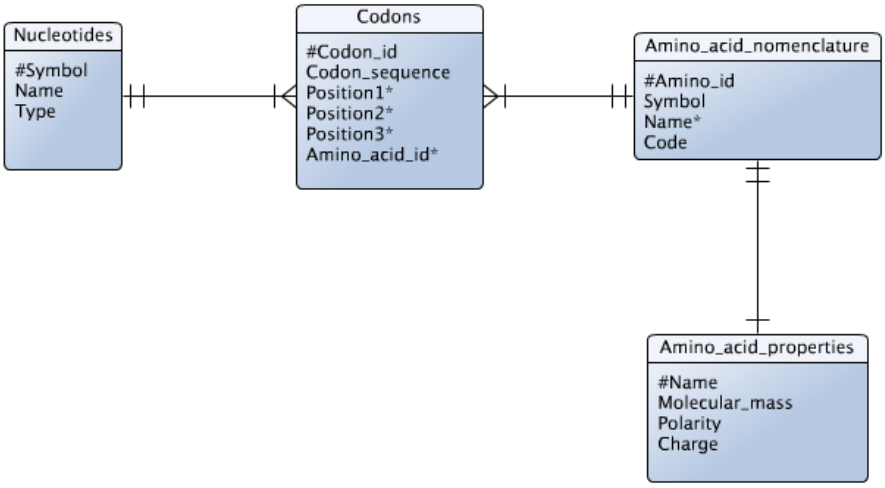
1)

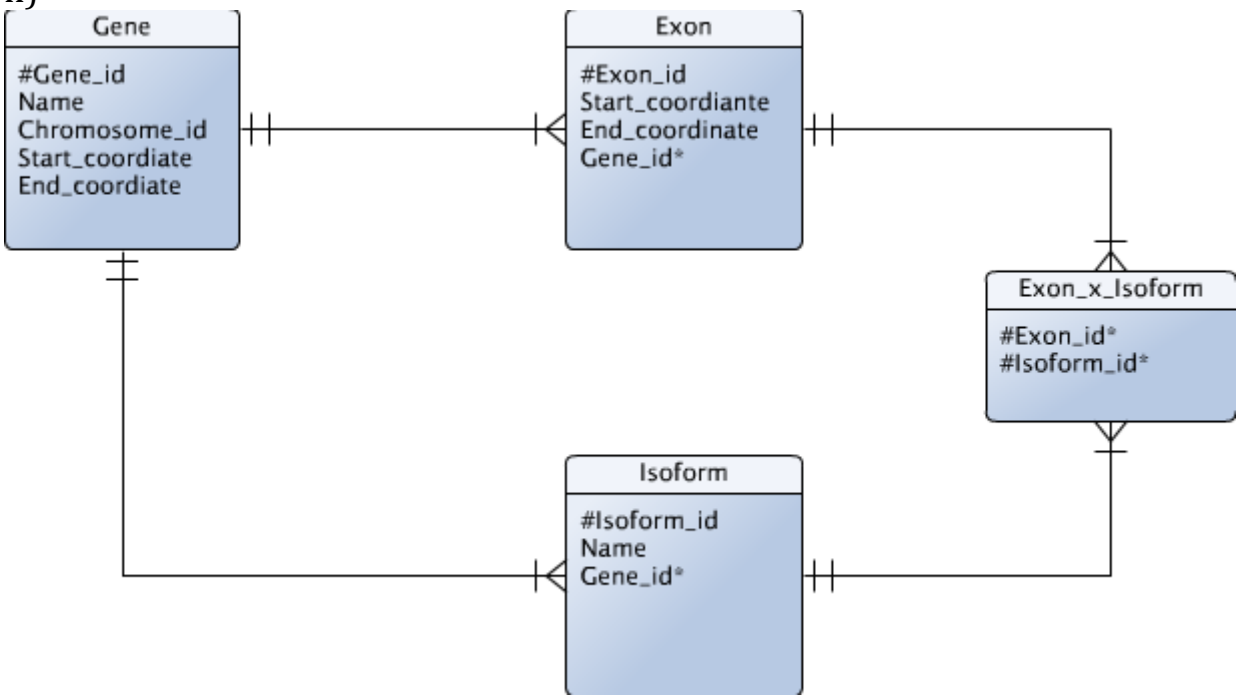


2)

i)

