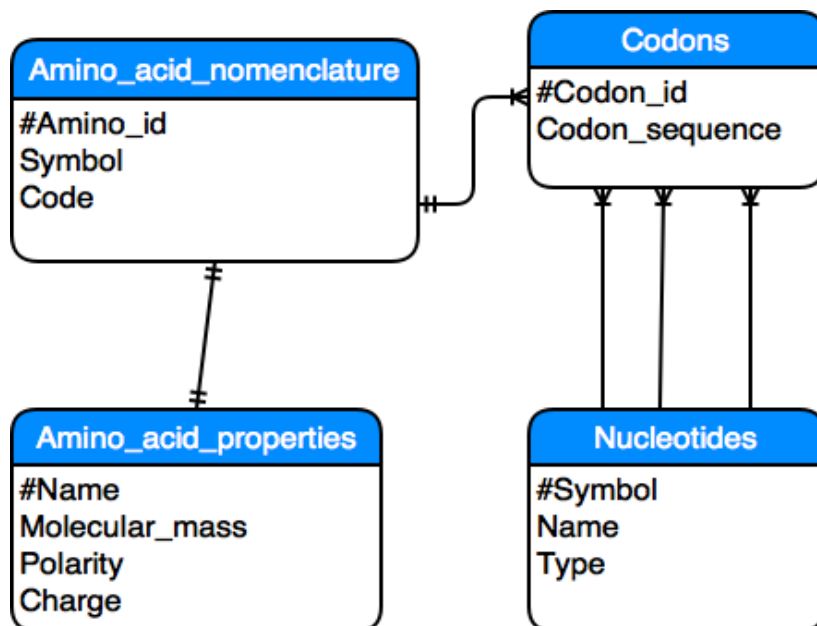


COMPULSORY 2 – CAZ003

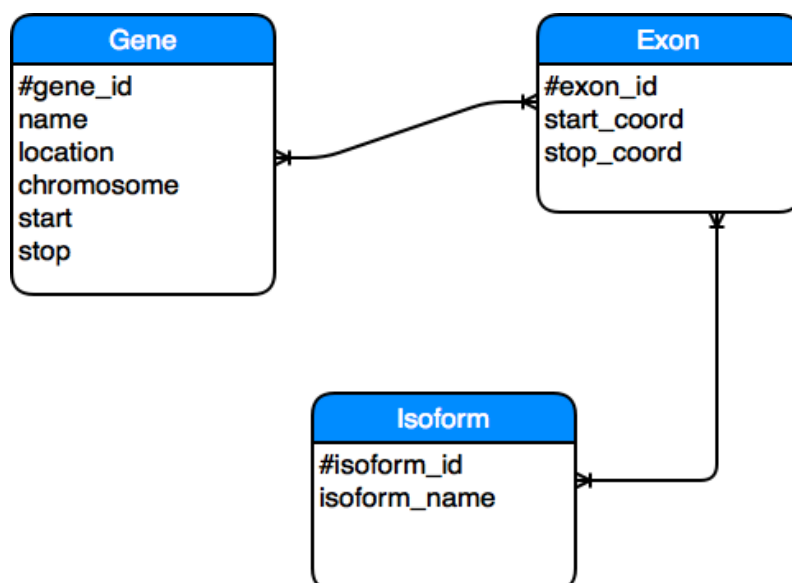
OPPGAVE 1



OPPGAVE 2

i) Identifiser entitetene: Gene, Exon, Isoform

ii)



iii)

Gene (#gene_id, chromosome, start, stop)

Gene_name (#name, gene_id*)

(Navnet til genet gjør at avhengigheten fra gene_id til de tre andre attributene blir transitiv.)

Exon (#exon_id, start_coord, stop_coord)

Isoform (#Isoform_id, isoform_name)

(Dersom dette er logisk databasedesign, så må vi løse opp mange-til-mange forholdene)

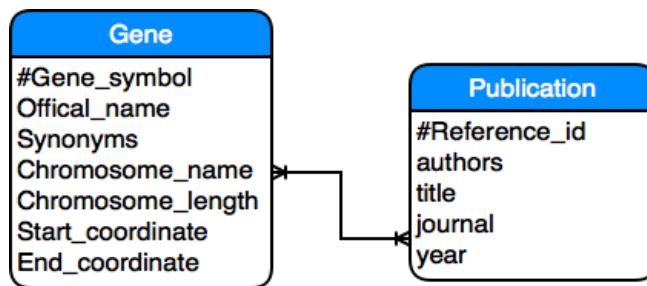
Exons_in_gene (#gene_id*, #exon_id*)

Exons_in_isoform (#isoform_id*, #exon_id*)

Oppgave 3

i) Identifiser entitene: Gene, Publication

ii)



iii) Gene (#Gene_symbol, Official_name, Chromosome_name, Chromosome_length, Start_coordinate, end_coordinate)

Synonyms (#Synonyme_id, Gene_symbol*, synonyme_name)

