In [3]:	<pre>import pandas as pd df = pd.read_csv("E:\data science\iris_csv.csv")</pre>
	df.head() sepallength sepalwidth petallength petalwidth class
	0 5.1 3.5 1.4 0.2 Iris-setosa 1 4.9 3.0 1.4 0.2 Iris-setosa 2 4.7 3.2 1.3 0.2 Iris-setosa 3 4.6 3.1 1.5 0.2 Iris-setosa
In [4]:	4 5.0 3.6 1.4 0.2 Iris-setosa
In [5]:	(150, 5) df.info()
	<pre><class 'pandas.core.frame.dataframe'=""> RangeIndex: 150 entries, 0 to 149 Data columns (total 5 columns): # Column Non-Null Count Dtype 0 sepallength 150 non-null float64</class></pre>
	0 sepallength 150 non-null float64 1 sepalwidth 150 non-null float64 2 petallength 150 non-null float64 3 petalwidth 150 non-null float64 4 class 150 non-null object dtypes: float64(4), object(1) memory usage: 6.0+ KB
In [6]: Out[6]:	
	count 150.000000 150.000000 150.000000 150.000000 mean 5.843333 3.054000 3.758667 1.198667 std 0.828066 0.433594 1.764420 0.763161 min 4.300000 2.000000 1.000000 0.100000
	25% 5.100000 2.800000 1.600000 0.300000 50% 5.800000 3.00000 4.350000 1.300000 75% 6.400000 3.300000 5.100000 1.800000 max 7.900000 4.400000 6.900000 2.500000
In [7]: Out[7]:	<pre>df.sample(n=2,axis=0)</pre>
	11 4.8 3.4 1.6 0.2 Iris-setosa 30 4.8 3.1 1.6 0.2 Iris-setosa
In [8]: Out[8]:	sepallength sepalwidth petallength petalwidth class The sepalwidth sepalwidth petallength petalwidth class False False False False False False
	1FalseFalseFalseFalse2FalseFalseFalseFalseFalse3FalseFalseFalseFalseFalse4FalseFalseFalseFalseFalse
	147FalseFalseFalseFalseFalse148FalseFalseFalseFalseFalse149FalseFalseFalseFalseFalse
In [9]:	150 rows × 5 columns df.isnull().sum()
	sepallength 0 sepalwidth 0 petallength 0 petalwidth 0 class 0 dtype: int64
In [10]: Out[10]:	<pre>ndf = df.drop_duplicates() ndf sepallength sepalwidth petallength petalwidth class</pre>
	0 5.1 3.5 1.4 0.2 Iris-setosa 1 4.9 3.0 1.4 0.2 Iris-setosa 2 4.7 3.2 1.3 0.2 Iris-setosa 3 4.6 3.1 1.5 0.2 Iris-setosa
	4 5.0 3.6 1.4 0.2 Iris-setosa 145 6.7 3.0 5.2 2.3 Iris-virginica 146 6.3 2.5 5.0 1.9 Iris-virginica
	147 6.5 3.0 5.2 2.0 Iris-virginica 148 6.2 3.4 5.4 2.3 Iris-virginica 149 5.9 3.0 5.1 1.8 Iris-virginica
In [11]:	147 rows × 5 columns ndf.value_counts("class")
	class Iris-versicolor 50 Iris-virginica 49 Iris-setosa 48 dtype: int64
In [12]: In [13]:	<pre>import seaborn as sns import matplotlib.pyplot as plt sns.countplot(x="class" , data=ndf)</pre>
	plt.show() 50
	40 - the second
	10 - Iris-setosa Iris-versicolor Iris-virginica
In [14]:	sns.scatterplot(x="petallength", y="petalwidth", hue="class", data=ndf) plt.show()
	2.5 - class Iris-setosa Iris-versicolor Iris-virginica
In [15]:	0.0 1 2 3 4 5 6 7 petallength
. [12];	<pre>sns.scatterplot(x="sepallength", y="sepalwidth", hue="class", data=ndf) plt.show()</pre>
	4.0 - tjp 3.5 - New 2015 - New
	2.5 - Class Iris-setosa Iris-versicolor Iris-virginica Iris-virginica
In [16]:	sepallength sns.pairplot(data=ndf)
Out[16]:	
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	plt.show() sepallength - 1
	sepalwidth0.11
	petalwidth - 0.82
In [18]:	<pre>sns.boxplot(x="class", y="petallength", data=ndf) plt.show() sns.boxplot(x="class", y="petalwidth", data=ndf) plt.show()</pre>
	<pre>sns.boxplot(x="class", y="sepallength", data=ndf) plt.show() sns.boxplot(x="class", y="sepalwidth", data=ndf) plt.show()</pre>
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	1 - Iris-setosa Iris-versicolor Iris-virginica
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