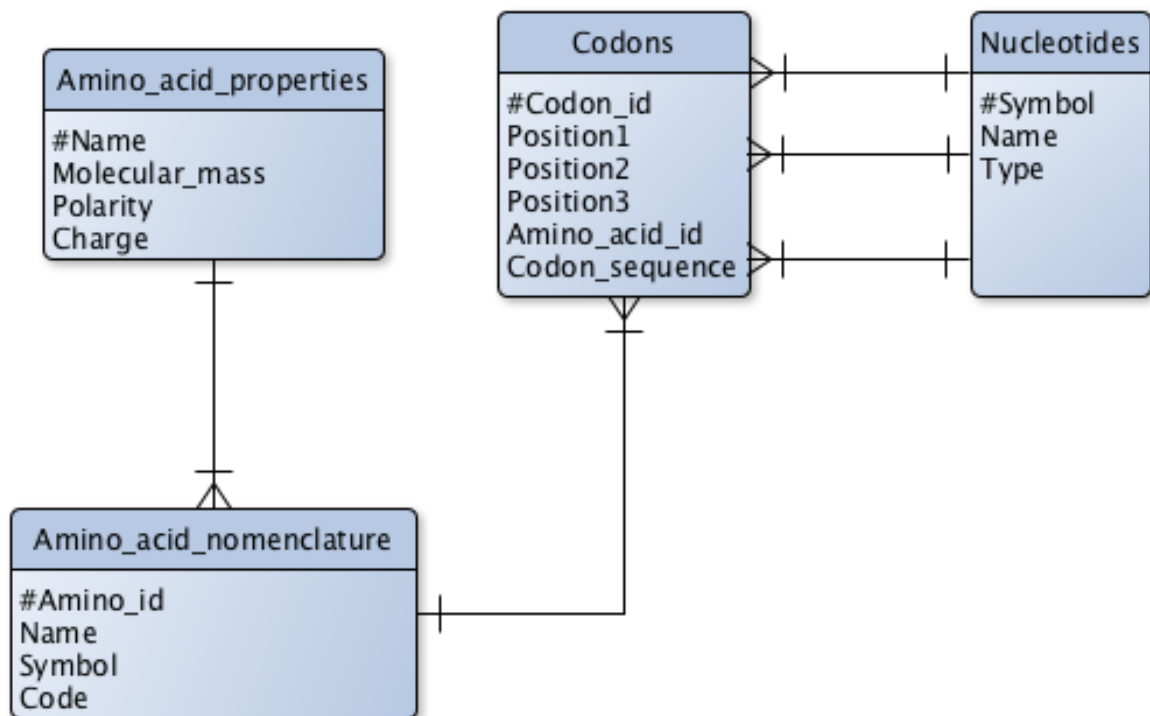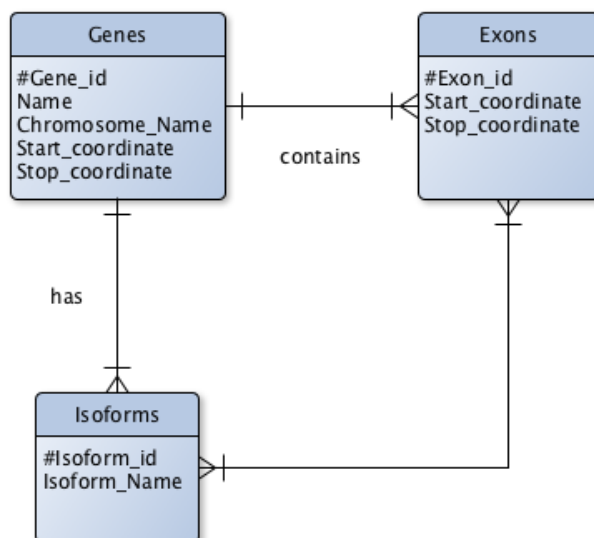# Oblig 2 – INF115:

Oppgave 1:

Oppgave 2:

I)
Genes(), Exons(), Isoforms().

