In [ ]:
```
NAME : SHINDE SHUBHAM DNYANDEV,     ROLL NO. : EN23107121,     BATCH : C
```

In [1]:
```
import pandas as pd
```

In [75]:
```
df = pd.read_csv("/home/admin1/Downloads/Titanic.csv")
df
```

Out[75]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599	71
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803	53
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450	8
...	...	...	...	...	...	...	...	...	...	
886	887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	211536	13
887	888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	112053	30
888	889	0	3	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	1	2	W./C. 6607	23
889	890	1	1	Behr, Mr. Karl Howell	male	26.0	0	0	111369	30
890	891	0	3	Dooley, Mr. Patrick	male	32.0	0	0	370376	7

891 rows × 12 columns

In [7]:
```
df.isnull()
```

Out[7]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cal
0	False	False	False	False	False	False	False	False	False	False	T
1	False	False	False	False	False	False	False	False	False	False	Fa
2	False	False	False	False	False	False	False	False	False	False	T
3	False	False	False	False	False	False	False	False	False	False	Fa
4	False	False	False	False	False	False	False	False	False	False	T
...	...	...	...	...	...	...	...	...	...	...	
886	False	False	False	False	False	False	False	False	False	False	T
887	False	False	False	False	False	False	False	False	False	False	Fa
888	False	False	False	False	False	True	False	False	False	False	T
889	False	False	False	False	False	False	False	False	False	False	Fa
890	False	False	False	False	False	False	False	False	False	False	T

891 rows × 12 columns

In [11]:
```
df.isnull().sum()
```

Out[11]:
```
PassengerId      0
Survived         0
Pclass           0
Name             0
Sex              0
Age            177
SibSp            0
Parch            0
Ticket           0
Fare             0
Cabin          687
Embarked         2
dtype: int64
```

In [13]:
```
df.describe()
```

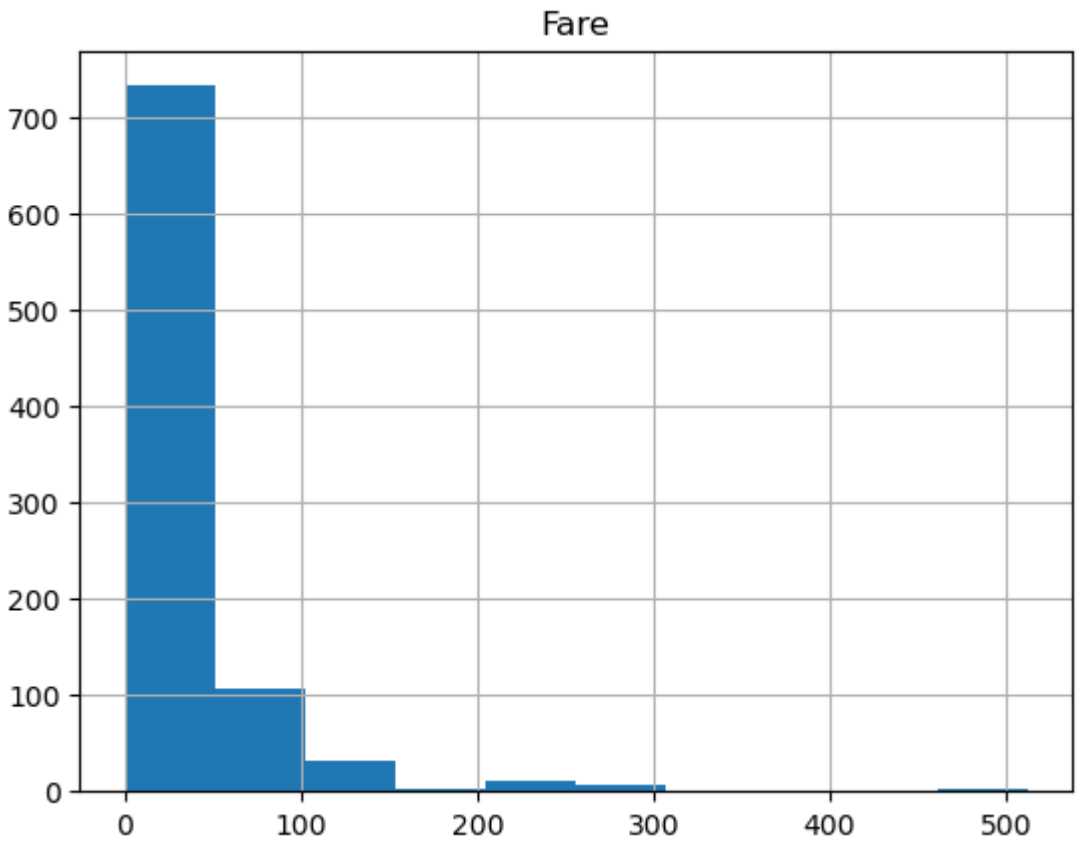
Out[13]:

	PassengerId	Survived	Pclass	Age	SibSp	Parch	
count	891.000000	891.000000	891.000000	714.000000	891.000000	891.000000	891.00
mean	446.000000	0.383838	2.308642	29.699118	0.523008	0.381594	32.20
std	257.353842	0.486592	0.836071	14.526497	1.102743	0.806057	49.69
min	1.000000	0.000000	1.000000	0.420000	0.000000	0.000000	0.00
25%	223.500000	0.000000	2.000000	20.125000	0.000000	0.000000	7.91
50%	446.000000	0.000000	3.000000	28.000000	0.000000	0.000000	14.45
75%	668.500000	1.000000	3.000000	38.000000	1.000000	0.000000	31.00
max	891.000000	1.000000	3.000000	80.000000	8.000000	6.000000	512.32

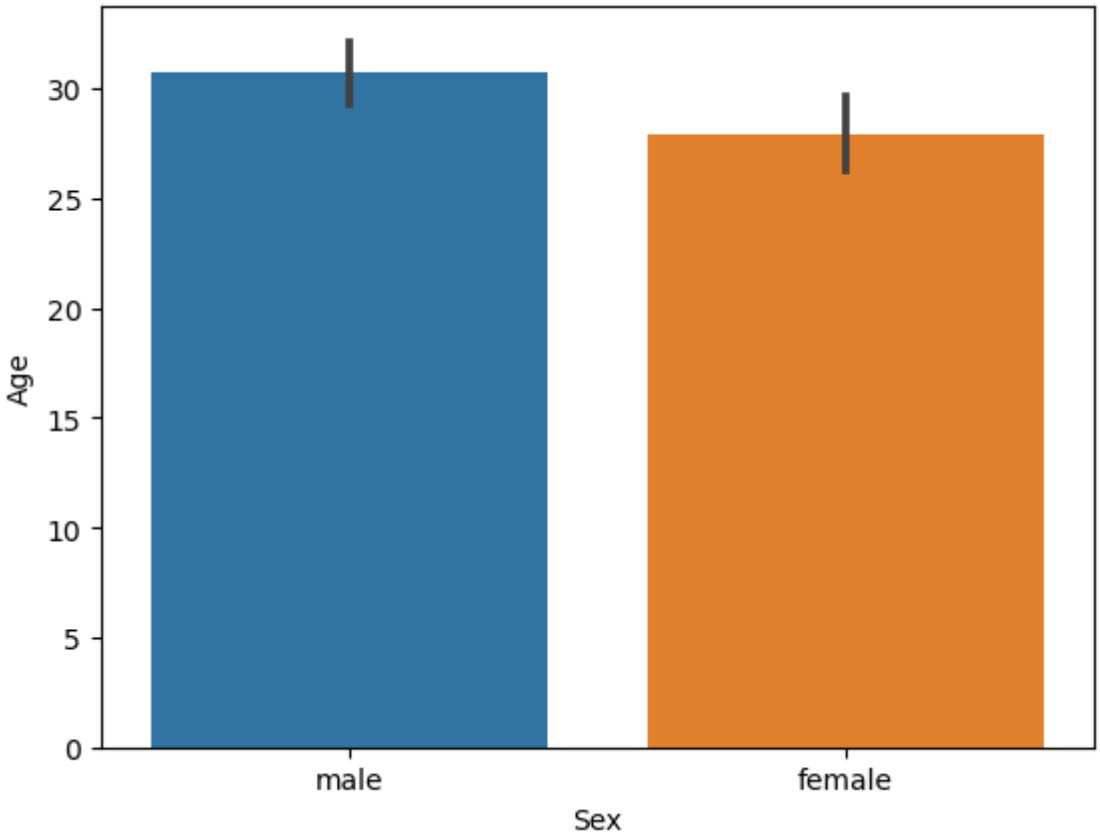
In [15]:
```
import matplotlib.pyplot as plt
import seaborn as sns
```

