```
import pandas as pd import numpy as np
 import seaborn as sns z
import matplotlib.pyplot as plt
%matplotlib inline
```

```
data=pd.read_csv('/content/Iris_Dataset.csv')
data
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	variety
0	1	5.1	3.5	1.4	0.2	Iris-setosa
1	2	4.9	3.0	1.4	0.2	Iris-setk,osa
2	3	4.7	3.2	1.3	0.2	Iris-setosa
3	4	4.6	3.1	1.5	0.2	Iris-setosa=
4	5	5.0	3.6	1.4	0.2	Iris-setosa
...	...	...	...	...	...	...
145	146	6.7	3.0	5.2	2.3	Iris-virginica
146	147	6.3	2.5	5.0	1.9	Iris-viirginica
147	148	6.5	3.0	5.2	2.0	Iris-virginica
148	149	6.2	3.4	5.4	2.3	Iris-virginica
149	150	5.9	3.0	5.1	1.8	Iris-virginica

150 rows × 6 columns

```
data.info() i
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 150 entries, 0 to 149
Data columns (total 6 columns):
 # Column Non-Null Count Dtype
--- ------ -------------- -----
 0 Id 150 non-null int64
 1 SepalLengthCm 150 non-null float64
 2 SepalWidthCm 150 non-null float64
 3 PetalLengthCm 150 non-null float64
 4 PetalWidthCm 150 non-null float64
 5 variety 150 non-null object
dtypes: float64(4), int64(1), object(1)
memory usage: 7.2+ KB
```

```
l
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
count	150.000000	150.000000	150.000000	150.000000	150.000000
mean	75.500000	5.843333	3.054000	3.758667	1.198667
std	43.445368	0.828066	0.433594	1.764420	0.763161
min	1.000000	4.300000	2.000000	1.000000	0.100000
25%	38.250000	5.100000	2.800000	1.600000	0.300000
50%	75.500000	5.800000	3.000000	4.350000	1.300000
75%	112.750000	6.400000	3.300000	5.100000	1.800000
max	150 000000	7 900000	4 400000	6 900000	2 500000

```
data.value_counts('variety')
```

Varie ty	count
Iris-setosa	50
Iris-versicolor	50
Iris-virginica	50


```
sns.countplot(x='variety',data=data,)
plt.show()
```

```
dummies=pd.get_dummies(data.variety)
```

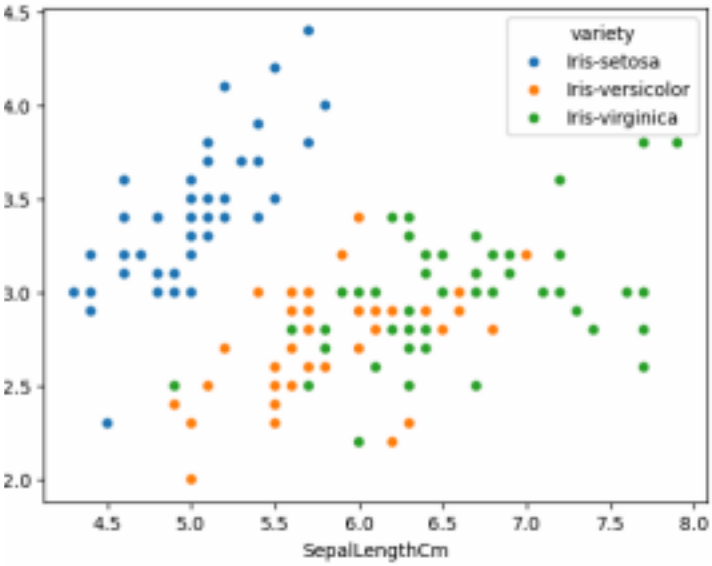
```
FinalDataset=pd.concat([pd.get_dummies(data.variety),data.iloc[:,[0,1,2,3]]],axis=1)
```

```
FinalDataset.head()
```

	Iris-setosa	Iris-versicolor	Iris-virginica	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm
0	True	False	False	1	5.1	3.5	1.4
1	True	False	False	2	4.9	3.0	1.4
2	True	False	False	3	4.7	3.2	1.3
3	True	False	False	4	4.6	3.1	1.5
4	True	False	False	5	5.0	3.6	1.4

```
sns.scatterplot(x='SepalLengthCm',y='SepalWidthCm',hue='variety',data=data)
```

