```
pip install seaborn
```

```
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: seaborn in c:\programdata\anaconda3\lib\site-packages (0.11.2)
Requirement already satisfied: scipy>=1.0 in c:\programdata\anaconda3\lib\site-packages (from seaborn) (1.9.1)
Requirement already satisfied: matplotlib>=2.2 in c:\programdata\anaconda3\lib\site-packages (from seaborn) (3.5.2)
Requirement already satisfied: numpy>=1.15 in c:\users\dell\appdata\roaming\python\python39\site-packages (from seaborn) (1.23.5)
Requirement already satisfied: pandas>=0.23 in c:\programdata\anaconda3\lib\site-packages (from seaborn) (1.4.4)
Requirement already satisfied: python-dateutil>=2.7 in c:\programdata\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (2.8.2
Requirement already satisfied: fonttools>=4.22.0 in c:\programdata\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (4.25.0)
Requirement already satisfied: cycler>=0.10 in c:\programdata\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (0.11.0)
Requirement already satisfied: pillow>=6.2.0 in c:\programdata\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (9.2.0)
Requirement already satisfied: packaging>=20.0 in c:\programdata\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (21.3)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\programdata\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (1.4.2)
Requirement already satisfied: pyparsing>=2.2.1 in c:\programdata\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (3.0.9)
Requirement already satisfied: pytz>=2020.1 in c:\programdata\anaconda3\lib\site-packages (from pandas>=0.23->seaborn) (2022.1)
Requirement already satisfied: six>=1.5 in c:\programdata\anaconda3\lib\site-packages (from python-dateutil>=2.7->matplotlib>=2.2->seabo
Note: you may need to restart the kernel to use updated packages.
```

```
import seaborn as sns
```

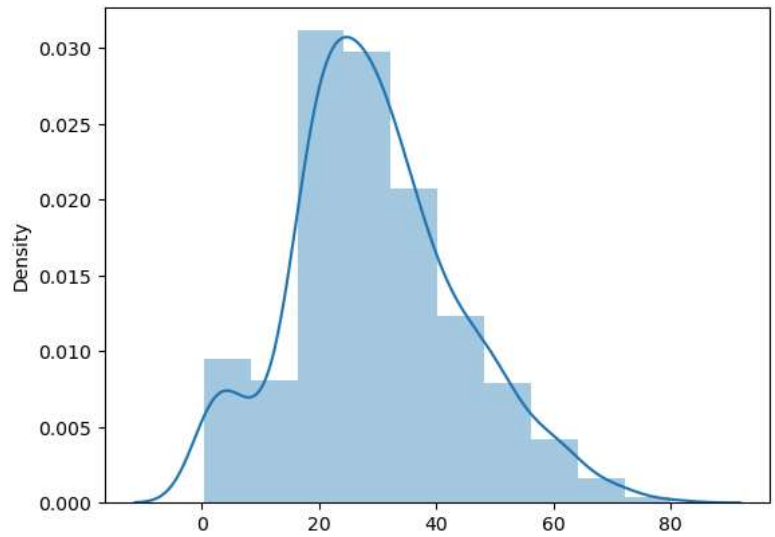
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

```
dataset = pd.read_csv('Titanic.csv')
dataset.head()
```

	sex	age	sibsp	parch	fare	embarked	class	who	alone	survived
0	male	22.0	1	0	7.2500	S	Third	man	False	0
1	female	38.0	1	0	71.2833	C	First	woman	False	1
2	female	26.0	0	0	7.9250	S	Third	woman	True	1
3	female	35.0	1	0	53.1000	S	First	woman	False	1
4	male	35.0	0	0	8.0500	S	Third	man	True	0

