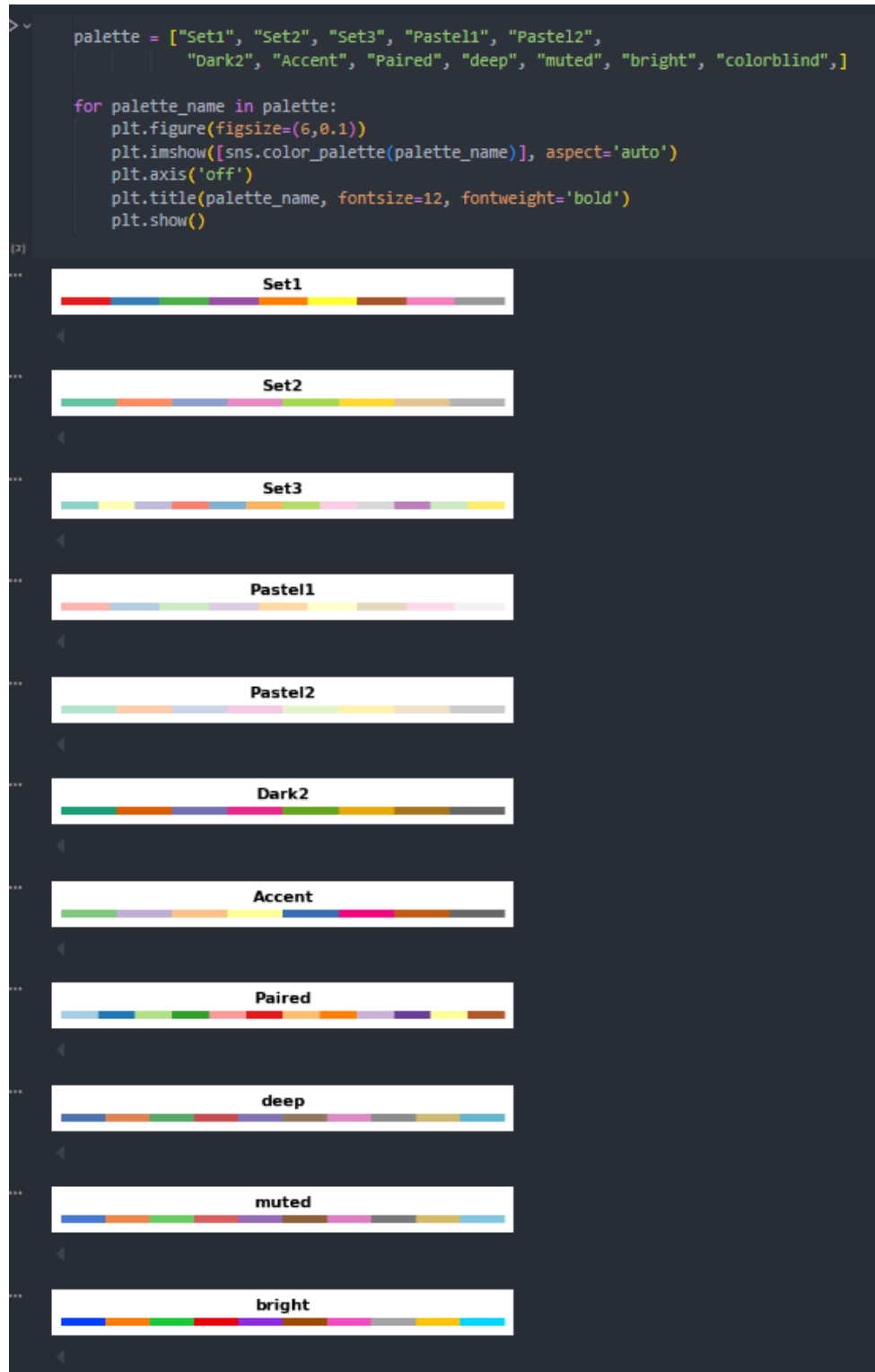


Output in lab Feature



```

mean_values = iris.groupby('species').mean()
variance_values = iris.groupby('species').var()
skewness_values = iris.iloc[:, :-1].groupby(iris['species']).apply(lambda x: x.apply(skew))
kurtosis_values = iris.iloc[:, :-1].groupby(iris['species']).apply(lambda x: x.apply(kurtosis))

print("\nStatistical Summary for Each by Species: \n")
print("Mean Values: \n", mean_values)
print("Variance Values: \n", variance_values)
print("Skewness Values: \n", skewness_values)
print("Kurtosis Values: \n", kurtosis_values)

```

(3)

...

Statistical Summary for Each by Species:

Mean Values:

	sepal length (cm)	sepal width (cm)	petal length (cm)
species			
0	5.006	3.428	1.462
1	5.936	2.770	4.260
2	6.588	2.974	5.552

petal width (cm)

species	petal width (cm)
0	0.246
1	1.326
2	2.026

Variance Values:

	sepal length (cm)	sepal width (cm)	petal length (cm)
species			
0	0.124249	0.143690	0.030159
1	0.266433	0.098469	0.220816
2	0.404343	0.104004	0.304588

petal width (cm)

species	petal width (cm)
0	1.434317
1	-0.487833
2	-0.661348

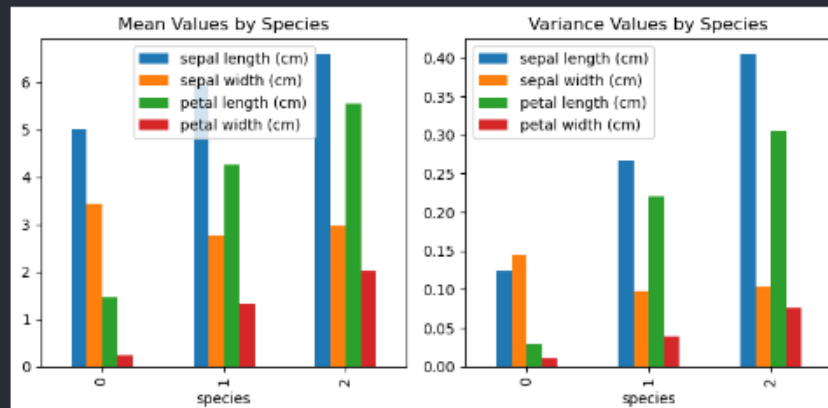
```

plt.figure(figsize=(8, 4))
plt.subplot(1, 2, 1)
mean_values.plot(kind='bar', ax=plt.gca())
plt.title('Mean Values by Species')
plt.subplot(1, 2, 2)
variance_values.plot(kind='bar', ax=plt.gca())
plt.title('Variance Values by Species')
plt.tight_layout()
plt.show()

```

(4)

...



Histograms of Features for Each Species