Entities: Gene, Exon, Isoform

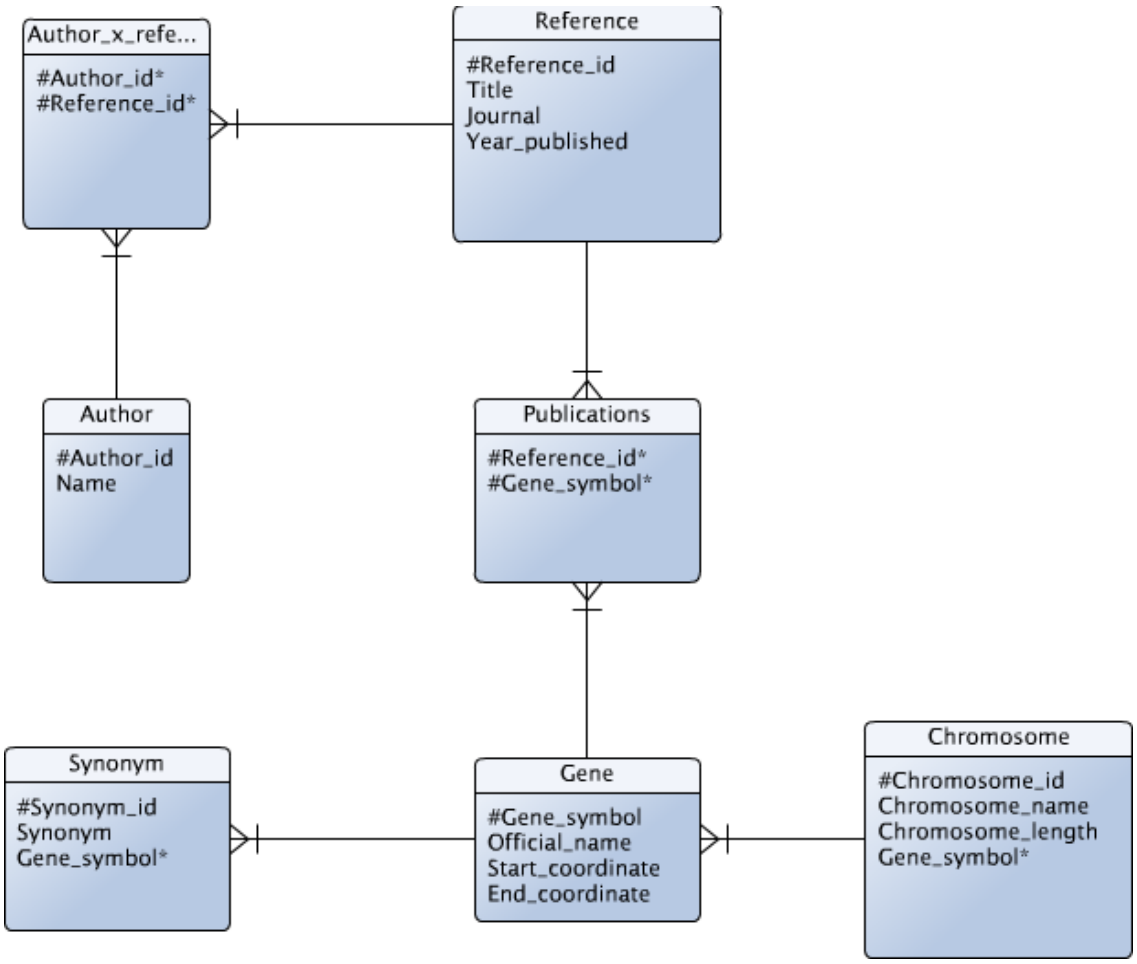
ii)



iii)
Chromosome(#Chromosome_id, Name)
Gene(#Gene_id, Name, Start_coordinate, End-coordinate, Chromosome_id*)
Exon(#Exon_id, Start-coordinate, End-coordinate, Gene_id*)
Isoform(#Isoform_id, Name, Gene_id*)
Exon_x_Isoform(#Exon_id*, #Isoform_id*)