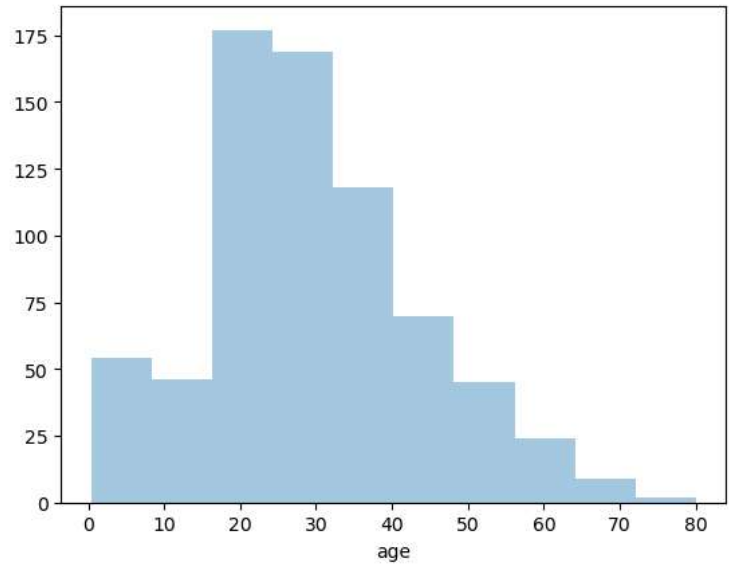
```
#Distribution plot
#distplot Dist plot gives us the histogram of the selected continuous variable
import seaborn as sns
sns.distplot(x = dataset['age'], bins = 10)
```

```
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\distributions.py:2619: FutureWarning:
  warnings.warn(msg, FutureWarning)
<AxesSubplot:ylabel='Density'>
```



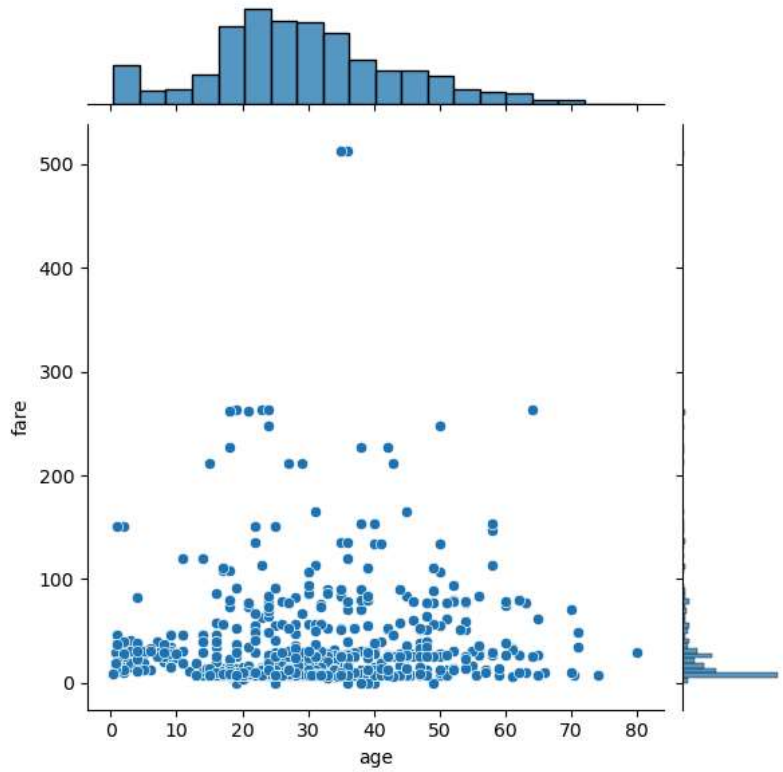
```
sns.distplot(dataset['age'], bins = 10,kde=False)
```

```
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\distributions.py:2619: FutureWarning: `distplot` is a deprecated function and will be
  warnings.warn(msg, FutureWarning)
<AxesSubplot:xlabel='age'>
```



