import pandas as pd

# data using a dictionary

data = {"mammal": ["African Elephant", "Bottlenose Dolphin", "Cheetah", "Domestic Cat", "Giraffe", "Ground Squirrel", "Horse", "House Mouse", "Human", "Killer Whale", "Lion", "Pig", "Rabbit"],

"life\_span": [70, 25, 14, 16, 25, 9, 25, 3, 80, 50, 15, 10, 5],

"hours\_of\_sleep": [3, 5, 12, 12, 2, 15, 3, 12, 8, 3, 20, 8, 11],

"speed": [40, 37, 110, 50, 50, 19, 69, 13, 45, 48, 80, 18, 56],

"diet": ["plants", "meat", "meat", "meat", "plants", "both", "plants", "both", "both", "meat", "meat", "both", "plants"]

}

# format data into a DataFrame

mammals = pd.DataFrame(data)

# prints the mammals dataframe

print("Mammals DataFrame with Default Index")

print("-----------------")

print(mammals)

# prints the mammals dataframe using the mammal column as the index

print()

print("Mammals DataFrame with Index = Mammals Column")

print("-----------------")

print(mammals.set\_index("mammal"))

# prints the mammals datafram (index didn't change)

print()

print("Didn't actually change the DataFrame...")

print("-----------------")

print(mammals)

# changes the index to the mammal column

# prints the NEW mammals dataframe

print()

print("DOES change the DataFrame...")

print("-----------------")

mammals.set\_index("mammal", inplace=True)

print(mammals)

# stores the table consisting of only the hours of sleep

# columns in a variable

sleep\_data = mammals[["hours\_of\_sleep"]]

# prints the sleep\_data for mammals who sleep less than 4 hours

print()

print("Sleeps Less Than 4 Hours")

print("-----------------")

new\_data = sleep\_data[(sleep\_data["hours\_of\_sleep"] < 4)]

print(new\_data)

# resets the index by renumbering the rows

print()

print("Renumbers the Rows")

print("-----------------")

new\_data.reset\_index(inplace=True)

print(new\_data)