Pandas Exercises

[Q1 – 16] Consider the following Python dictionary data and Python list labels:

data = {

'birds': ['Cranes', 'Cranes', 'plovers', 'spoonbills', 'spoonbills', 'Cranes', 'plovers', 'Cranes', 'spoonbills', 'spoonbills'],

'age': [3.5, 4, 1.5, np.nan, 6, 3, 5.5, np.nan, 8, 4],

'visits': [2, 4, 3, 4, 3, 4, 2, 2, 3, 2], 'priority': ['yes', 'yes', 'no', 'yes', 'no', 'no', 'no', 'yes', 'no', 'no']

}

labels = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j']

1. Create a DataFrame birds from this dictionary data which has the index labels.
2. Display a summary of the basic information about birds DataFrame and its data.
3. Print the first 2 rows of the birds dataframe
4. Print all the rows with only 'birds' and 'age' columns from the dataframe
5. select [2, 3, 7] rows and in columns ['birds', 'age', 'visits']
6. select the rows where the number of visits is less than 4
7. select the rows with columns ['birds', 'visits'] where the age is missing i.e NaN
8. Select the rows where the birds is a Cranes and the age is less than 4
9. Select the rows the age is between 2 and 4(inclusive)
10. Find the total number of visits of the bird Cranes
11. Calculate the mean age for each different birds in dataframe.
12. Append a new row 'k' to dataframe with your choice of values for each column. Then delete that row to return the original DataFrame.
13. Find the number of each type of birds in dataframe (Counts)
14. Sort dataframe (birds) first by the values in the 'age' in decending order, then by the value in the 'visits' column in ascending order.
15. Replace the priority column values with'yes' should be 1 and 'no' should be 0
16. In the 'birds' column, change the 'Cranes' entries to 'trumpeters'.