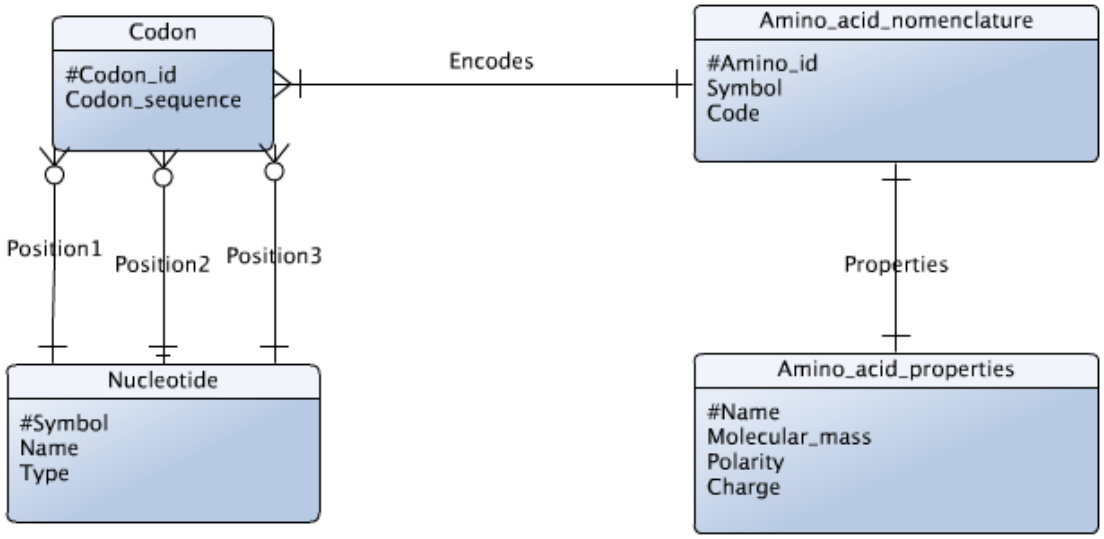
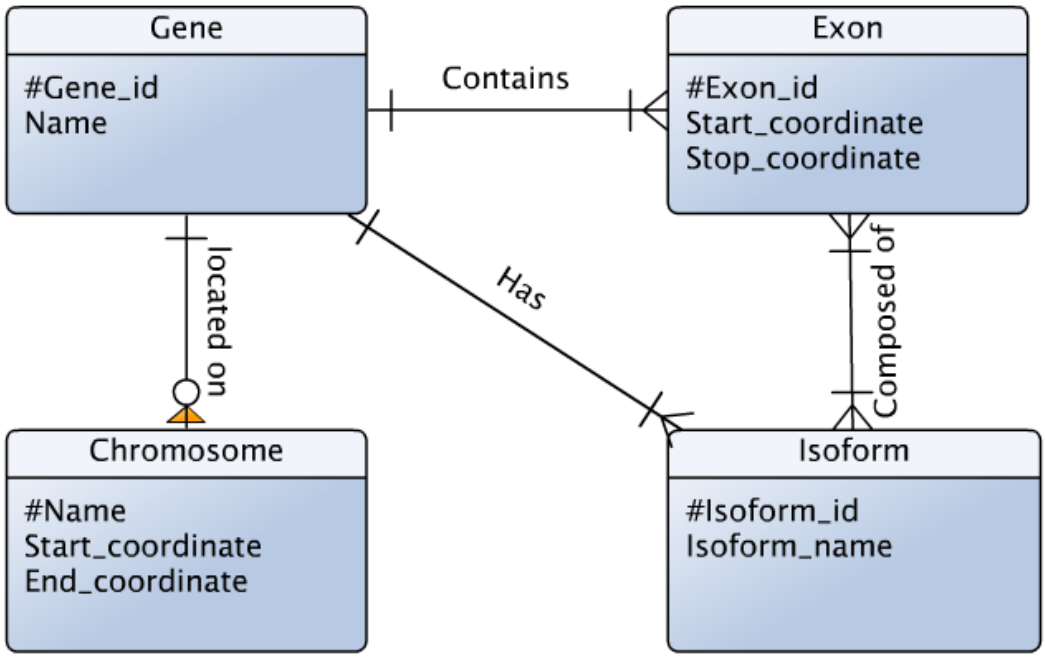
Task 1)



Task 2)

i. The entities in the description are Gene, Exon, Isoform, and Chromosome.

ii.



