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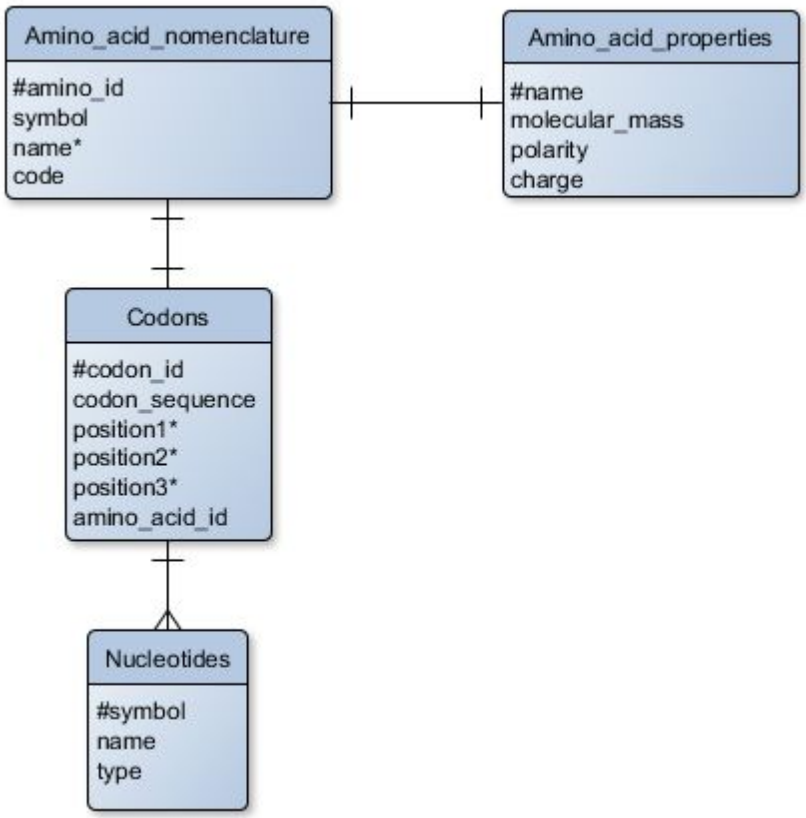
10.04.2016

INF115 - Compulsory excercise 2

Rodmundur i Lida - rli080

1) (10%)



2) (20%)

i)

Entities: Gene, Exon, Isoform, Chromosome.

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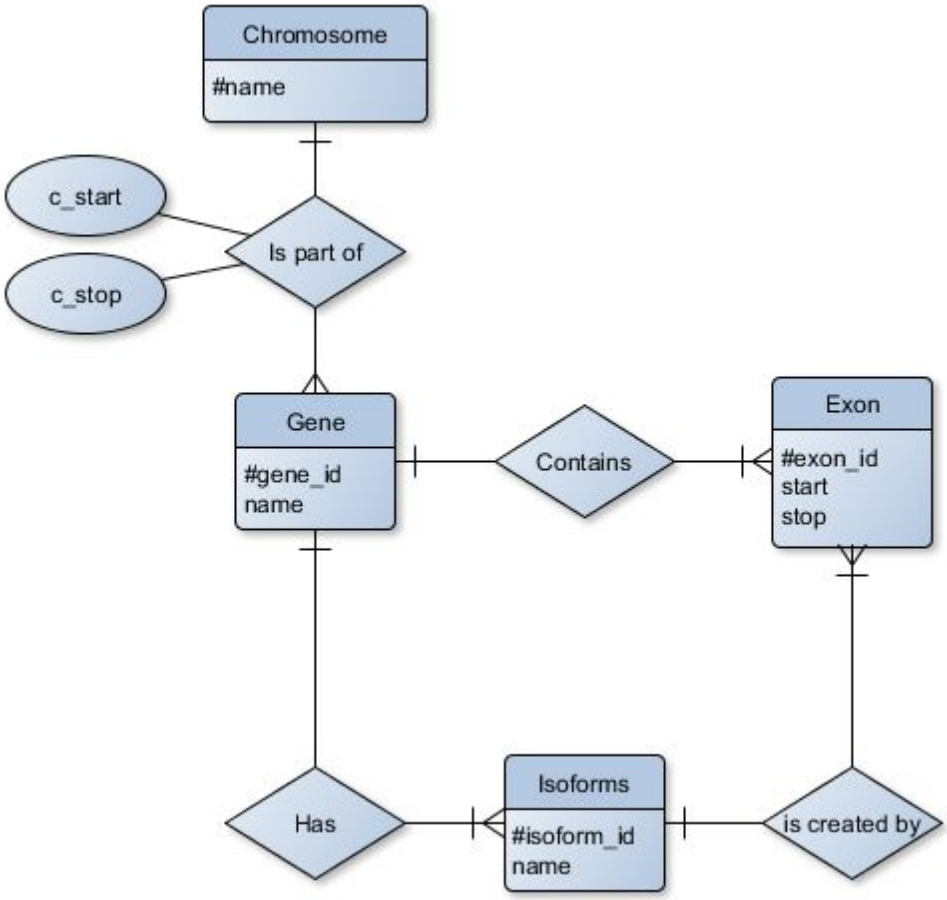
ii)



