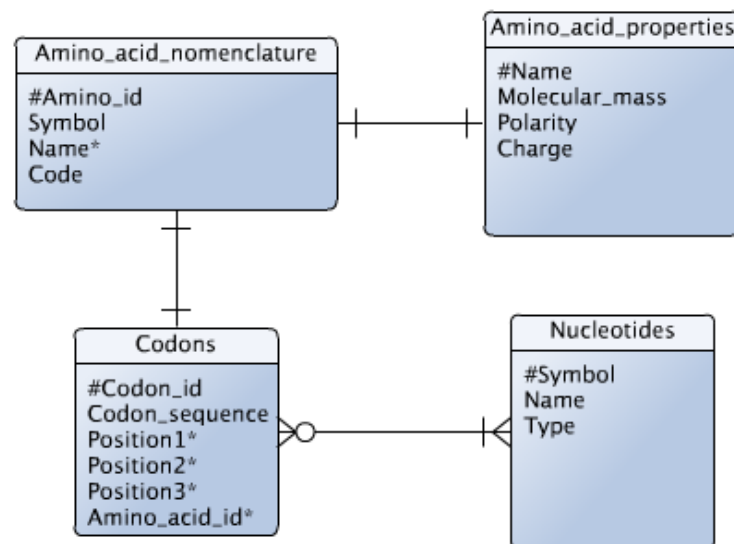


Compulsory Exercise 2

Hans Ivar Botnen (hbo014)

Candidate: 104

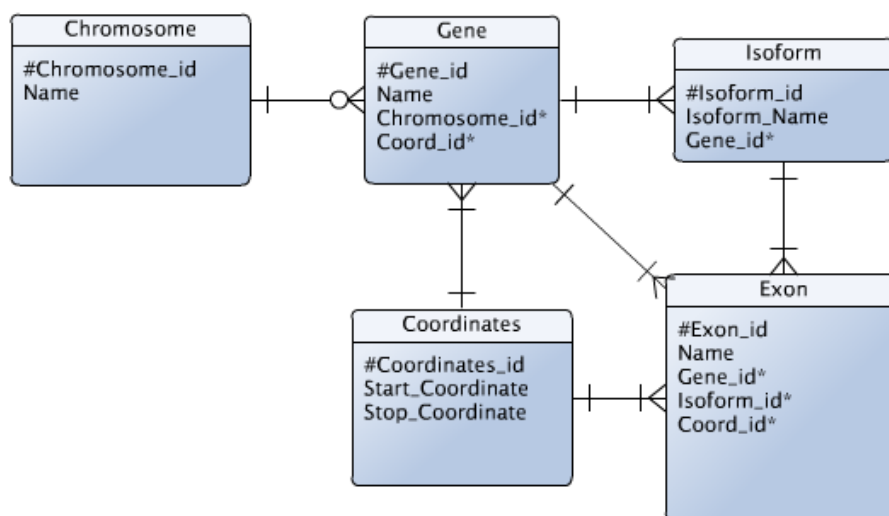
1)



2i)

Gene, Chromosome, Coordinates, Exon and Isoform

2ii)



2iii)

(Primary keys are marked with “#” at the front, while foreign keys are marked with a “*” at the end)

Chromosome (#Chromosome_id, Name)

Gene (#Gene_id, Name, Chromosome_id*, Coord_id*)

Isoform (#Isoform_id, Name, Gene_id*)

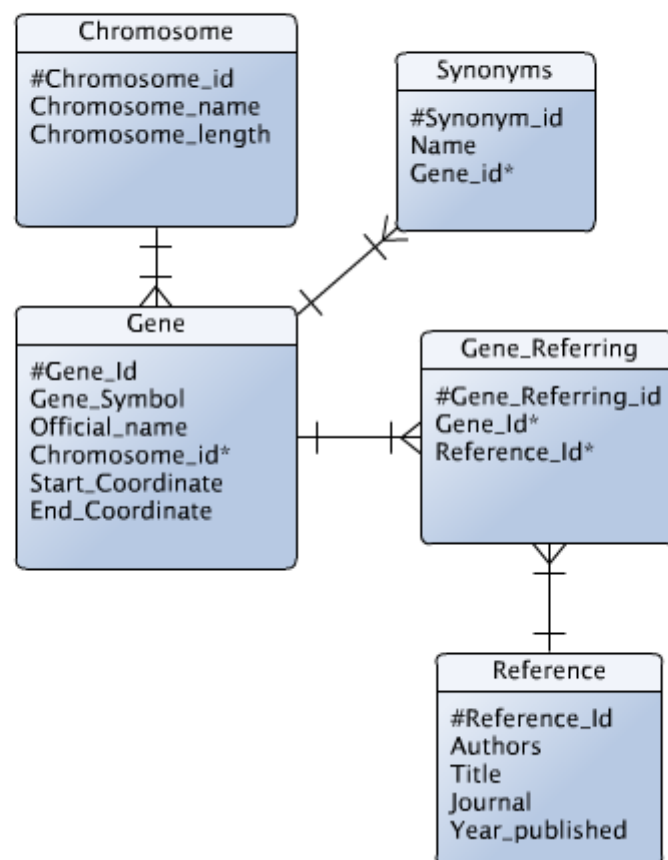
Exon (#Exon_id, Name, Gene_id*, Isoform_id*, Coord_id*)

