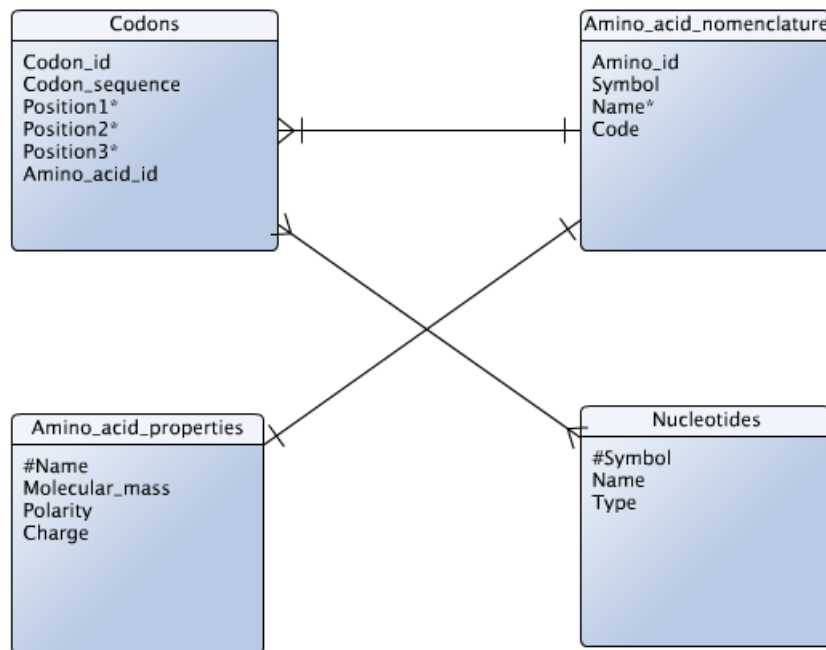


Compulsory Exercise 2

Oppg. 1



Oppg. 2 i) Genes

- #gene_id
- Name
- Chromosome_name
- Start_coo
- Stop_coo
- exon_id*
- isoform_id*

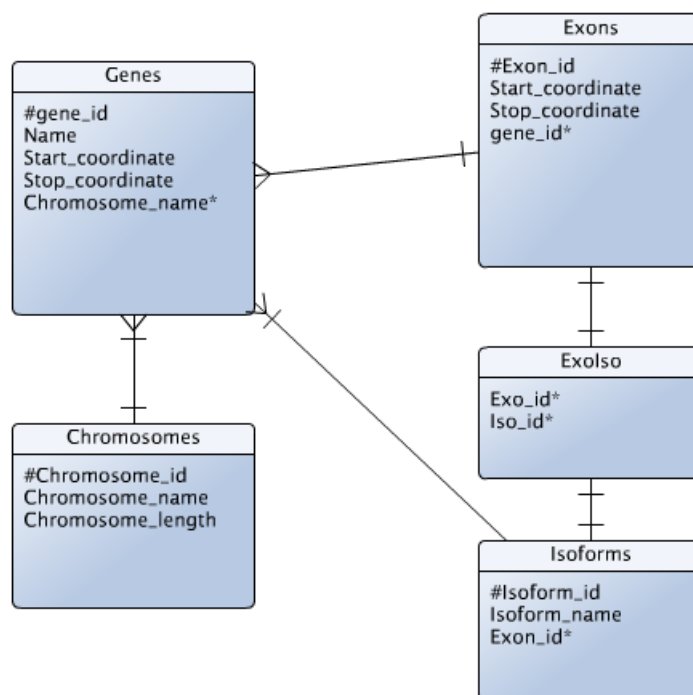
Exons

- #Exon_id
- Start_coordinate
- Stop_coordinate

Isoforms

- #Isoform_id
- Isoform_name
-

ii)



iii) Genes(#gene_id, gene_name, cromosome_id*, start_pos, end_pos)

Exons(#exon_id, gene_id*, start_pos, stop_pos)

Isoforms(#Isoform_id, Isoform_name)

Exoniso(Iso_id*, Exo_id*)

Chromosomes(#Chromosome_id, Chromosome_name, Chromosome_length)

Oppg. 3 i) Genes

- #Gene_symbol
- Official_name
- Start_coordinate
- End_coordinate
- Reference_id
- Chromosome_name*

Chromosomes

- #Chromosome_name
- Chromosome_length

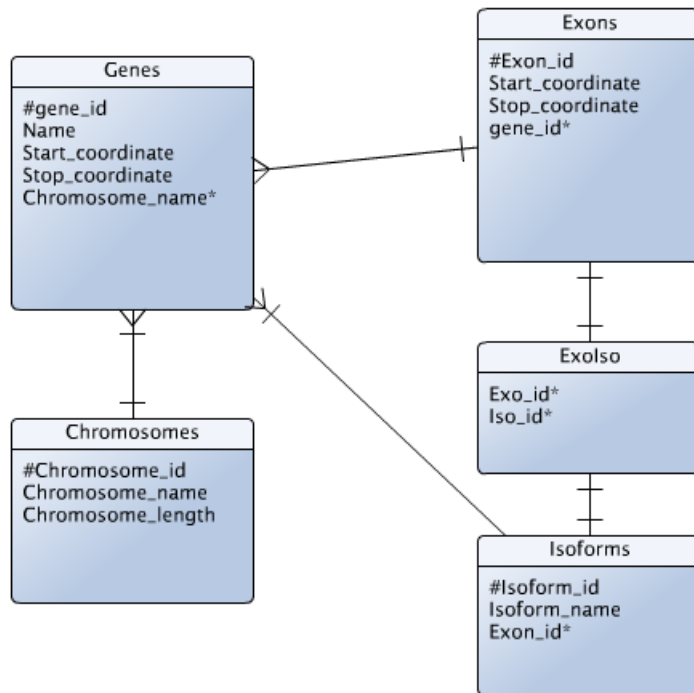
References

- #Reference_id
- Authors
- Title
- Journal
- Year_published

Synonyms

- #Synonym
- Official_name*

ii)



iii)