iii)

3NF

Chromosome (#name)
Is part of (#gene_id*, #c_name*, c_start, c_stop)
Gene (#gene_id, name)
Contains (#exon_id*, #gene_id*)
Exon (#exon_id, start, stop)
Has (#isoform_id*, #gene_id*)
Isoform (#isoform_id, isoform_name)
Is created by (#exon_id*, #isoform_id*)

3) (25%)

i)

Entities: Chromosome, Gene, Publication, Synonym

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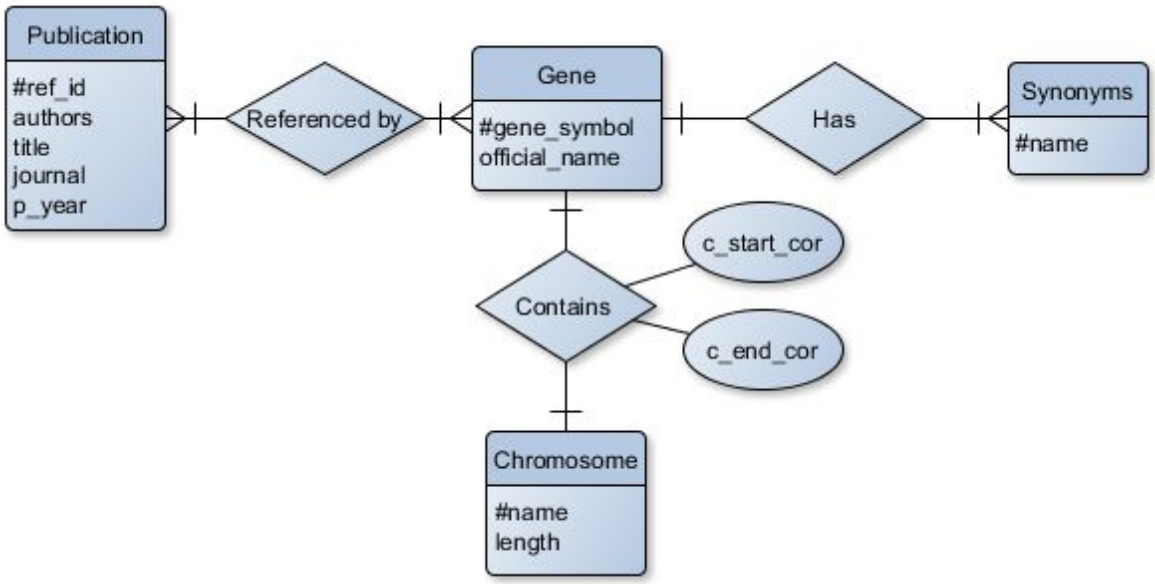
ii)



iii)

Gene (#gene_symbol, official_name, c_start_cor, c_end_cor)
Chromosome (#name, length)
Synonyms (#name)
Publication (#ref_id, authors, title, journal, p_year)

iv)

Gene (gene_symbol#, official_name)
Contains (#gene_symbol*, #c_name*, c_start_cor, c_end_cor)
Chromosome (#name, length)
Has (#gene_symbol*, #s_name*)
Synonyms (#name)
Publication (#ref_id, authors, title, journal, p_year)
Referenced by (#ref_id*, #gene_symbol*)

