Pandas Groupby Practice Sheet

Dataset: Run below code:

import seaborn as sns

penguins = sns.load\_dataset(‘penguins’)

**Question 1:** Write a program to find the average bill\_length\_mm for each type of penguin species in the dataset.

**Question 2:** Write a program to determine the total number of penguins found on each island.

**Question 3:** Write a program to calculate the mean flipper\_length\_mm for each combination of species and gender.

**Question 4:** Write a program to calculate the average and median body\_mass\_g for each penguin species on each island.

**Question 5:** Write a program to identify the maximum bill\_depth\_mm for male and female penguins separately.

**Question 6:** Write a program to count how many different islands each penguin species inhabits.

**Question 7:** Write a program to calculate the range (difference between maximum and minimum) of flipper\_length\_mm and its standard deviation for each penguin species.

**Question 8:** Write a program to create a new column that shows how each penguin's body\_mass\_g compares to the average body\_mass\_g of its species.

**Question 9:**Write a program to identify the top 3 species-island combinations based on the highest average flipper\_length\_mm.

**Question 10:** Write a program to compute the ratio of the mean bill\_length\_mm to the mean bill\_depth\_mm for each species in the dataset.