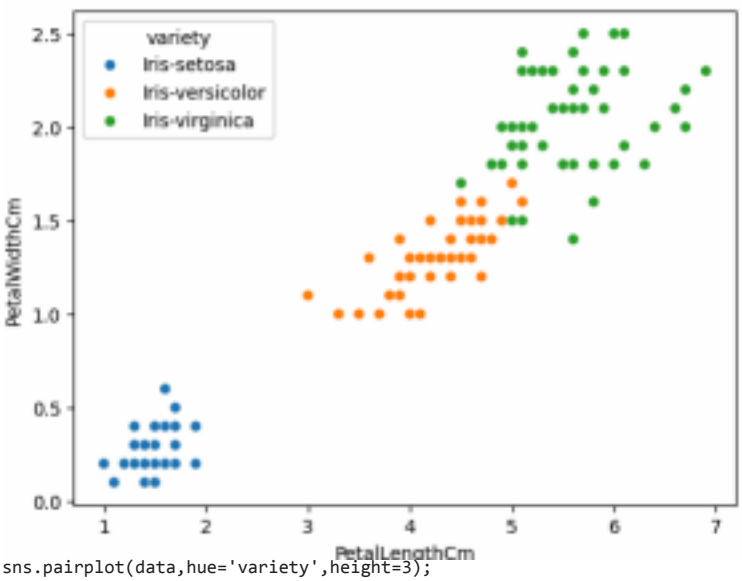
```
<Axes: xlabel='SepalLengthCm', ylabel='SepalWidthCm'>
```



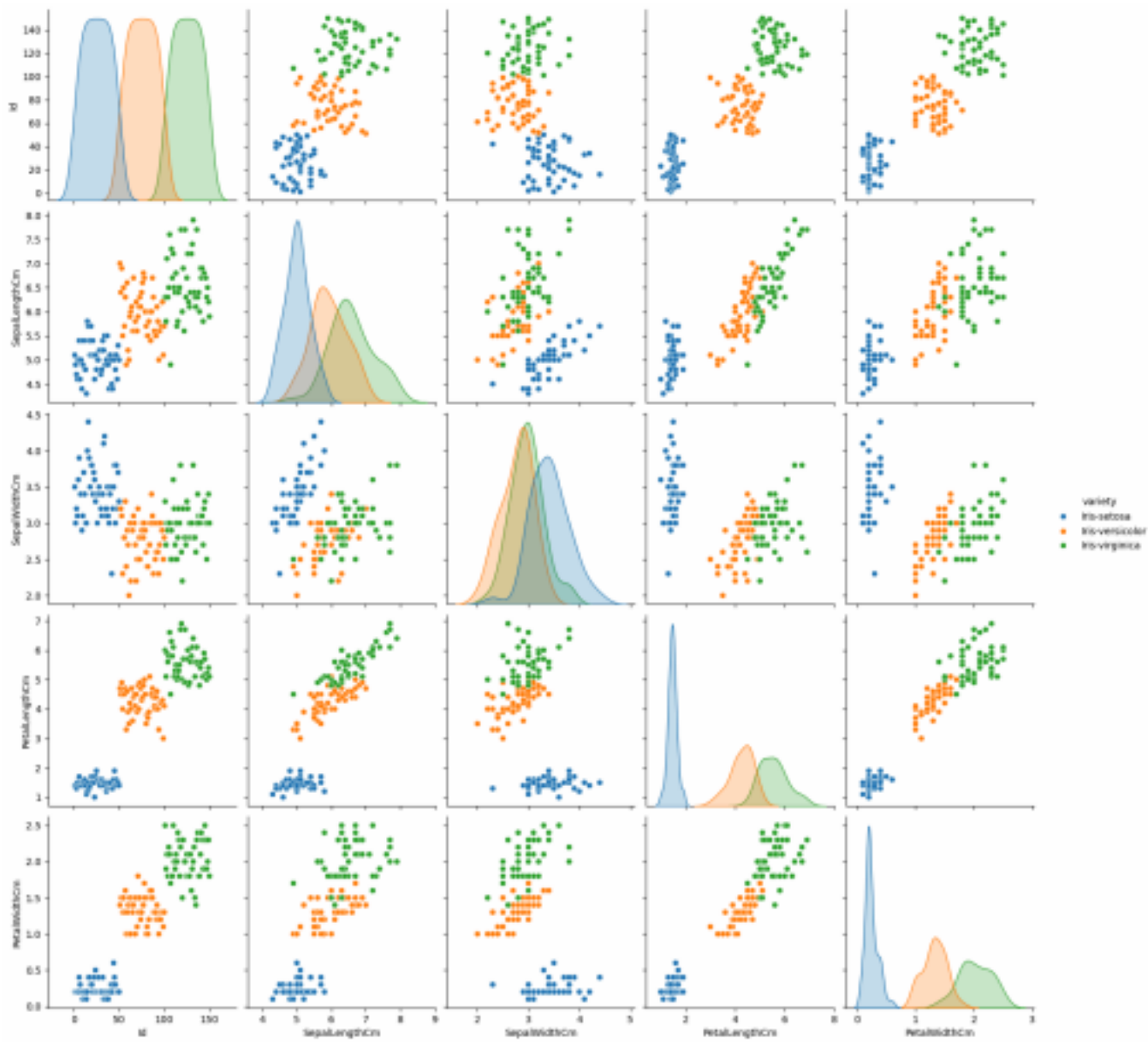

```
sns.scatterplot(x='PetalLengthCm',y='PetalWidthCm',hue='variety',data=data,)
```



```
<Axes: xlabel='PetalLengthCm', ylabel='PetalWidthCm'>
```

