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Assignment #3

Prompt 1

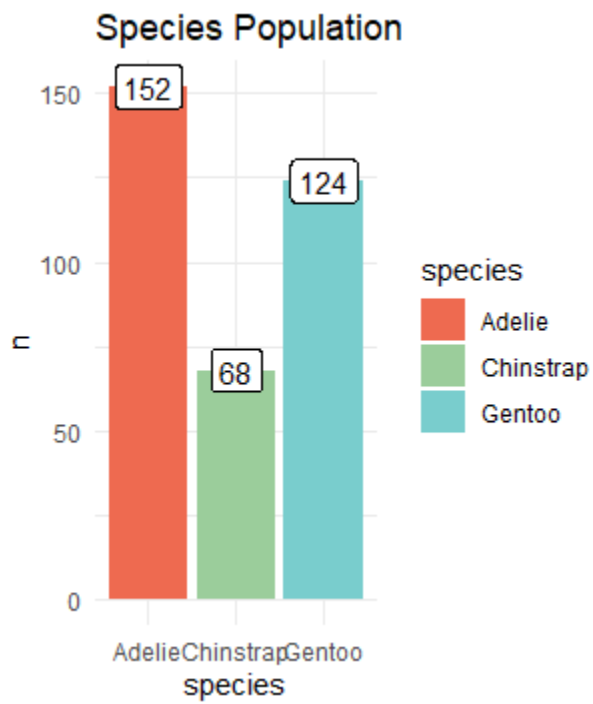
1. In code
2. In code
3. Levels return null for numbers. It is probably only for categorical variables

Variable	Class	Level
sex	"factor"	"female" "male"
body_mass_g	"integer"	NULL
species	"factor"	"Adelie" "Chinstrap" "Gentoo"
island	"factor"	"Biscoe" "Dream" "Torgersen"
bill_length_mm	"numeric"	NULL
bill_depth_mm	"numeric"	NULL
flipper_length_mm	"integer"	NULL

4.

Prompt 2

1. In code



2.

- Adelie penguins are the most common. Gentoo are almost twice as common as Chinstrap. Chinstrap has the least number of members.

Prompt 3.

- In code

summary(penguins\$species)	
Adelie	152
Chinstrap	68
Gentoo	124
summary(penguins\$island)	
Biscoe	168
Dream	124
Torgersen	52
summary(penguins\$sex)	
female	165
male	168
NA's	11

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species	island	bill_length_mm	bill_depth_mm
Adelie :152	Biscoe :168	Min. :32.10	Min. :13.10
Chinstrap: 68	Dream :124	1st Qu.:39.23	1st Qu.:15.60
Gentoo :124	Torgersen: 52	Median :44.45	Median :17.30
		Mean :43.92	Mean :17.15
		3rd Qu.:48.50	3rd Qu.:18.70
		Max. :59.60	Max. :21.50
		NA's :2	NA's :2
flipper_length_mm	body_mass_g	sex	year
Min. :172.0	Min. :2700	female:165	Min. :2007
1st Qu.:190.0	1st Qu.:3550	male :168	1st Qu.:2007
Median :197.0	Median :4050	NA's : 11	Median :2008
Mean :200.9	Mean :4202		Mean :2008
3rd Qu.:213.0	3rd Qu.:4750		3rd Qu.:2009
Max. :231.0	Max. :6300		Max. :2009
NA's :2	NA's :2		

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- On github

Prompt 4.

- Gentoo penguins are the largest species in the data set. Adelie are the most prevalent species in the data, and Chinstrap are the least common. The Adelie

and Chinstrap have comparable body mass. All species seem to have equal distribution of females and males.

2. A. What is the flipper mass density for each species? Linear regression was done for body mass to flipper length. The slope value should theoretically be the mass in grams per mm of flipper. The value seems to be too high. Simple linear regression may not be appropriate.

B. How does the male to female ratio compare for each species?