In [17]:
```
df.hist('Fare')
```

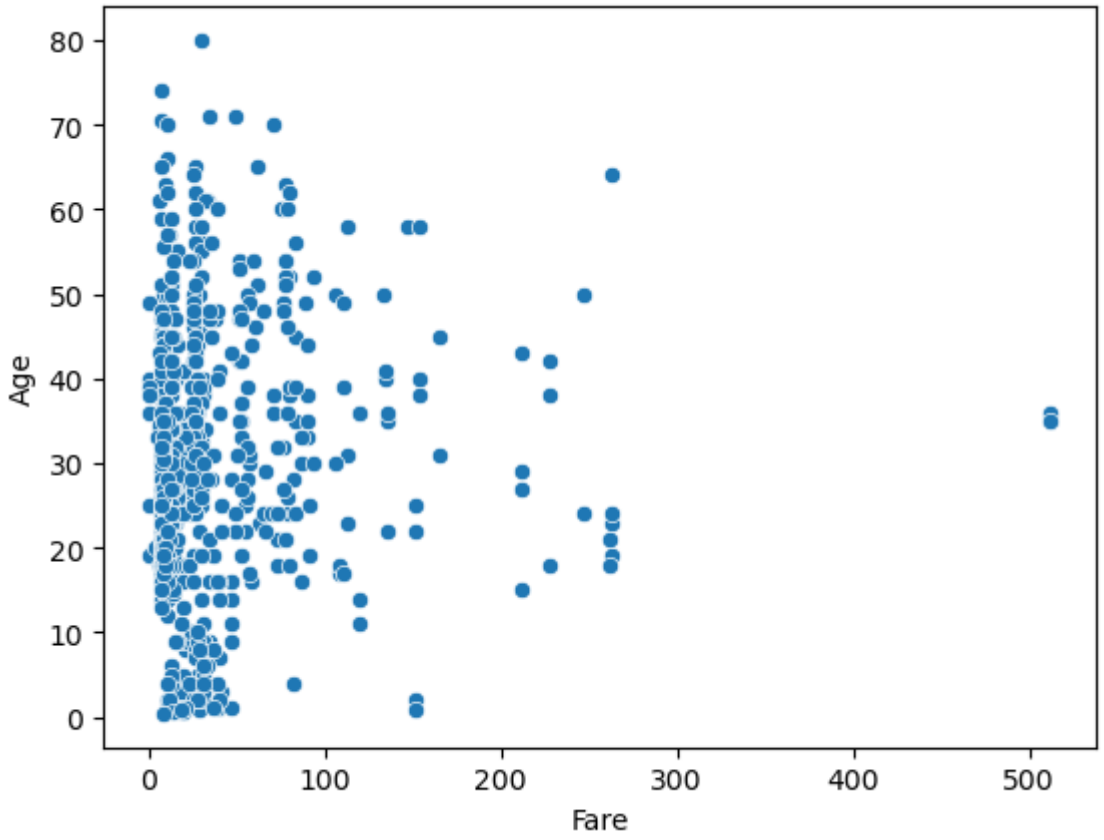
Out[17]:
```
array([[<Axes: title={'center': 'Fare'}>]], dtype=object)
```



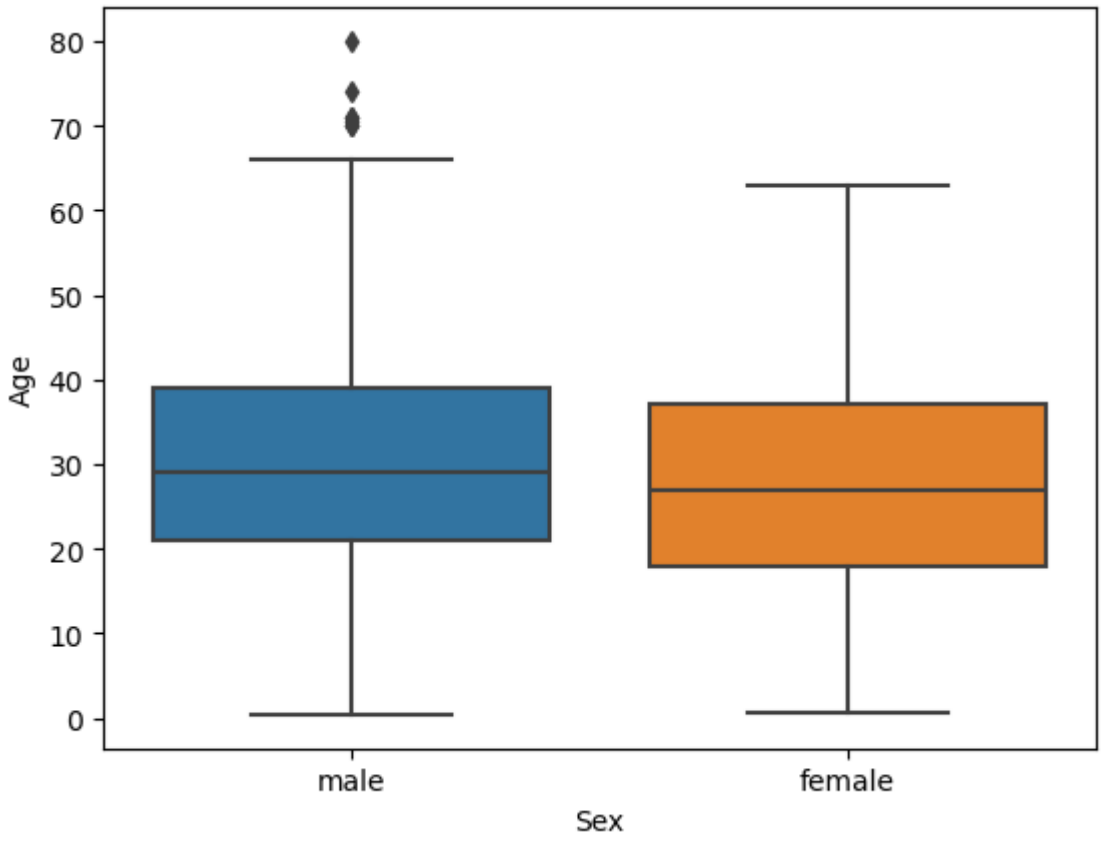
In [27]:
```
sns.barplot(data = df, x = 'Sex', y = 'Age')
plt.show()
```