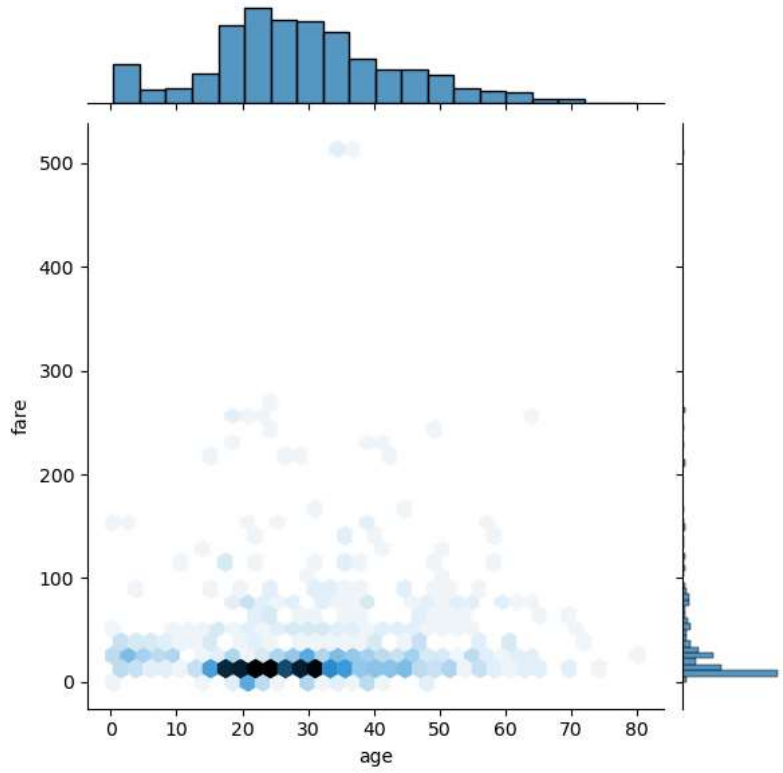

```
#join plot combination of the distplot of two variables.
import seaborn as sns
# For Plot 1
sns.jointplot(x = dataset['age'], y = dataset['fare'], kind =
'scatter')
```

```
<seaborn.axisgrid.JointGrid at 0x1b3bc293550>
```



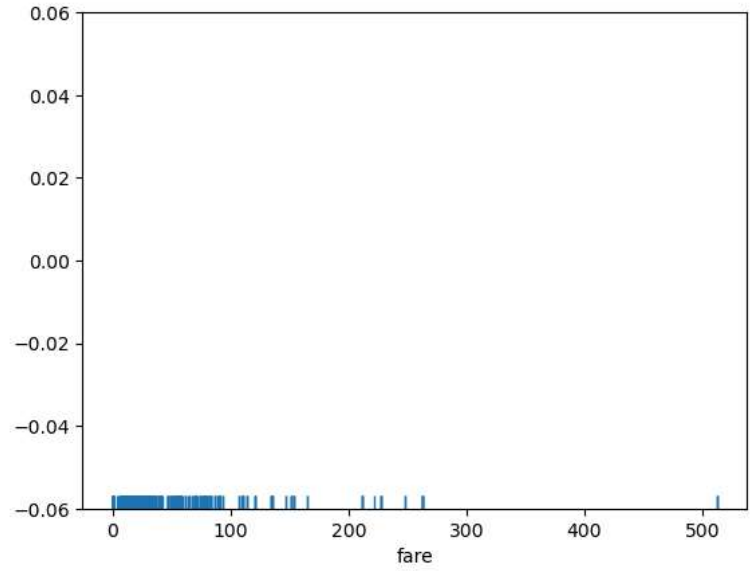

```
# For Plot 2
sns.jointplot(x = dataset['age'], y = dataset['fare'], kind = 'hex')
```

```
<seaborn.axisgrid.JointGrid at 0x1b3bfa8e3d0>
```