Publication (#Reference_id, title, journal, year)

Publication_author (#Reference_id*, #author)

iv) Gene (#Gene_symbol, Chromosome_name*, Start_coordinate, End_coordinate)

Gene_name (#Name, gene_id*)

Chromosome (#Chromosome_name*, Chromosome_length)

Synonyms (#Synonyme_id, Gene_symbol*, synonyme_name)

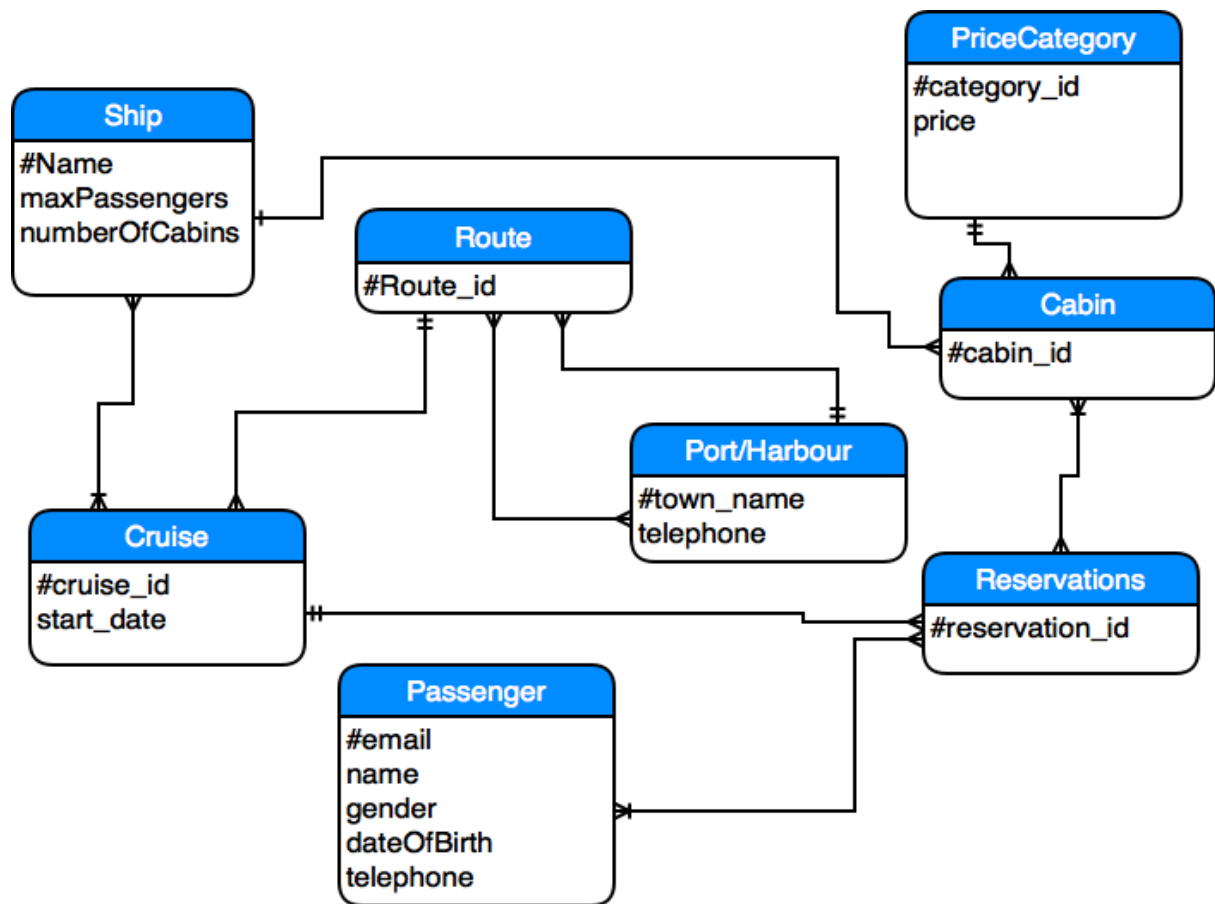
Publication (#Reference_id, journal, year)

Publication_title (#title, Reference_id*)

Publication_author (#Reference_id*, #author)

Oppgave 4

I denne oppgaven har jeg antatt at en port og en harbour er det samme (forklart av gruppeleder)



Oppgave 5

- i) Slik som tabellen er satt opp, så kan man kun ha én assignment på en truck. Dermed må man opprette en ny truck i databasen hver gang en truck skal brukes. Dette medfører masse unødvendig redundans (eventuelt vil de få ikke-atomære verdier i cellen, hvilket man heller ikke ønsker). De har heller ikke noen primærnøkkel i tabellen.
- ii) Registration_number -> Registration Year, Model
Model -> Maximum_weight
- iii) Kandidatnøkkel: Registration_nr
- iv) Truck (#Registration_nr, Registration_year, Model_id*)
Model (#Model_id, Maximum_weight)
TruckAssignment(#Registration_nr*, #Assignment_number*)