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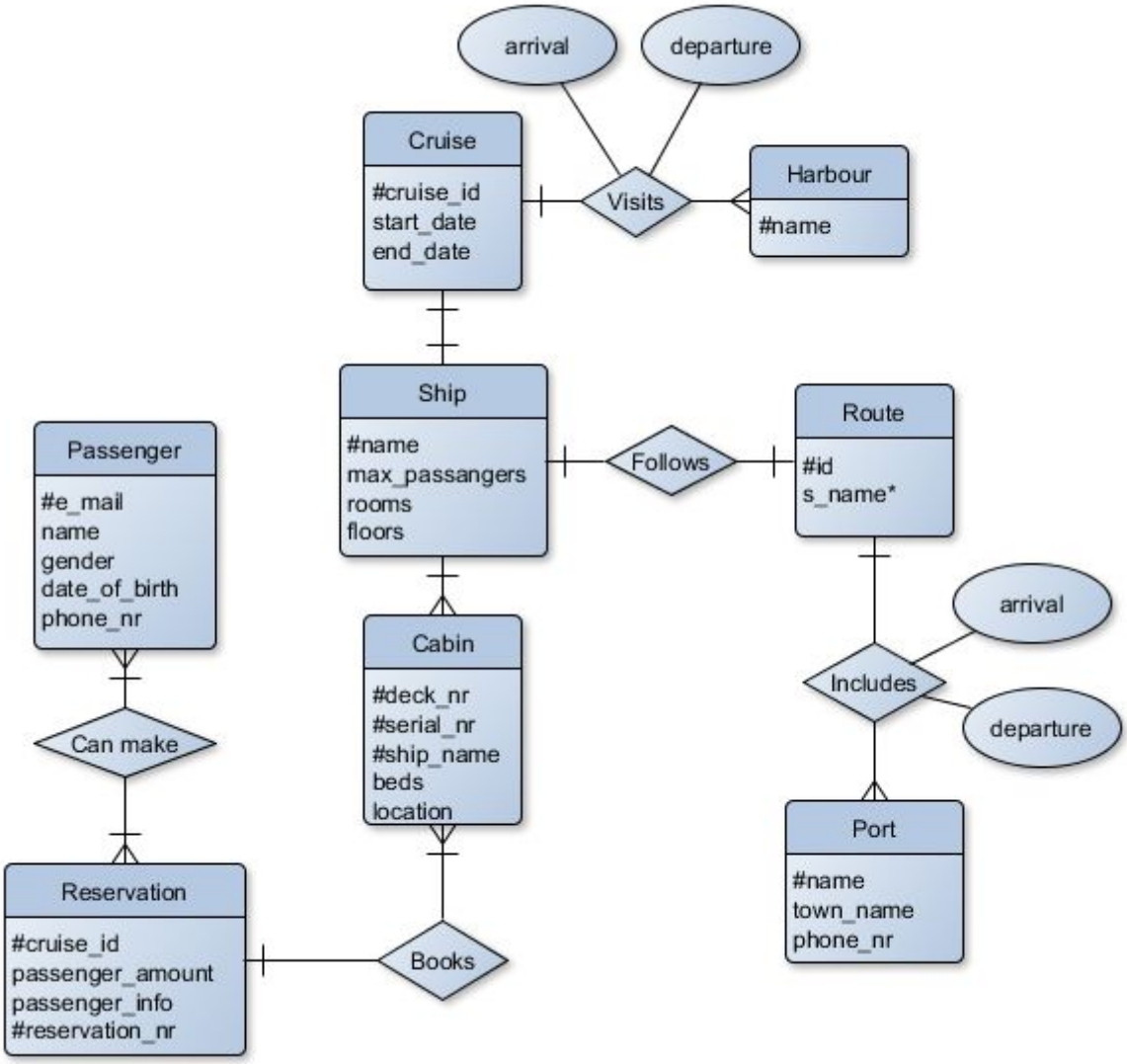
4) (20%)



5) (25%)

i)

This can be problematic because the Truck table does not have a primary key. The trucks need to be uniquely defined if they are to be involved in the same assignment. You also need your table to be joinable.

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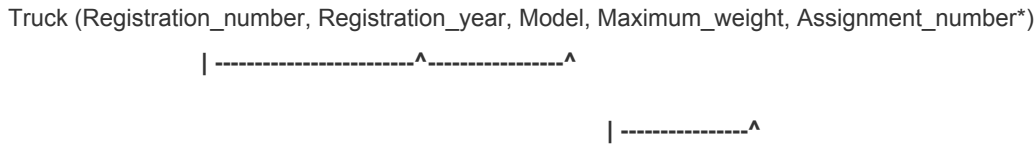
ii)



iii)

#Registration_number

iv)

Truck (#Registration_number, Registration_year, Model*, Assignment_number*)

Truck_model (#Model, Maximum_weight)

Truck_assignment (#Assignment_id, Registration_number*, Assignment_number*)