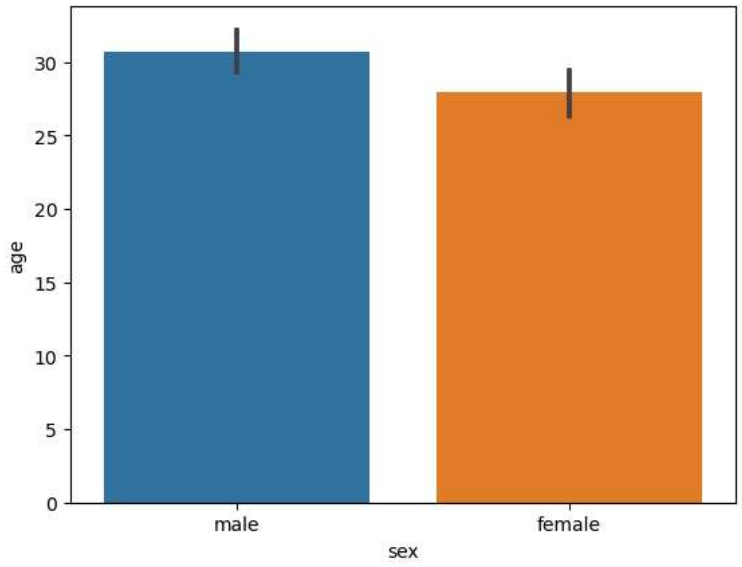

```
#Rug plot used to draw small bars along the x-axis for each point in the dataset
sns.rugplot(dataset['fare'])
```

```
<AxesSubplot:xlabel='fare'>
```



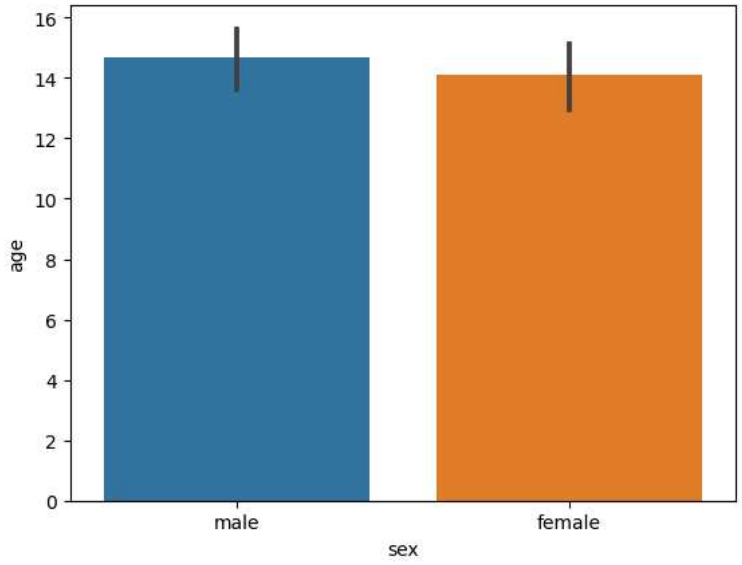

```
#categorical plot
#bar plot sed to display the mean value for each value in a categorical column, against a
#numeric columns.
sns.barplot(x='sex', y='age', data=dataset)
```

```
<AxesSubplot:xlabel='sex', ylabel='age'>
```



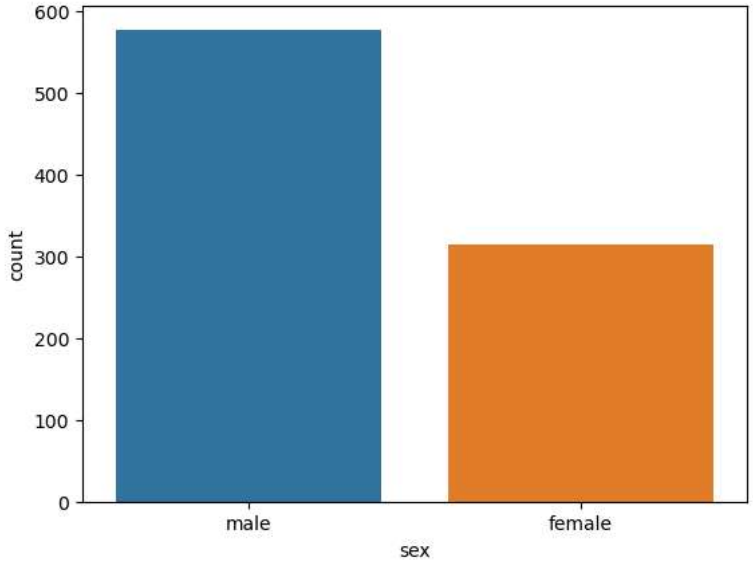

```
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
sns.barplot(x='sex', y='age', data=dataset, estimator=np.std)
```

```
<AxesSubplot:xlabel='sex', ylabel='age'>
```