In [33]:
```
sns.scatterplot(data = df, x ='Fare',y='Age')
plt.show()
```

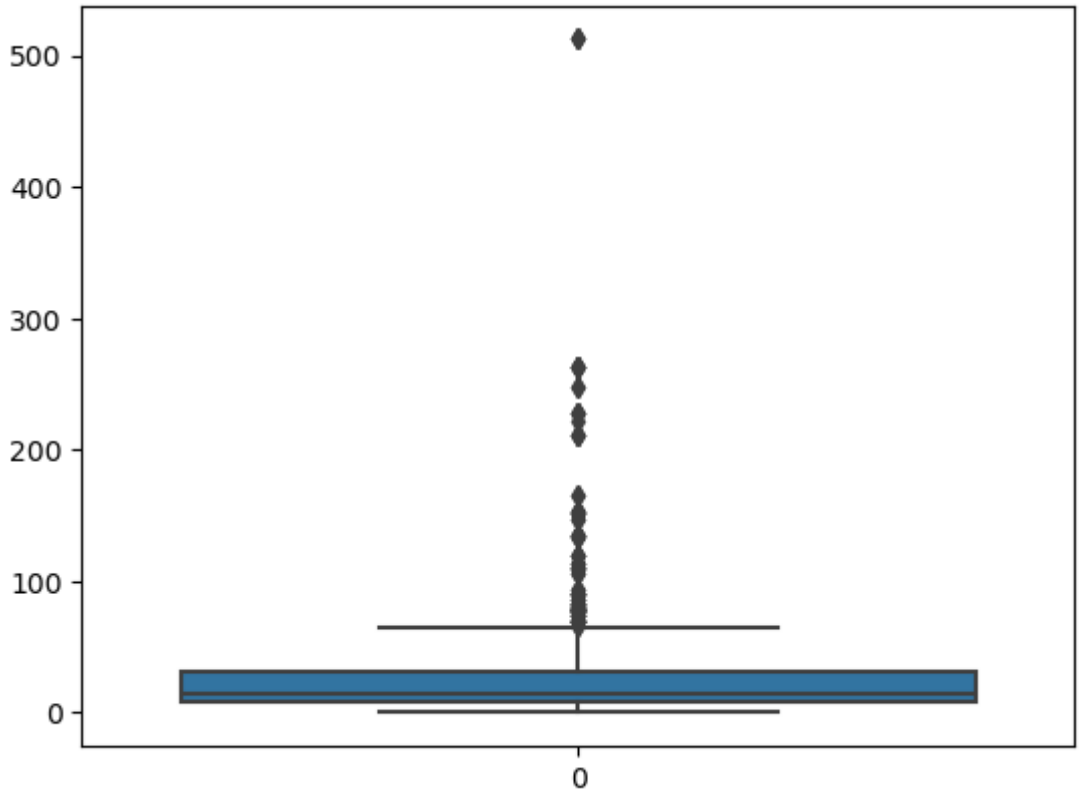


In [35]:
```
sns.boxplot(data = df, x = 'Sex', y = 'Age')
plt.show()
```



In [37]:
```
sns.boxplot(df['Fare'])
```

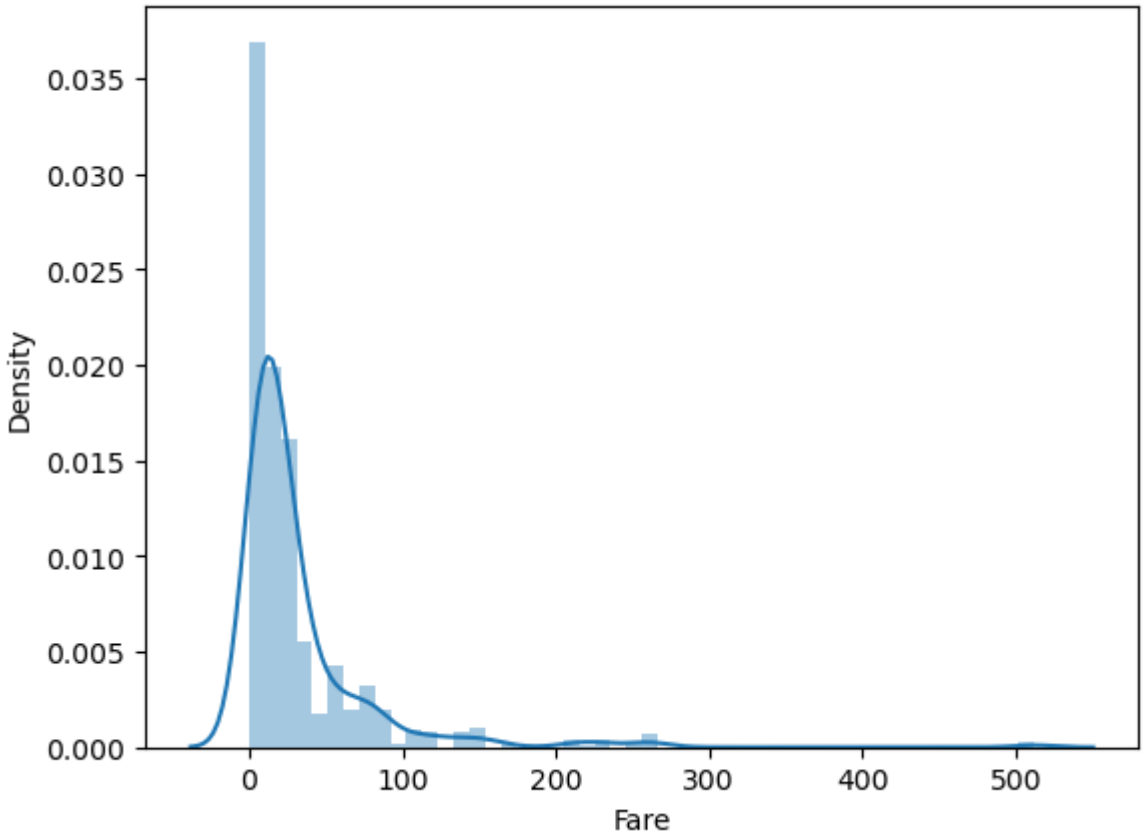
Out[37]: <Axes: >



In [39]:
```
sns.distplot(df['Fare'])
```

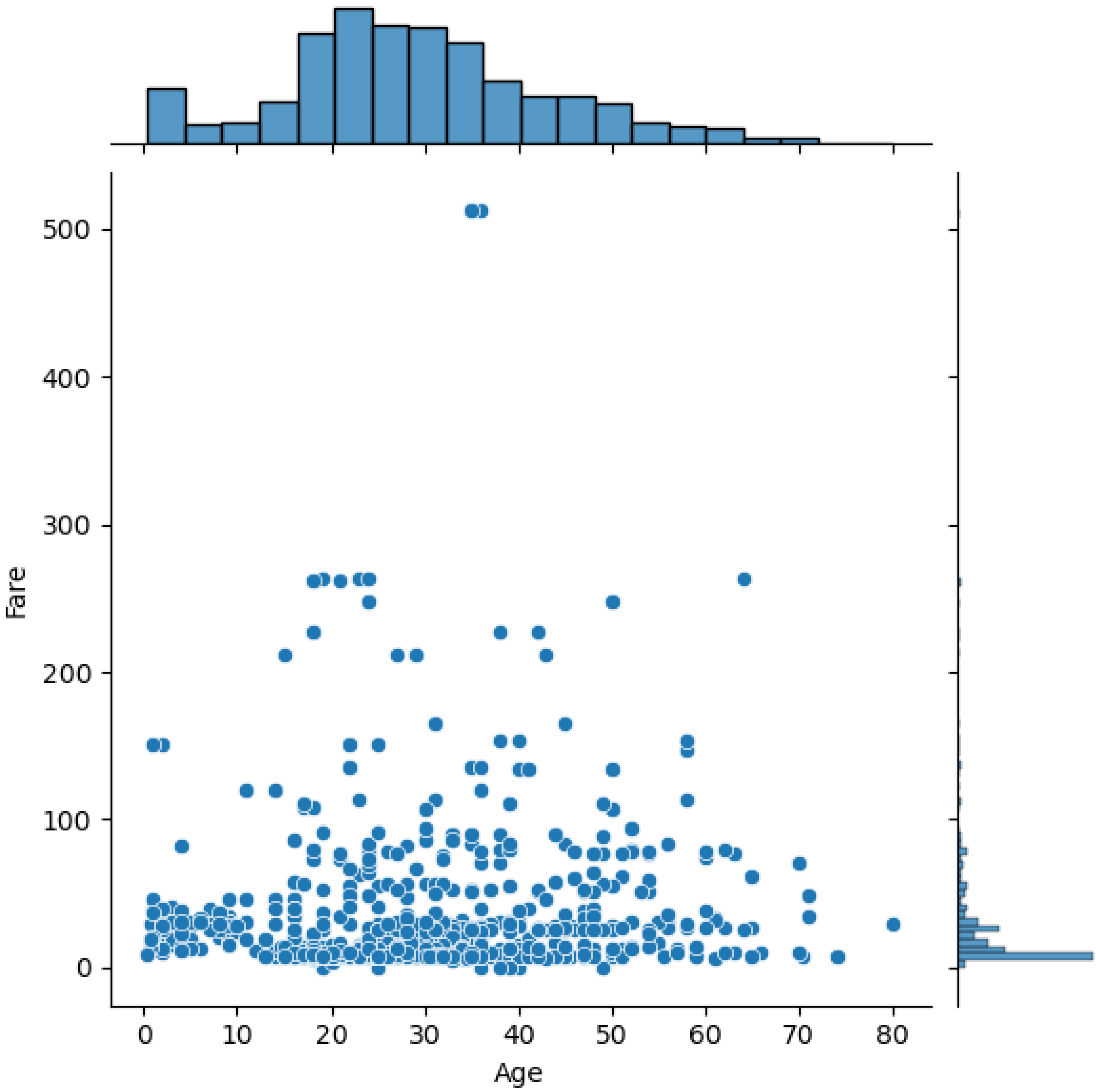
```
/tmp/ipykernel_10765/3425841524.py:1: UserWarning:

`distplot` is a deprecated function and will be removed in seaborn v0.14.0.

Please adapt your code to use either `displot` (a figure-level function with
similar flexibility) or `histplot` (an axes-level function for histograms).

For a guide to updating your code to use the new functions, please see
https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751

