In [19]: import pandas as pd

In [20]: df=pd.read_csv(r'C:\Users\admin\Desktop\Iris.csv')

In [21]: df

Out[21]:

	ld	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
0	1	5.1	3.5	1.4	0.2	Iris-setosa
1	2	4.9	3.0	1.4	0.2	Iris-setosa
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-virginica
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

In [22]: df.head()

Out[22]:

	ld	SepalLengthCm	SepalWidthCm	PetalLengthCm	Peta lW idthCm	Species
0	1	5.1	3.5	1.4	0.2	Iris-setosa
1	2	4.9	3.0	1.4	0.2	Iris-setosa
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

In [23]: df.tail()

Out[23]:

	ld	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
145	146	6.7	3.0	5.2	2.3	Iris-virginica
146	147	6.3	2.5	5.0	1.9	Iris-virginica
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

```
In [24]: df.info()
```

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 150 entries, 0 to 149
Data columns (total 6 columns):

Column Non-Null Count Dtype 0 Ιd 150 non-null int64 1 SepalLengthCm 150 non-null float64 150 non-null 2 SepalWidthCm float64 3 PetalLengthCm 150 non-null float64 4 PetalWidthCm 150 non-null float64 5 Species 150 non-null object dtypes: float64(4), int64(1), object(1)

memory usage: 7.2+ KB

In [25]: df.isnull()

Out[25]:

	ld	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
0	False	False	False	False	False	False
1	False	False	False	False	False	False
2	False	False	False	False	False	False
3	False	False	False	False	False	False
4	False	False	False	False	False	False
145	False	False	False	False	False	False
146	False	False	False	False	False	False
147	False	False	False	False	False	False
148	False	False	False	False	False	False
149	False	False	False	False	False	False

150 rows × 6 columns

In [26]: df.isnull().sum()

Out[26]: Id 0
SepalLengthCm 0

SepalWidthCm 0
PetalLengthCm 0
PetalWidthCm 0
Species 0

dtype: int64

In [27]: df.dropna()

Out[27]:

	ld	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
0	1	5.1	3.5	1.4	0.2	Iris-setosa
1	2	4.9	3.0	1.4	0.2	Iris-setosa
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-virginica
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

In [28]: df.fillna(0)

Out[28]:

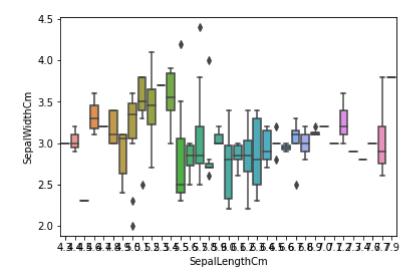
ld	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
1	5.1	3.5	1.4	0.2	Iris-setosa
2	4.9	3.0	1.4	0.2	Iris-setosa
3	4.7	3.2	1.3	0.2	Iris-setosa
4	4.6	3.1	1.5	0.2	Iris-setosa
5	5.0	3.6	1.4	0.2	Iris-setosa
146	6.7	3.0	5.2	2.3	Iris-virginica
147	6.3	2.5	5.0	1.9	Iris-virginica
148	6.5	3.0	5.2	2.0	Iris-virginica
149	6.2	3.4	5.4	2.3	Iris-virginica
150	5.9	3.0	5.1	1.8	Iris-virginica
	1 2 3 4 5 146 147 148	1 5.1 2 4.9 3 4.7 4 4.6 5 5.0 146 6.7 147 6.3 148 6.5 149 6.2	1 5.1 3.5 2 4.9 3.0 3 4.7 3.2 4 4.6 3.1 5 5.0 3.6 146 6.7 3.0 147 6.3 2.5 148 6.5 3.0 149 6.2 3.4	1 5.1 3.5 1.4 2 4.9 3.0 1.4 3 4.7 3.2 1.3 4 4.6 3.1 1.5 5 5.0 3.6 1.4 146 6.7 3.0 5.2 147 6.3 2.5 5.0 148 6.5 3.0 5.2 149 6.2 3.4 5.4	1 5.1 3.5 1.4 0.2 2 4.9 3.0 1.4 0.2 3 4.7 3.2 1.3 0.2 4 4.6 3.1 1.5 0.2 5 5.0 3.6 1.4 0.2 146 6.7 3.0 5.2 2.3 147 6.3 2.5 5.0 1.9 148 6.5 3.0 5.2 2.0 149 6.2 3.4 5.4 2.3