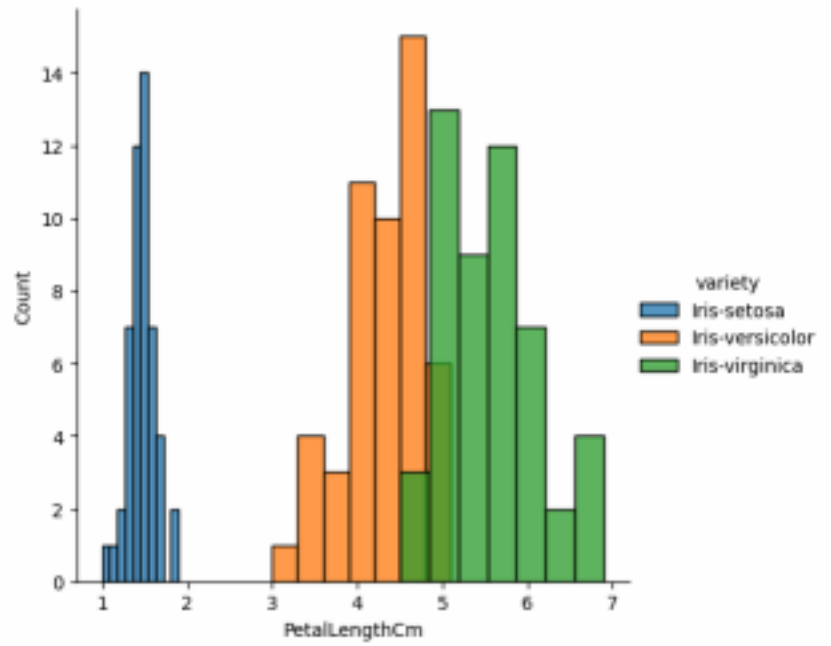



```
sns.pairplot(data,hue='variety',height=3);
```