  sns.distplot(df['Fare'])
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWar
ning: use_inf_as_na option is deprecated and will be removed in a future version. Conv
ert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

Out[39]: <Axes: xlabel='Fare', ylabel='Density'>



In [43]:
```
sns.jointplot(data = df, x = 'Age', y = 'Fare')
plt.show()
```

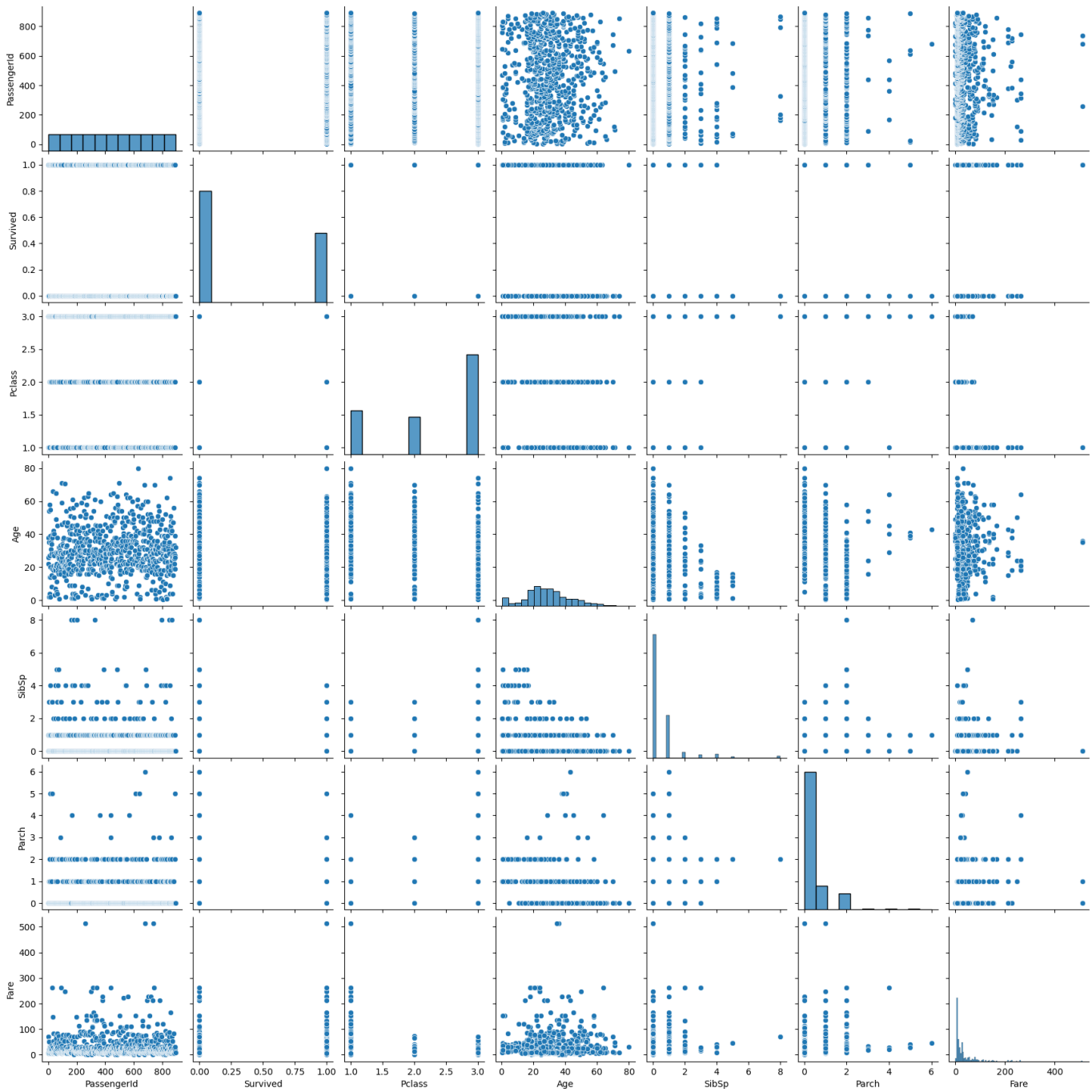
```
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWar
ning: use_inf_as_na option is deprecated and will be removed in a future version. Conv
ert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWar
ning: use_inf_as_na option is deprecated and will be removed in a future version. Conv
ert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```