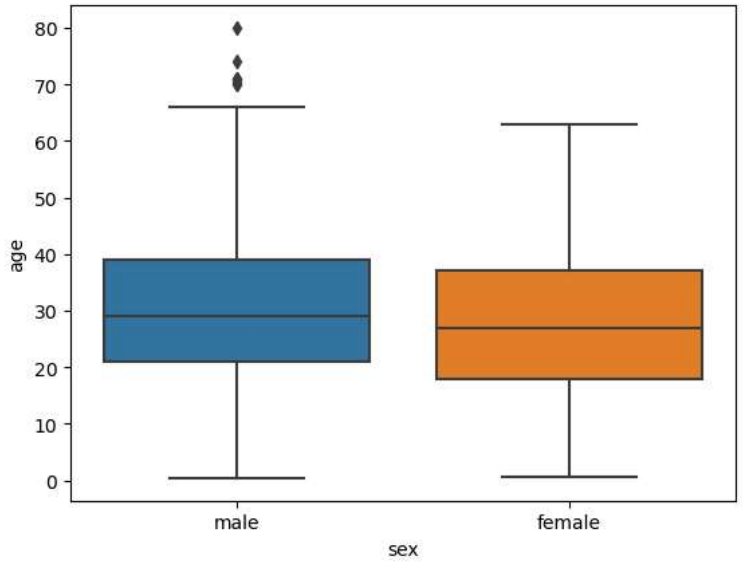

```
#count plotThe count plot is similar to the bar plot, however it displays the count of the categories in a
#specific column
sns.countplot(x='sex', data=dataset)
```

```
<AxesSubplot:xlabel='sex', ylabel='count'>
```



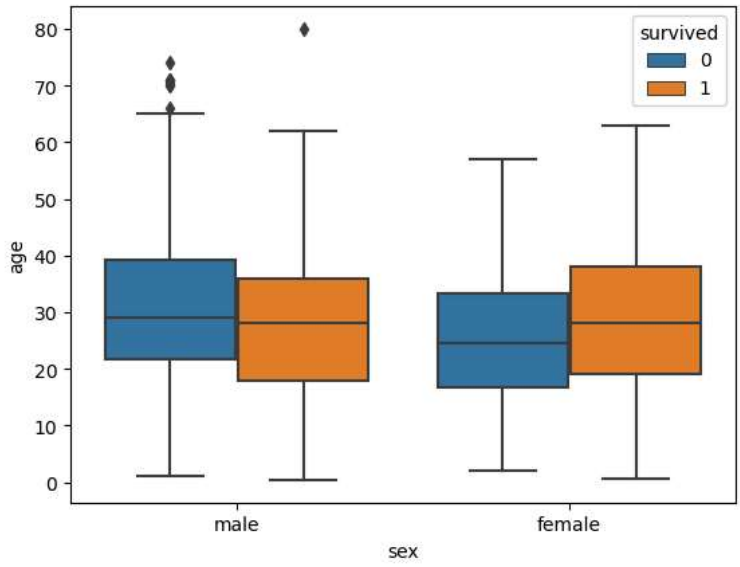

```
#Box plot display the distribution of the categorical data in the form of quartiles.
#The centre of the box shows the median value.
sns.boxplot(x='sex', y='age', data=dataset)
```

```
<AxesSubplot:xlabel='sex', ylabel='age'>
```