#Gene_symbol	off_name	chr_name	chr_length	start_coord	stop_coord	synonyms	#references_id	authors	title	journal	year_published
SHH	Sonic hedgehog	Chr5	153573022	28456815	28467256	HHG1					
SHH	Sonic hedgehog	Chr5	153573022	28456815	28467256	MCOPCB5					
SHH	Sonic hedgehog	Chr5	153573022	28456815	28467256	SMMCi					
SHH	Sonic hedgehog	Chr5	153573022	153573022	28467256	TPT					
SHH	Sonic hedgehog	Chr5	153573022	153573022	28467256	TPTPS					
SHH	Sonic hedgehog	Chr5	153573022	153573022	28467256		J:227320	Holtz AM, et al.,	Secreted HHIP1 interacts with heparan sulfate and regulates Hedgehog ligand localization and function.	J Cell Biol.	2015

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SHH	Sonic hedgehog	Chr5	153573022	153573022	28467256		J:13476	Dickie MM,	Hemimelic extra toes, Hx.	Mouse News Lett.	1968
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#Gene_symbol	off_name	chr_name	chr_length	start_coo	stop_coo	synonyms	#references_id	author_s	title	journal	year_published
SHH	Sonic hedgehog	Chr5	153573022	28456815	28467256	HHG1					
SHH	Sonic hedgehog	Chr5	153573022	28456815	28467256	MCOPCB5					
SHH	Sonic hedgehog	Chr5	153573022	28456815	28467256	SMMCi					
SHH	Sonic hedgehog	Chr5	153573022	153573022	28467256	TPT					
SHH	Sonic hedgehog	Chr5	153573022	153573022	28467256	TPTPS					
SHH	Sonic hedgehog	Chr5	153573022	153573022	28467256		J:227320	Holtz AM, et al.,	Secreted HHIP1 interacts with heparan sulfate and regulates Hedgehog ligand localization and function.	J Cell Biol.	2015
SHH	Sonic hedgehog	Chr5	153573022	153573022	28467256		J:13476	Dickie MM,	Hemimelic extra toes, Hx.	Mouse News Lett.	1968

iv)

BOYCE CODD

Gene

#Gene_symbol	Off_name	Chr_name*	Start_coo	End_coo
SHH	Sonic hedgehog	Chr5	28456815	28467256

Synonym

#Synonym	Gene_symbol*
HHG1	SHH
MCOPCB5	SHH
SMMCi	SHH
TPT	SHH
TPTPS	SHH

Chromosome

#Chr_name	Chr_length
Chr5	153573022

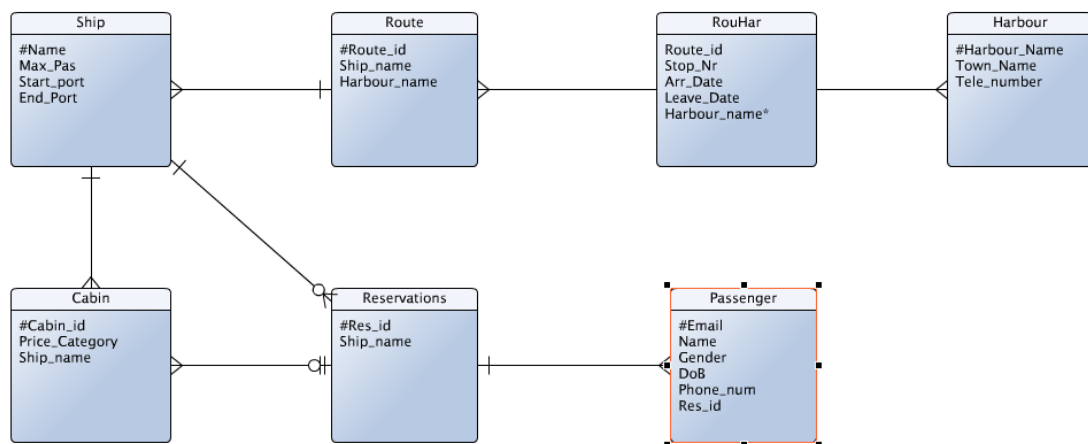
Reference

#reference_id	author	title	journal	year_published
J:227320	Holtz AM, et al.,	Secreted HHIP1 interacts with heparan sulfate and regulates Hedgehog ligand localization and function.	J Cell Biol.	2015
J:13476	Dickie MM,	Hemimelic extra toes, Hx.	Mouse News Lett.	1968

Gene_pub

reference_id*	gene_symbol*
J:227320	SHH
J_13476	SHH

Oppg. 4 i)



Oppg. 5 i) The registration number should be listed as a primary key, and Max_weight is too vague in terms of information. We cannot know if this includes the weight of the truck or simply the Maximum load weight, which can be crucial, in practical terms.

ii) Year, model and maximum weight are functional dependencies to the registration number.

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iii) Registration_number is candidate for primary key. Assignment_number is candidate for foreign key.

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, Registration_year, Model, Maximum_weight, Assignment_number*)