3)
i)
Entities: Gene, Synonym, Chromosome, Reference, Publication

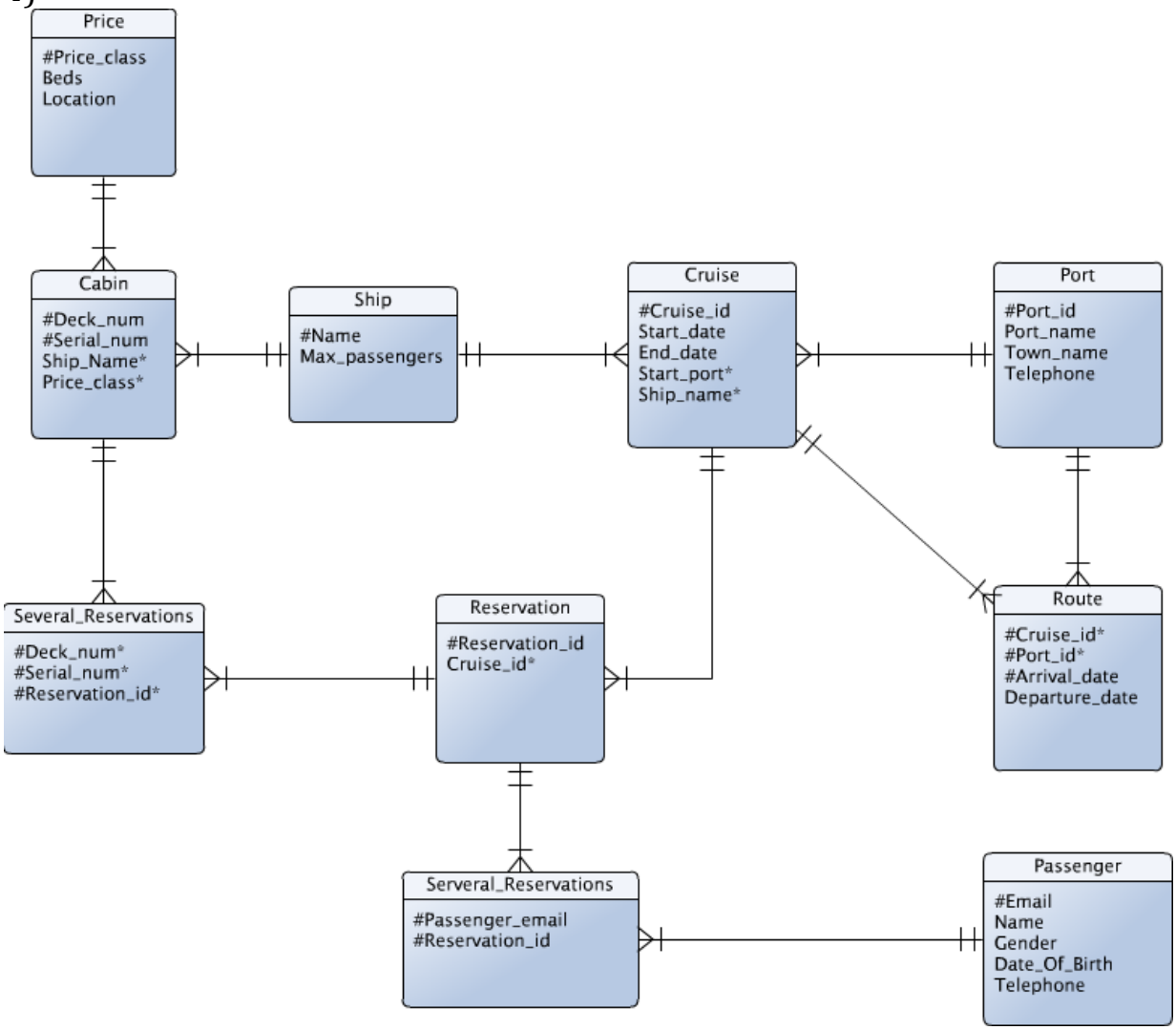
ii)



iii)
Gene(#Gene_symbol, Official_name, Start_coordinate, End_coortinate,
Chromosome_id, Chromosome_length)
Synonym(#Synonym_id, Synonym, Gene_symbol*)
Publications(#Reference_id*, #Gene_symbol*)
Reference(#Reference_id, Title, Journal, Year_published)
Author_x_reference(#Author_id*, #Reference_id*)
Author(#Author_id, Name)

iv)

4)



5)

i)

The problems with the Truck table:

- No primary key
- Multiple dependencies

ii)

Registration_year and assignment_number depends on registration number.

Maximum_weight depends on the model

iii)

Model and Registration number is good cadidate keys because they dont depent on other attributes