In [47]:
```
sns.pairplot(df)
```

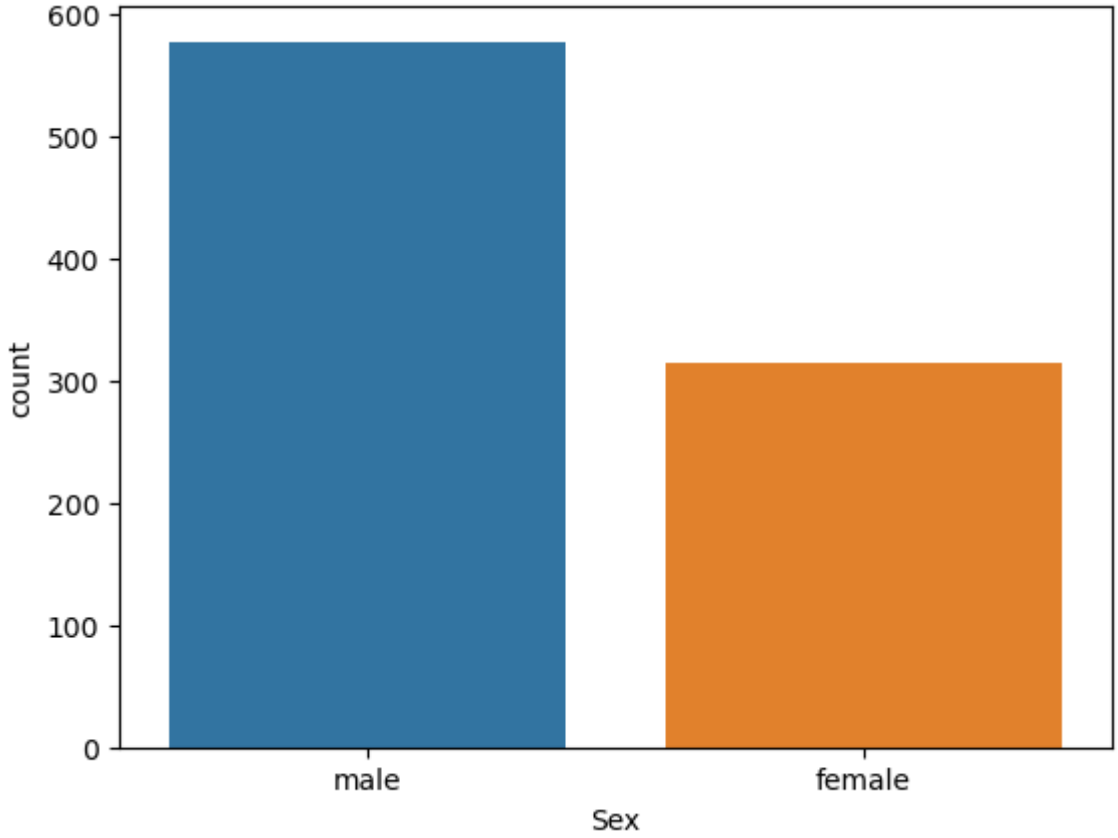
```
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

Out[47]: <seaborn.axisgrid.PairGrid at 0x7f0e25339880>



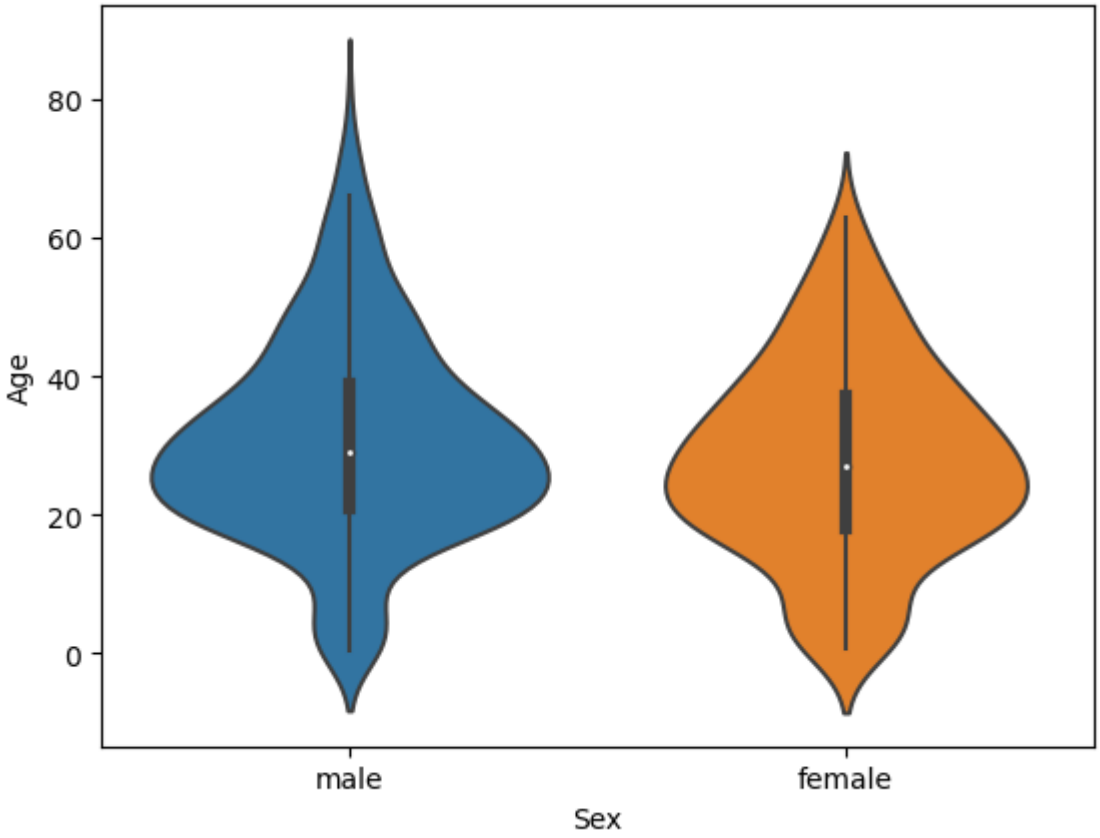
In [55]:
```
sns.countplot(data = df, x = 'Sex')
```

Out[55]: <Axes: xlabel='Sex', ylabel='count'>



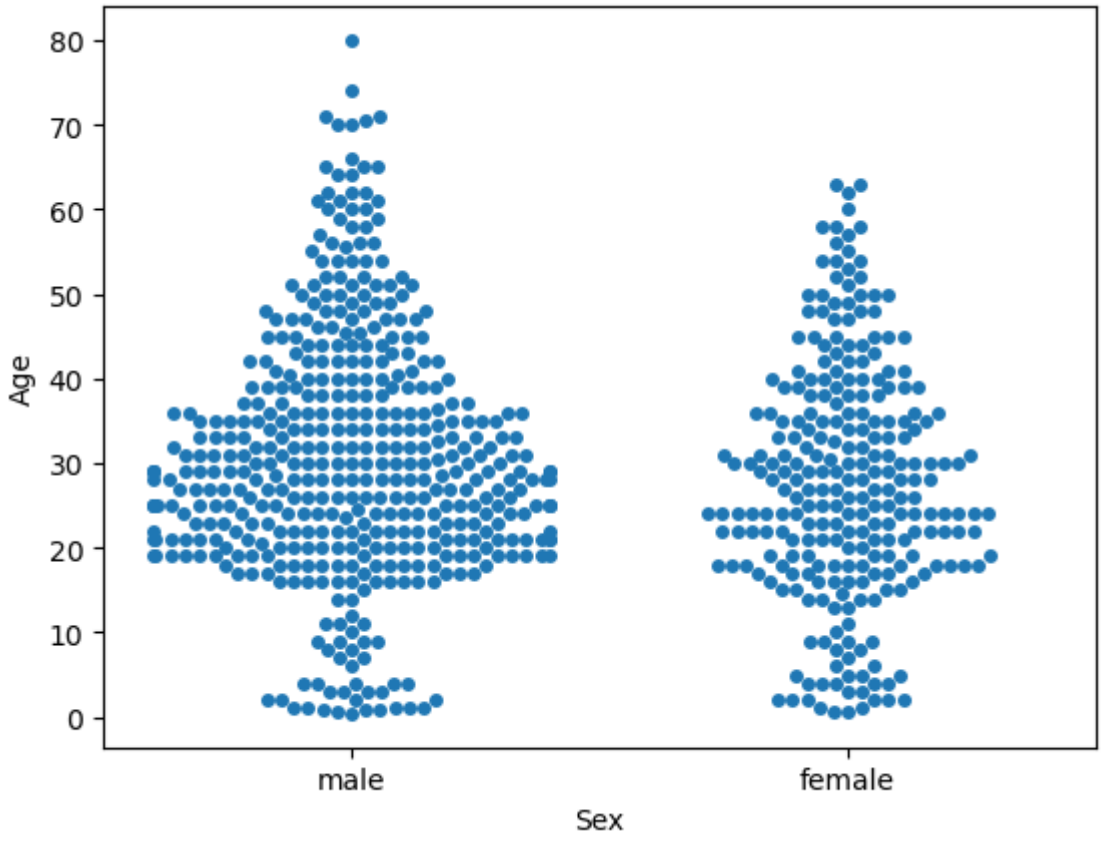
In [77]:
```
sns.violinplot(data = df, x = 'Sex', y = 'Age')
```

Out[77]: <Axes: xlabel='Sex', ylabel='Age'>



In [57]:
```
sns.swarmplot(data = df, x = 'Sex', y = 'Age')
plt.show()
```

