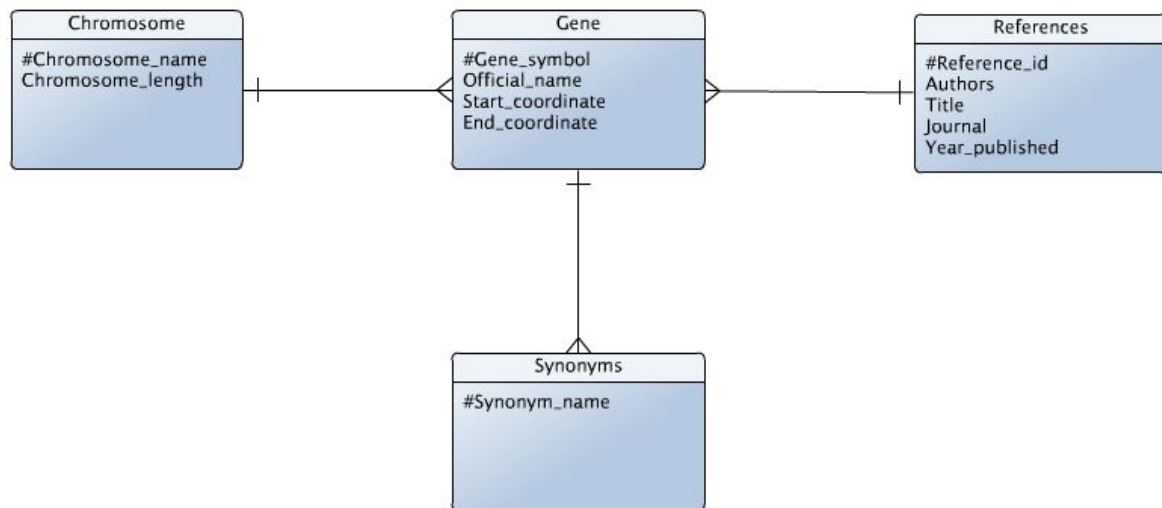Genes(#gene_id, name, startCoordinate, stopCoordinate, onChromosome)
Exons(#exon_id, startCoordinate, stopCoordinate, gene_id*, isoform_id*)
Isoforms(#isoform_id, isoform_name)

OPPGAVE 3 i

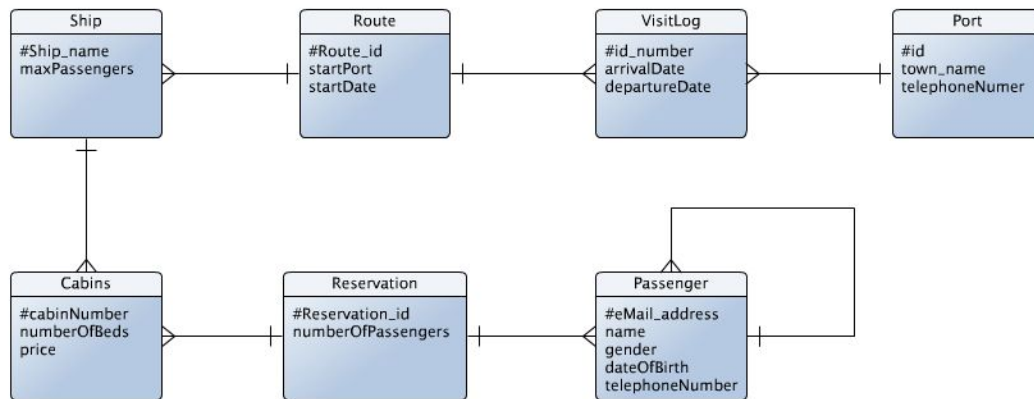Entities: Chromosome, Gen, Synonyms, References

OPPGAVE 3 ii

OPPGAVE 3 iii

Gene(#Gene_symbol, Official_name, Start_coordinate, End_coordinate,
#Chromosome_name, Chromosome_length, Reference_id*)
References(#Reference_id, Authors, Title, Journal, Year_published)
Synonyms(#Synonym_name, Gene_symbol*)

OPPGAVE 3 iv

Chromosome(#Chromosome_name, Chromosome_length)
Gene(#Gene_symbol, Official_name, Start_coordinate, End_coordinate, Reference_id*,
Chromosome_name*)
References(#Reference_id, Authors, Title, Journal, Year_published)
Synonyms(#Synonym_name, Gene_symbol*)

OPPGAVE 4

Ship
#Ship_name
maxPassengers

Route
#Route_id
startPort
startDate

VisitLog
#id_number
arrivalDate
departureDate

Port
#id
town_name
telephoneNumer

Cabins
#cabinNumber
numberOfBeds
price

Reservation
#Reservation_id
numberOfPassengers

Passenger
#eMail_address
name
gender
dateOfBirth
telephoneNumber

OPPGAVE 5 i

First of all we don't have a primary key, but the main reason as to why it's problematic and therefore won't work is because the *Assignment number* is a foreign key, limiting each truck to ever having one assignment. The *Truck* and *Assignment* have a many-to-many relationship, so we'll need a junction table functioning as a connection between them, limiting the *Truck* table to just the truck.

OPPGAVE 5 ii

Registration_number -> Registration_year
Model -> Maximum_weight

OPPGAVE 5 iii

Candidate keys: Registration_number, Model

OPPGAVE 5 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, Registration_year, Model, Maximum_weight)

CurrentAssignment(#(Assignment_number, Registration_number))

Just to clarify about the junction table CurrentAssignment*: for the primary key we have PRIMARY KEY (Assignment_number, Registration_number), so that both of the* Truck *and* Assignment *primary key makes one for the* CurrentAssignment *table.*