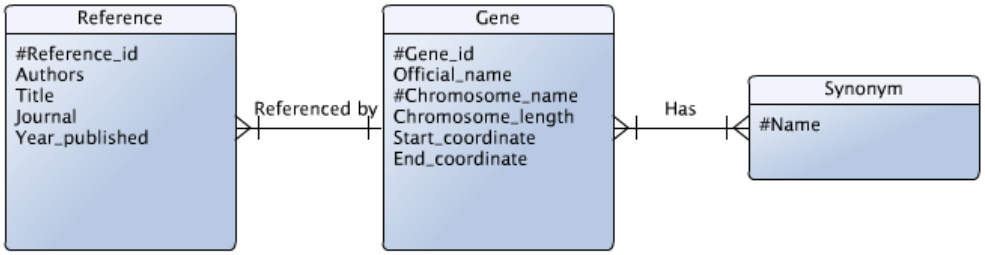
iii.

Gene(#Gene_id, Name)
Exon(#Exon_id, Start_coordinate, Stop_coordinate, *Gene_id)
Isoform(#Isoform_id, Name, *Gene_id)
IsoformExon(#*Exon_id, #*Isoform_id)
Chromosome(#*Gene_id, #Name, Start_coordinate, End_coordinate)

Task 3)

i. The entities are Gene, Synonym, and Reference.

ii.



iii.

Gene(#Gene_symbol, #Synonym, Official_name, Chromosome_name, Chromosome_length,
Start_coordinate, End_coordinate, Authors, Title, Journal, Year_published)

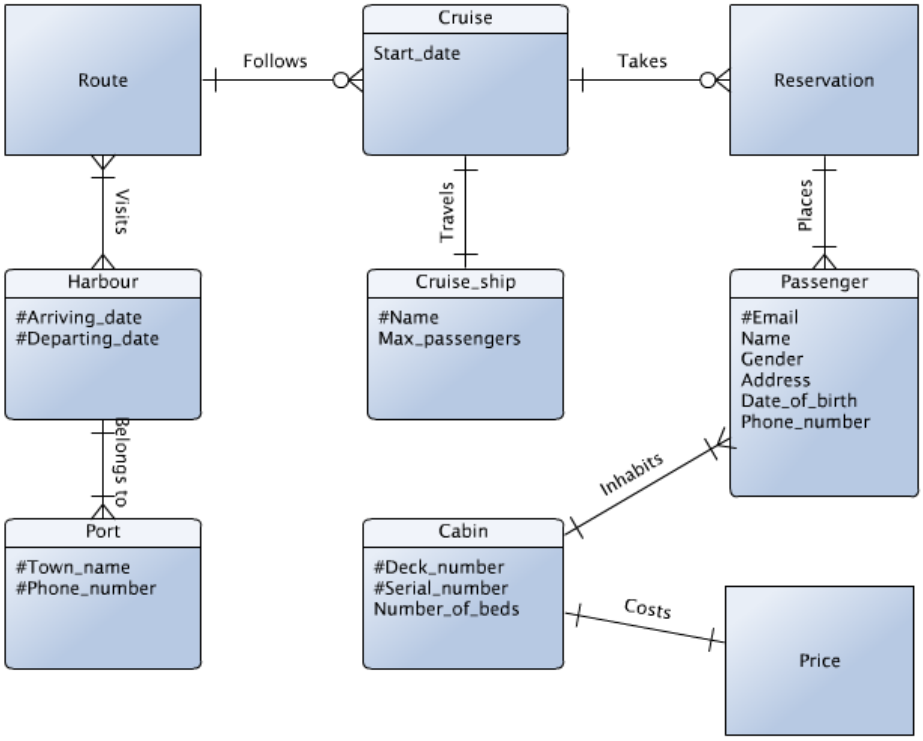
iiii.

Gene(#Gene_symbol, Official_name, Start_coordinate, End_coordinate)
Synonym(#Name, *Gene_symbol)

Chromosome(#Chromosome_name, Chromosome_length)
GeneChromosome(#*Chromosome_name, #*Gene_symbol)

Reference(#Reference_id, Authors, Title, Journal, Year_published)
GeneReference(#*Reference_id, #*Gene_symbol)

Task 4)



Task 5)

i. There is no primary-key specified for the Truck table.

ii. The functional dependencies for the Truck table is Registration_number -> Registration_year and Model -> Maximum_weight.

iii. The candidate key for the Truck table is Registration_number, because this is the only unique entry that is able to determine the rest of the table.

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, *Model_id, *Assignment_number)
ModelInfo(#Model_id, Model_name, Maximum_weight)
RegisterInfo(#*Registration_number, Registration_year)