II)

III)
Genes (#Gene_id, Name, Chromosome_Name, Start_coordinate, Stop_coordinate)

Exons (#Exon_id, Start_coordinate, Stop_coordinate, Gene_id*, Isoform_id*)
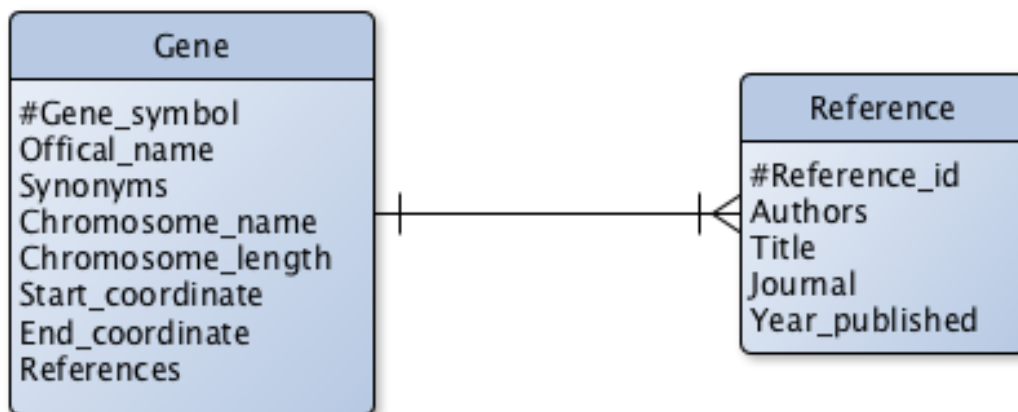
Isoforms (#Isoform_id, Isoform_Name, Gene_id*)

Exon_Isoform (Exon_id*, Isoform_id*)

Oppgave 3:

I)
Gene(), Reference().

II)

III)
Gene (#Gene_symbol, Ofiicial_name, #Synonyms, Chromosome_name,
Chromosome_length, Start_coordinate, End_coordinate, Reference_id*)

Reference (#Reference_id, #Authors, Title, Journal, Year_published)

IV)
Gene (#Gene_symbol, Official_name, Synonym_id*, Chromosome_name, Start_coordinate,
End_coordinate, Reference_id*)
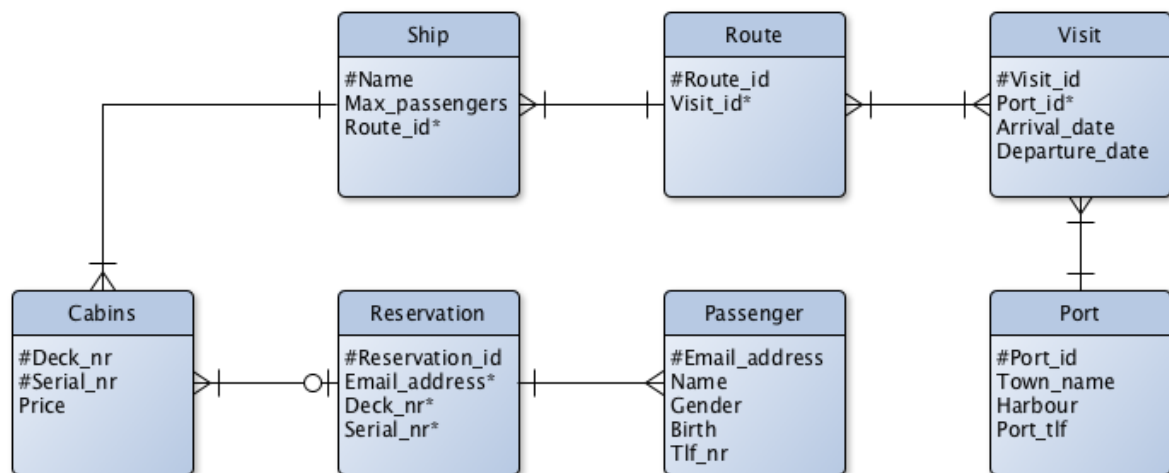
Synonyms (#Synonym_id, Synonym_name)

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

Authors (#Author_id, Author_name)

Chromosome (Chromosome_name, Chromosome_length)

Oppgave 4:

Ship
#Name
Max_passengers
Route_id*

Route
#Route_id
Visit_id*

Visit
#Visit_id
Port_id*
Arrival_date
Departure_date

Cabins
#Deck_nr
#Serial_nr
Price

Reservation
#Reservation_id
Email_address*
Deck_nr*
Serial_nr*

Passenger
#Email_address
Name
Gender
Birth
Tlf_nr

Port
#Port_id
Town_name
Harbour
Port_tlf

Oppgave 5:

I)
The solution is problematic because the Truck table does not have a primary key. In addition, the trucks assigned to an assignment won't be able to do anything else whilst the assignment is still in progress. This means that even though the truck might have the "time" to work on another assignment, it can't because the current assignment still "owns" it.

II)
The functional dependency of the Truck table is between Model and Maximum_weight (Model → Maximum_weight). This is because if you have two trucks that are identical (i.e. are of the same model), they also have the same maximum weight.

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

Model (#Model, Maximum_weight)