```
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWar
ning: use_inf_as_na option is deprecated and will be removed in a future version. Conv
ert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWar
ning: use_inf_as_na option is deprecated and will be removed in a future version. Conv
ert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1075: FutureWar
ning: When grouping with a length-1 list-like, you will need to pass a length-1 tuple
to get_group in a future version of pandas. Pass `(name,)` instead of `name` to silenc
e this warning.
  data_subset = grouped_data.get_group(pd_key)
```



In [79]:
```
df = pd.read_csv("/home/admin1/iris.csv")
df
```

Out[79]:

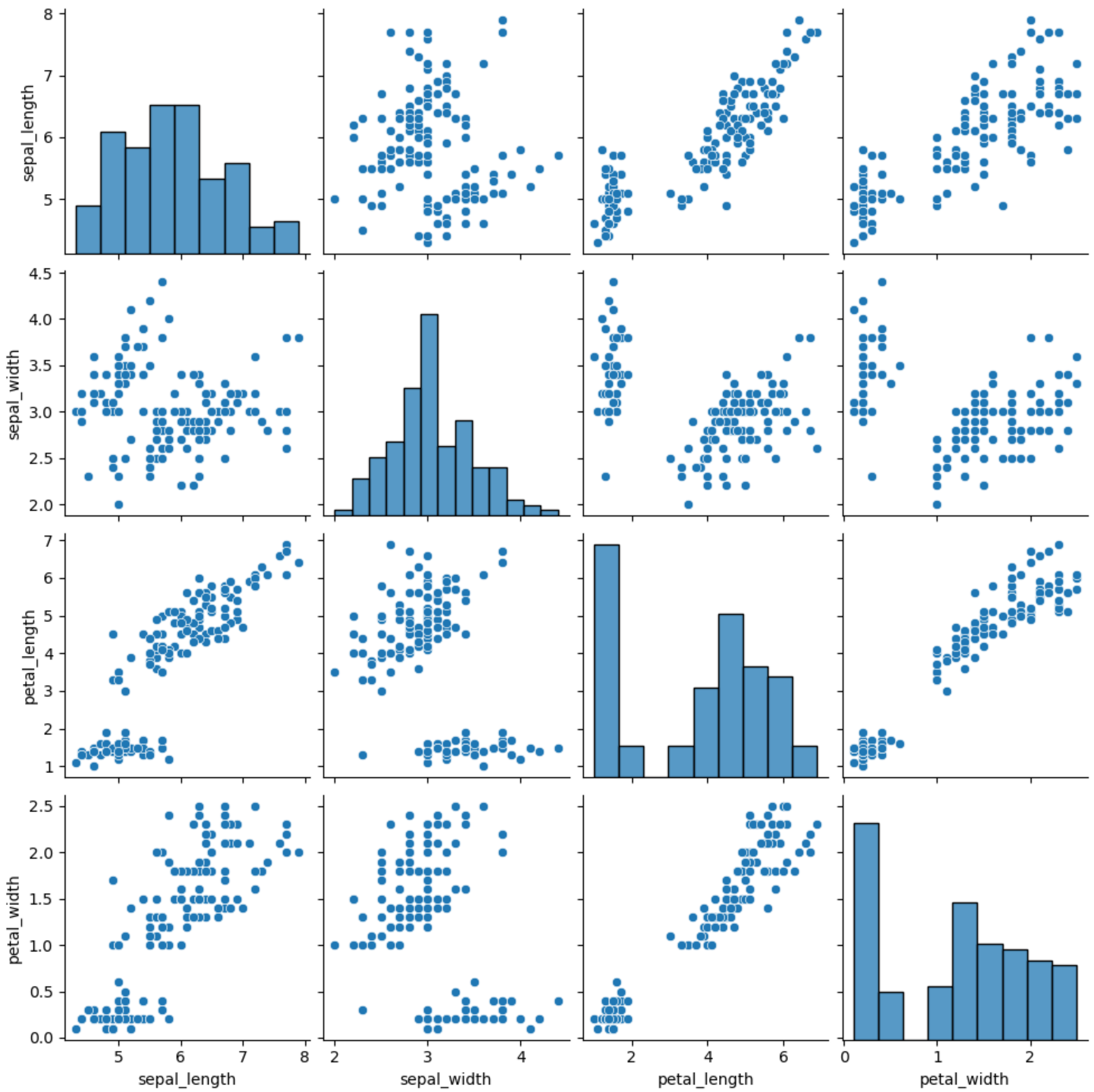
	sepal_length	sepal_width	petal_length	petal_width	species
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa
...	...	...	...	...	...
145	6.7	3.0	5.2	2.3	virginica
146	6.3	2.5	5.0	1.9	virginica
147	6.5	3.0	5.2	2.0	virginica
148	6.2	3.4	5.4	2.3	virginica
149	5.9	3.0	5.1	1.8	virginica

150 rows × 5 columns

In [61]:
```
sns.pairplot(df)
```

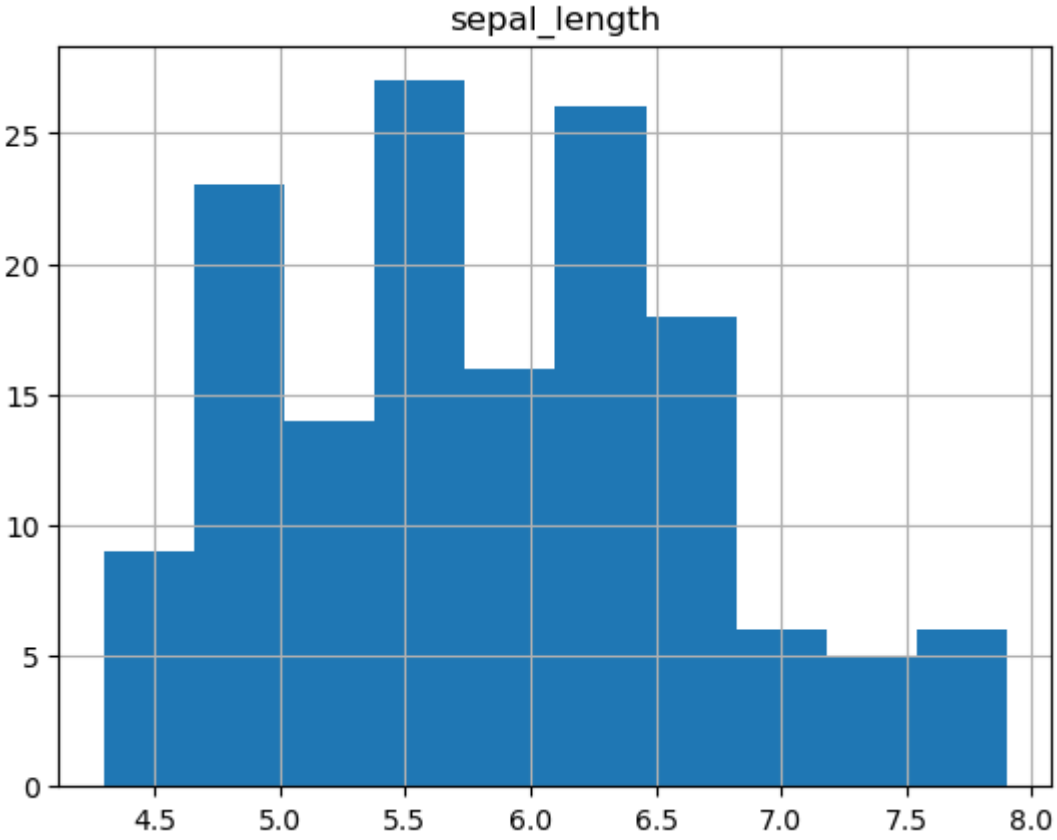
```
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
/home/admin1/anaconda3/lib/python3.9/site-packages/seaborn/_oldcore.py:1119: FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