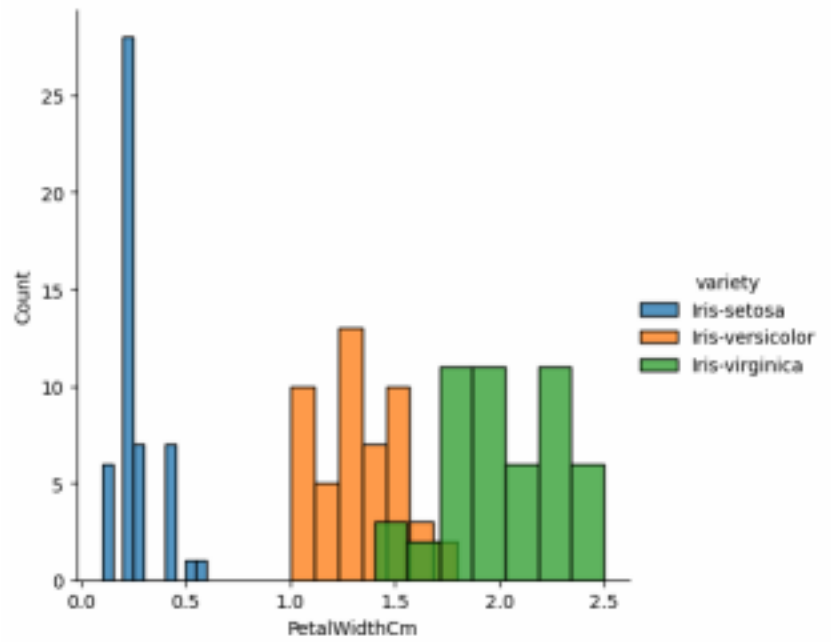


 `plt.show()`

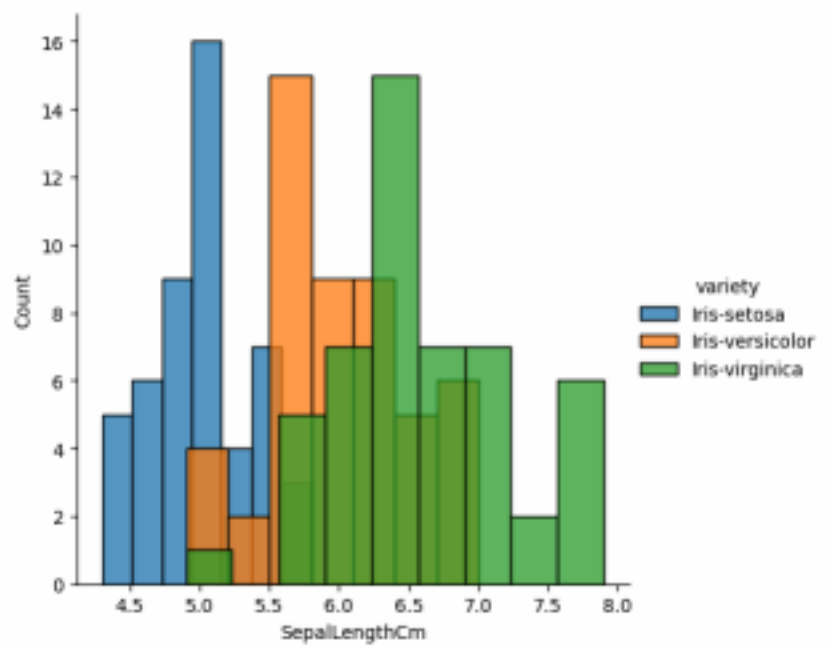
```
sns.FacetGrid(data,hue='variety',height=5).map(sns.histplot,'PetalLengthCm').add_legend();
plt.show();
```



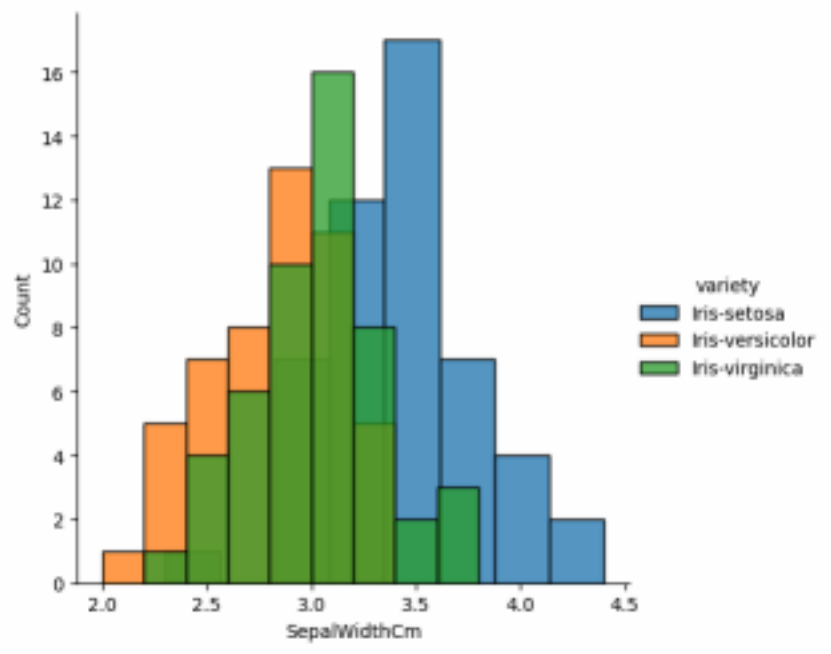

```
sns.FacetGrid(data,hue='variety',height=5).map(sns.histplot,'PetalWidthCm').add_legend();
plt.show();
```




```
sns.FacetGrid(data,hue='variety',height=5).map(sns.histplot,'SepalLengthCm').add_legend();
plt.show();
```


```
sns.FacetGrid(data,hue='variety',height=5).map(sns.histplot,'SepalWidthCm').add_legend();
plt.show();
```


Count
SepalWidthCm
variety
Iris-setosa
Iris-versicolor
Iris-virginica