Coordinates (#Coordinates_id, Start_Coordinate, Stop_Coordinate)

3i)

Gene, Chromosome, Reference, Synonyms, Gene_Referring

3ii)



3iii) Primary keys are specified by “#” and foreign keys are specified by “*”

Gene (#Gene_id, Gene_Symbol, Official_name, Chromosome_Name, Chromosome_length, Start_Coordinate, End_Coordinate)

Synonyms (#Synonym_id, Name, Gene_id*)

Gene_Referring (#Gene_Referring_id, Gene_id*, Reference_id*)

Referene (#Referene_id, Authors, Title, Journal, Year_published)

3IV)

Gene (#Gene_id, Gene_Symbol, Official_name, Chromosome_id*, Start_Coordinate, End_Coordinate)

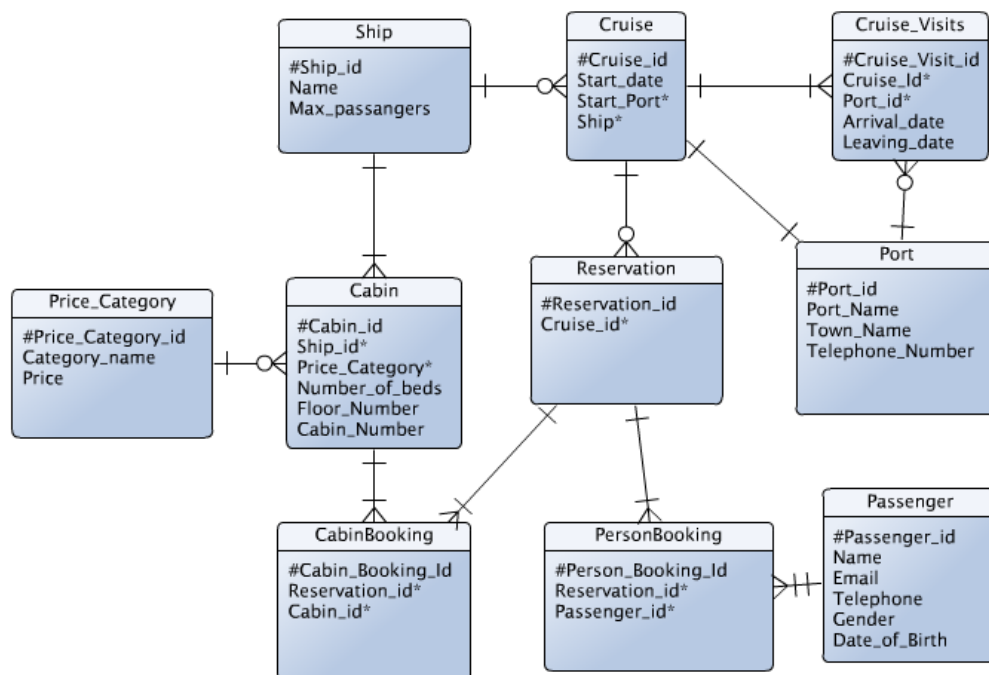
Chromosome (Chromosome_id, Chromosome_Name, Chromosome_length)

Synonyms (#Synonym_id, Name, Gene_id*)

Gene_Referring (#Gene_Referring_id, Gene_id*, Reference_id*)

Referene (#Referene_id, Authors, Title, Journal, Year_published)

4)



5i)

Firstly, "Truck" has no primary key.

Secondly, using this they would have to re-enter all the information for each assignment a truck will be assigned to.

5ii)

Registration_number → Registration_year

Registration_number → Model

Registration_number → Maximum_Weight

Model → Maximum_Weight

5iii)

Registration_Number is the only candidate key.

5IV)

Primary keys are marked by "#" and foreign keys are marked by "*"

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_id*)

TruckModel (#Model_id, Name, Maximum_Weight)

Transportation (#Transportation_id, Registration_Number*, Assignment_Number*)