Out[61]:
```
<seaborn.axisgrid.PairGrid at 0x7f0e1b2c08e0>
```



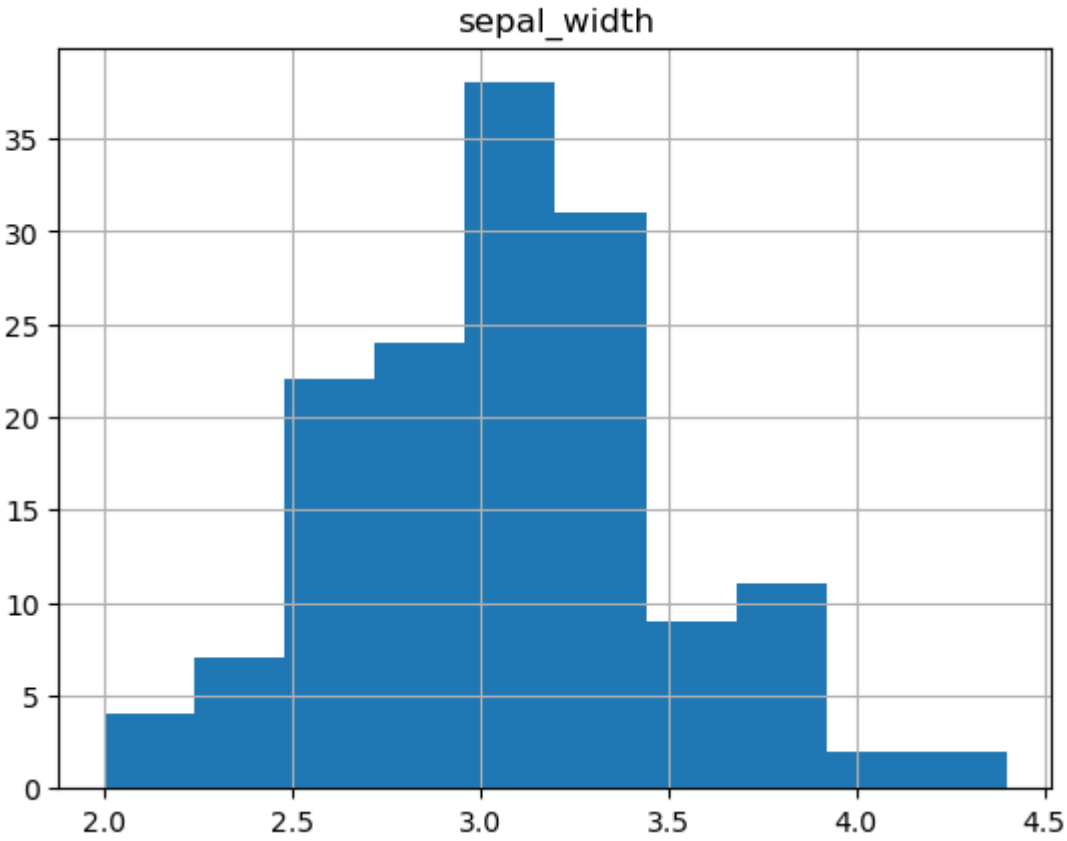
In [63]:
```
df.hist('sepal_length')
```

Out[63]:
```
array([[<Axes: title={'center': 'sepal_length'}>]], dtype=object)
```



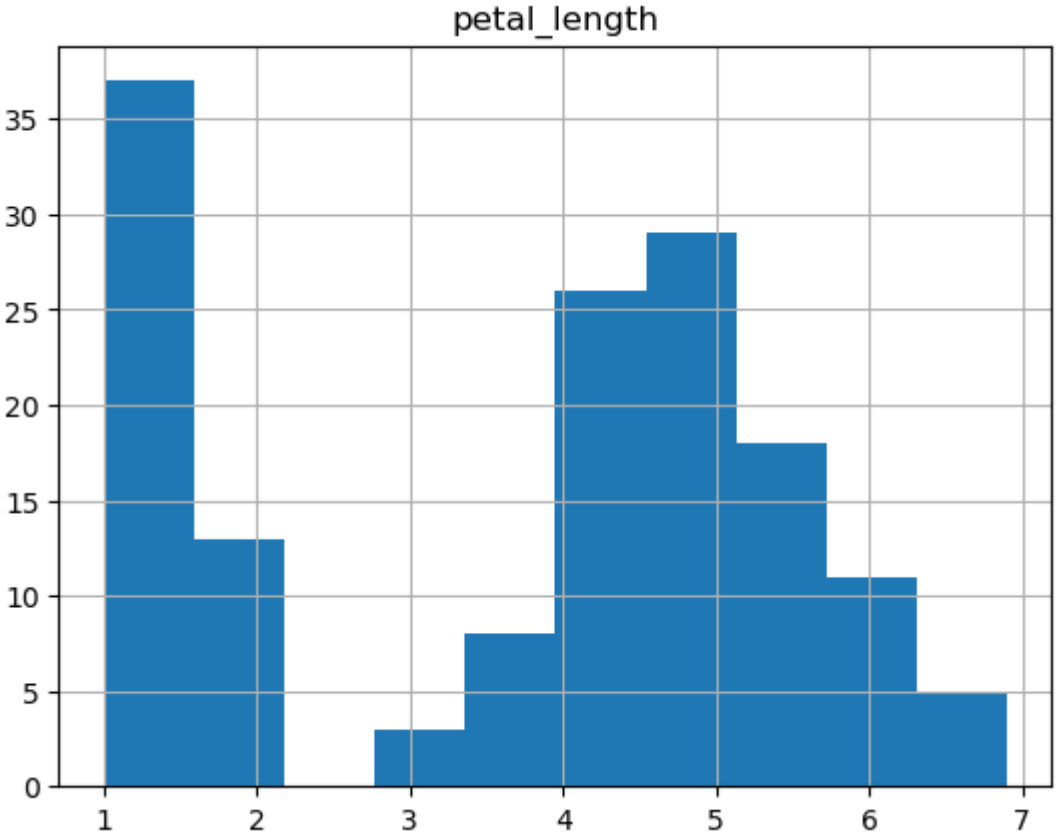
In [65]:
```
df.hist('sepal_width')
```

Out[65]:
```
array([[<Axes: title={'center': 'sepal_width'}>]], dtype=object)
```



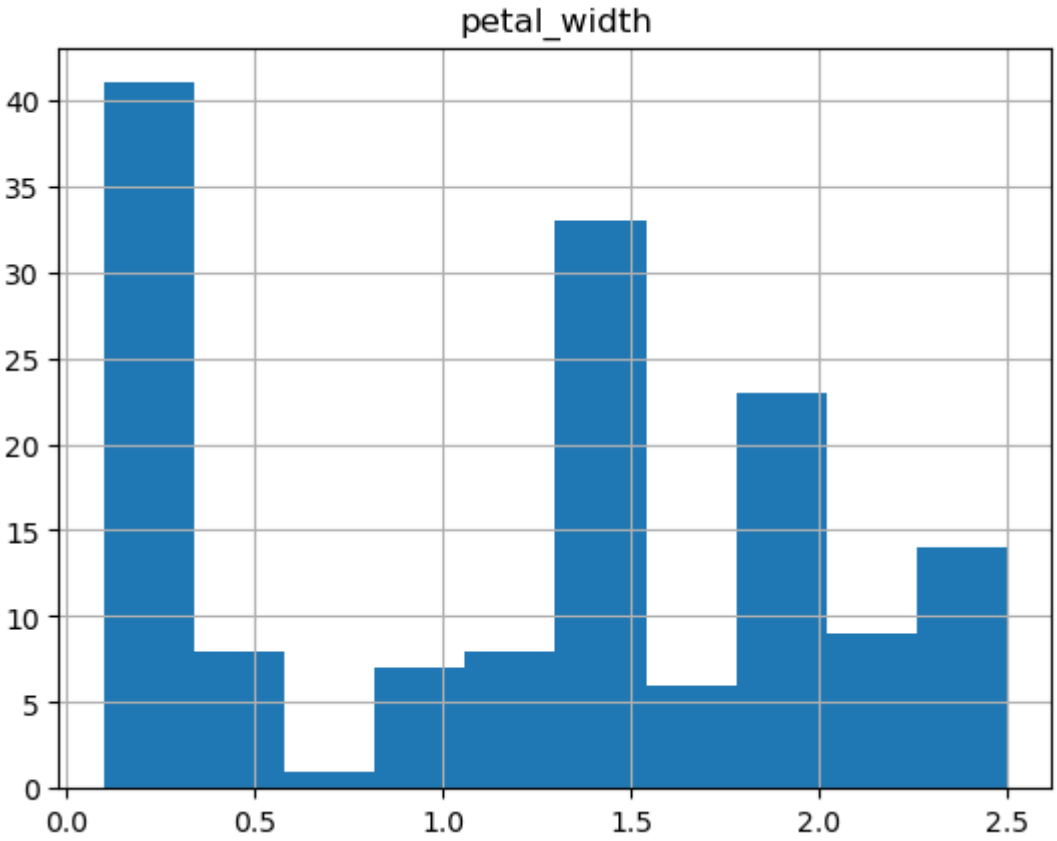
In [67]:
```
df.hist('petal_length')
```