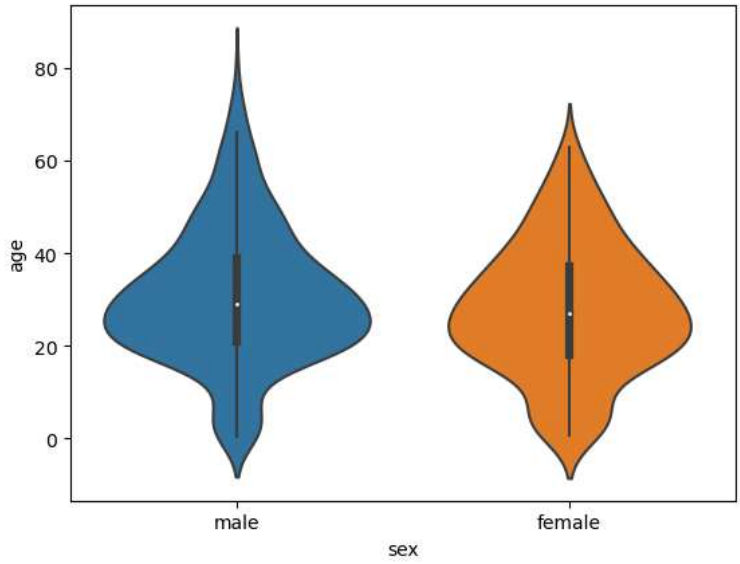

```
sns.boxplot(x='sex', y='age', data=dataset, hue="survived")
```

```
<AxesSubplot:xlabel='sex', ylabel='age'>
```



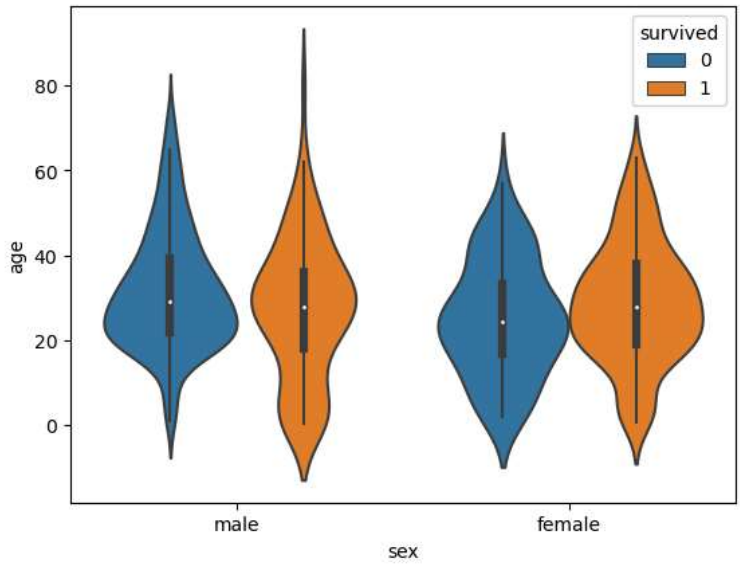

```
#viloin plot
#used to plot
#the violin plot. Like the box plot, the first parameter is the categorical column, the second
#parameter is the numeric column while the third parameter is the dataset
sns.violinplot(x='sex', y='age', data=dataset)
```

```
<AxesSubplot:xlabel='sex', ylabel='age'>
```



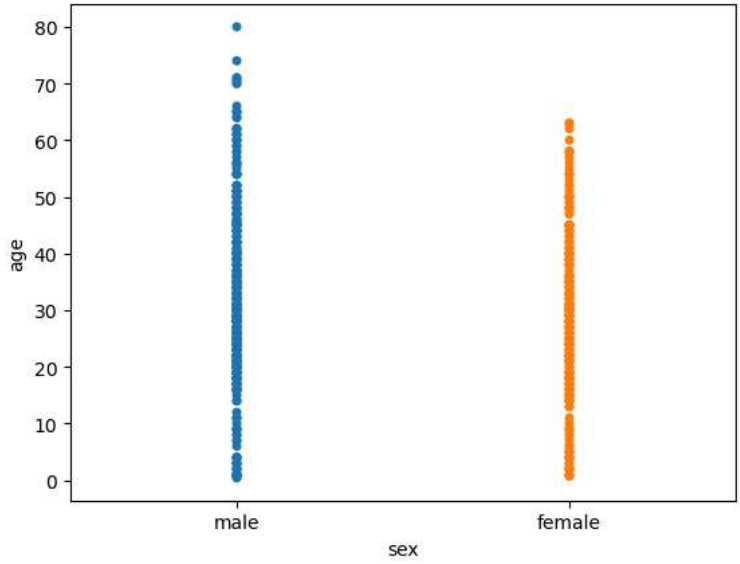

```
sns.violinplot(x='sex', y='age', data=dataset, hue='survived')
```

```
<AxesSubplot:xlabel='sex', ylabel='age'>
```



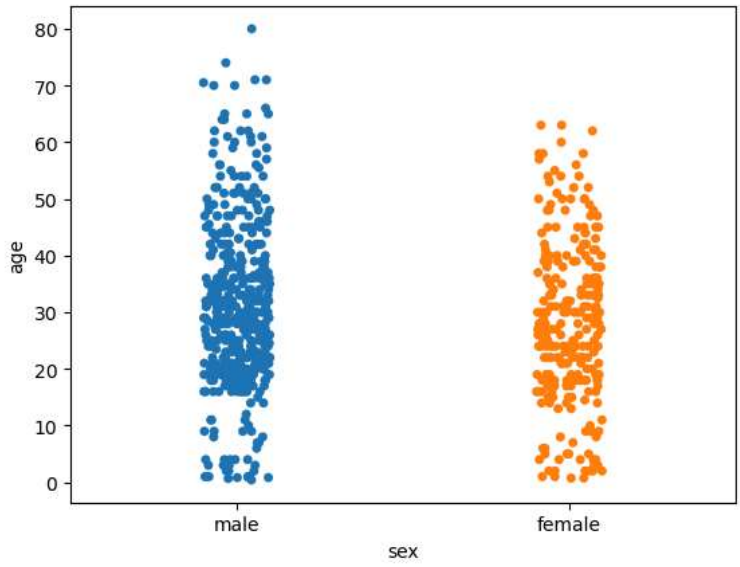

```
#Advance plot
#strip plot draws a scatter plot where one of the variables is categorical
sns.stripplot(x='sex', y='age', data=dataset, jitter=False)
```

```
<AxesSubplot:xlabel='sex', ylabel='age'>
```



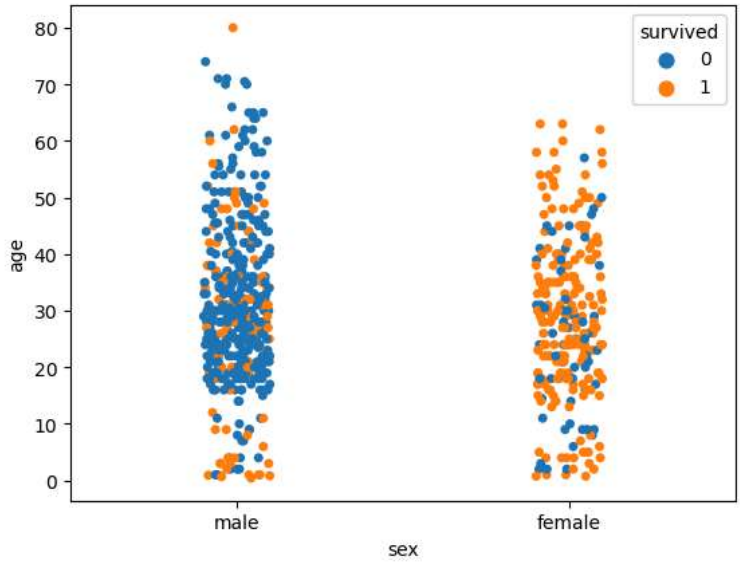

```
sns.stripplot(x='sex', y='age', data=dataset, jitter=True)
```

```
<AxesSubplot:xlabel='sex', ylabel='age'>
```