150 rows × 6 columns

In [29]: import seaborn as sns

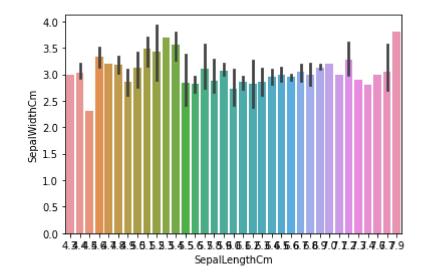
In [30]: | sns.boxplot(x='SepalLengthCm',y='SepalWidthCm',data=df)

Out[30]: <AxesSubplot:xlabel='SepalLengthCm', ylabel='SepalWidthCm'>



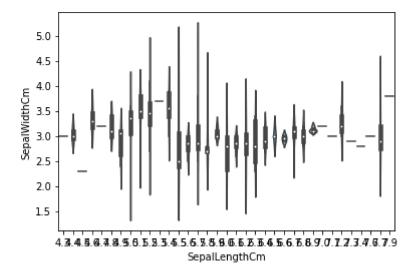
In [31]: sns.barplot(x='SepalLengthCm',y='SepalWidthCm',data=df)

Out[31]: <AxesSubplot:xlabel='SepalLengthCm', ylabel='SepalWidthCm'>



```
In [32]: sns.violinplot(x='SepalLengthCm',y='SepalWidthCm',data=df)
```

Out[32]: <AxesSubplot:xlabel='SepalLengthCm', ylabel='SepalWidthCm'>



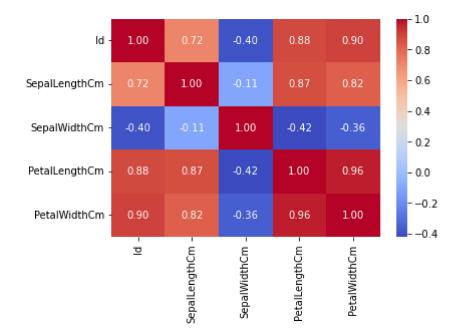
```
In [33]:
          df.corr
Out[33]: <bound method DataFrame.corr of
                                                     Ιd
                                                         SepalLengthCm
                                                                          SepalWidthCm
                                                                                         PetalLen
                  PetalWidthCm
          gthCm
                                 -\
          0
                  1
                                 5.1
                                                3.5
                                                                 1.4
                                                                                0.2
          1
                  2
                                 4.9
                                                                                0.2
                                                3.0
                                                                 1.4
          2
                  3
                                 4.7
                                                                                0.2
                                                3.2
                                                                 1.3
          3
                  4
                                 4.6
                                                3.1
                                                                 1.5
                                                                                0.2
          4
                  5
                                                                                0.2
                                 5.0
                                                3.6
                                                                 1.4
          . .
          145
                146
                                 6.7
                                                3.0
                                                                 5.2
                                                                                2.3
          146
                147
                                 6.3
                                                2.5
                                                                 5.0
                                                                                1.9
                                 6.5
                                                                                 2.0
          147
                148
                                                3.0
                                                                 5.2
          148
                149
                                 6.2
                                                3.4
                                                                 5.4
                                                                                 2.3
                                 5.9
                                                3.0
                                                                 5.1
                                                                                 1.8
          149
                150
```

	Species
0	Iris-setosa
1	Iris-setosa
2	Iris-setosa
3	Iris-setosa
4	Iris-setosa
	• • •
145	Iris-virginica
145 146	Iris-virginica Iris-virginica
146	Iris-virginica
146 147	Iris-virginica Iris-virginica

[150 rows x 6 columns]>

```
In [37]: sns.heatmap(df.corr(), annot=True, cmap='coolwarm', fmt=".2f")
```

Out[37]: <AxesSubplot:>



In []:	
In []:	
In []:	