Out[67]:
```
array([[<Axes: title={'center': 'petal_length'}>]], dtype=object)
```

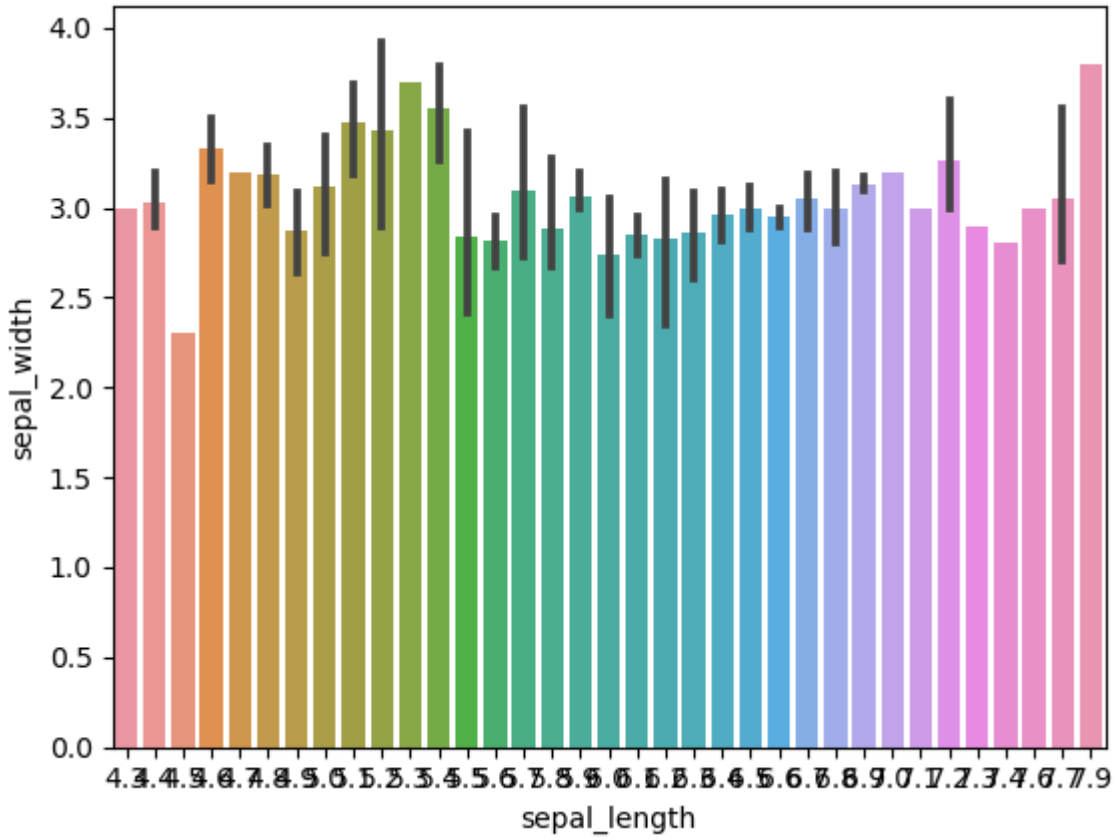


In [69]:
```
df.hist('petal_width')
```

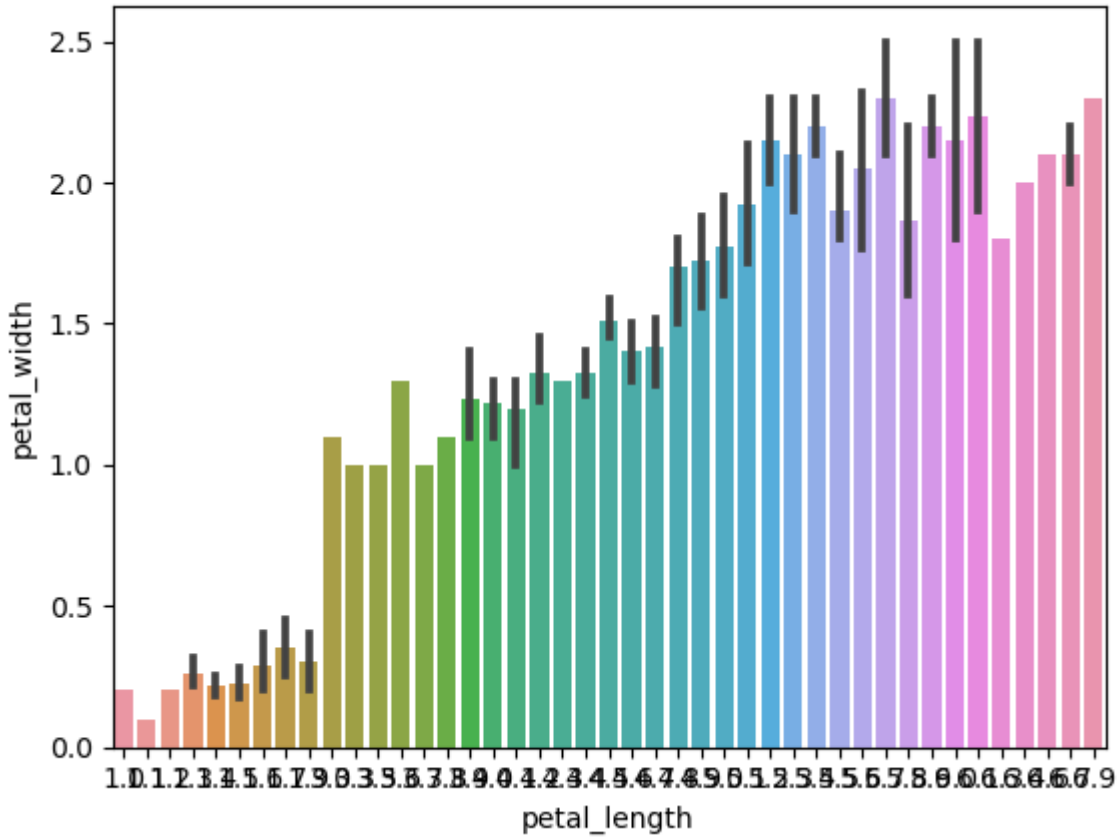
Out[69]:
```
array([[<Axes: title={'center': 'petal_width'}>]], dtype=object)
```



In [81]:
```
sns.barplot(data = df, x = 'sepal_length', y = 'sepal_width')
plt.show()
```



In [83]:
```
sns.barplot(data = df, x = 'petal_length', y = 'petal_width')
plt.show()
```



In [ ]: