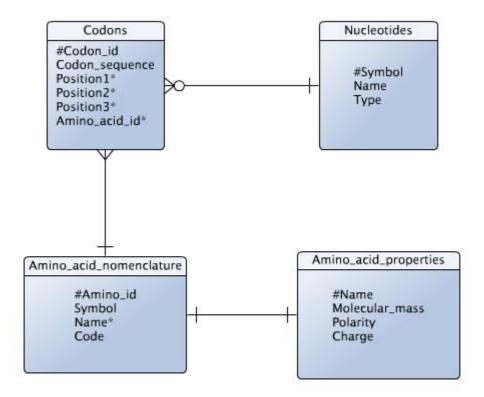
INF115 Compulsory Exercise 2

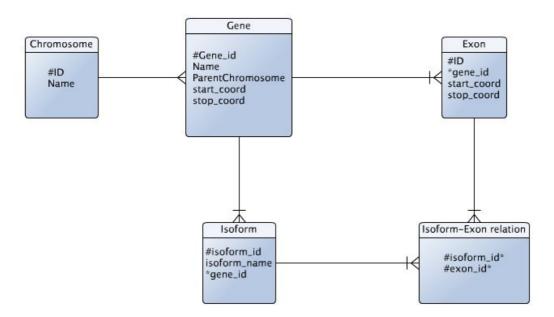
11.04.2016 pth002

Assignment 1)



Assignment 2)

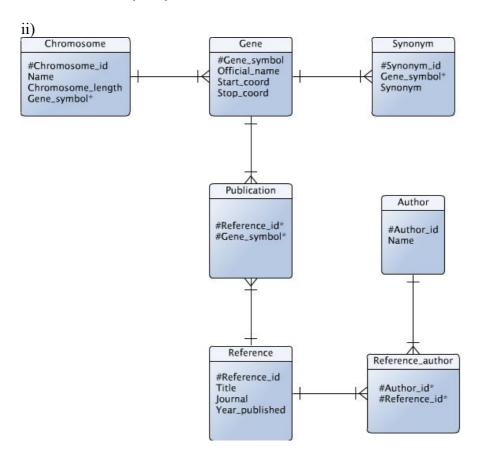
i)
The entities are Gene, Exon, Isoform and Chromosome.



iii)
Gene(#gene_id, name, *parent_chromosome , start_coord, stop_coord)
Chromosome(#id, Name)
Exon(#exon_id, *gene_id, start_coord, stop_coord)
Isoform(#isoform_id, isoform_name, *gene_id)
Isoform_Exon_relation(#isoform_id*, #exon_id*)

Assignment 3)

i)
The entities are Synonym, Reference, Publication, Gene and Chromosome.



iii)
Synonym(#Synonym_id, Gene_symbol*, Synonym_name)
Gene(#Gene_symbol, Official_name, Start_coord, Stop_coord, Chromosome_id, Chromosome_length)
Publication(#Reference_id*, #Gene_symbol*)
Reference(#Reference_id, Title, Journal, Year_published)
Reference_author(#Author_id*, #Reference_id*)
Author(#Author_id, Name)

iv)

Assignment 4) Route Port #Route_id #Port_id Source_port Name Dest_port Town_name Arrival_date Departure_date Telephone_number Cruise Ship Cabin #Cruise_id Ship_name Start_date #Cabin_id #Ship_name Deck_number Limit_passengers Serial_number End_date Price Start_port Ship_name* End_port Passenger $Multiple_passenger_reservation$ Reservation Multiple_cabins_reservation #Passenger_email Name #Reservation_id* #Reservation_id #Cabin_id* Gender #Passenger_email* Cruise_id* #Reservation_id* Date_birth Telephone_number

Assignment 5)

- i)
 The table Truck does not have a primary key and there are several dependencies.
- ii)
 The functional dependencies are:
- $-Registration_year\ and\ Assignment_number\ depends\ on\ Registration_number$
- -Maximum weight depends on Model.
- iii)

Candidate keys:

- -Model
- -Registration number
- iv)