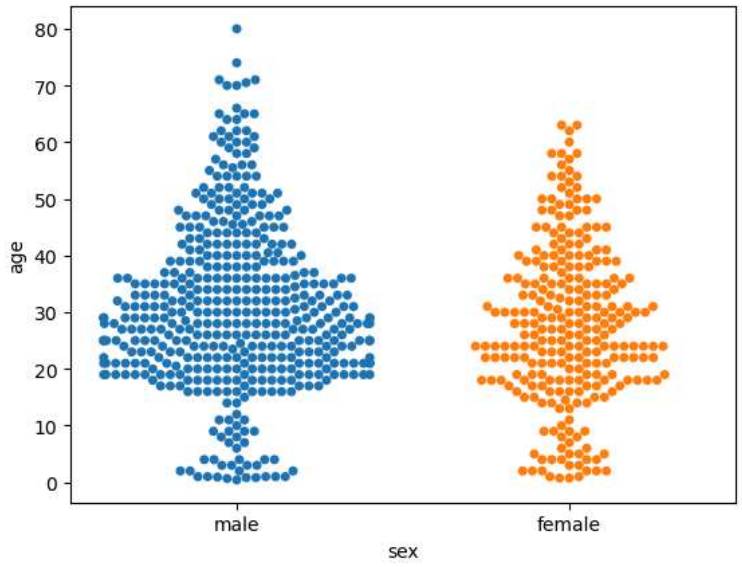

```
sns.stripplot(x='sex', y='age', data=dataset, jitter=True, hue='survived')
```

```
<AxesSubplot:xlabel='sex', ylabel='age'>
```



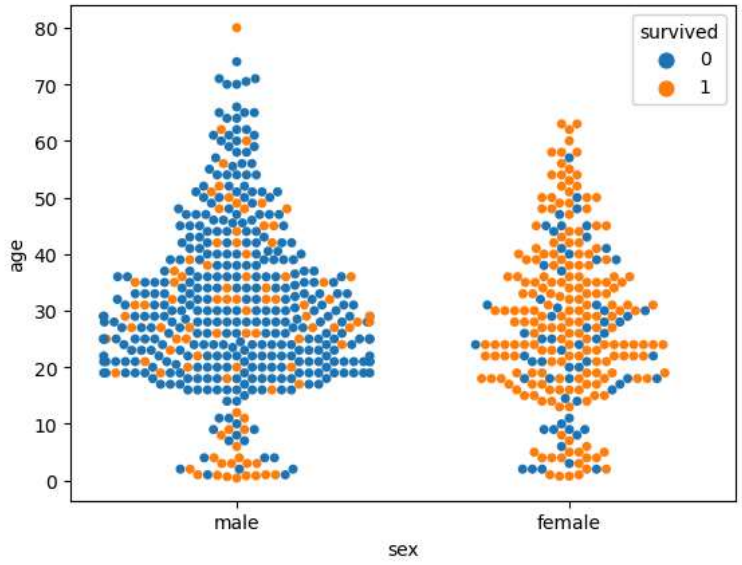

```
#swarm plot the points
#are adjusted in such a way that they don't overlap
sns.swarmplot(x='sex', y='age', data=dataset)
```

```
<AxesSubplot:xlabel='sex', ylabel='age'>
```




```
sns.swarmplot(x='sex', y='age', data=dataset, hue='survived')
```

```
<AxesSubplot:xlabel='sex', ylabel='age'>
```




```
#matrix plot
#heat map used to plot correlation between numeric columns in the form of a
#matrix.
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt


import seaborn as sns
dataset = pd.read_csv('Titanic.csv')
dataset.head()
```

	sex	age	sibsp	parch	fare	embarked	class	who	alone	survived
0	male	22.0	1	0	7.2500	S	Third	man	False	0
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3	female	35.0	1	0	53.1000	S	First	woman	False	1
4	male	35.0	0	0	8.0500	S	Third	man	True	0

```
dataset.corr()
```

	age	sibsp	parch	fare	alone	survived
age	1.000000	-0.308247	-0.189119	0.096067	0.198270	-0.077221
sibsp	-0.308247	1.000000	0.414838	0.159651	-0.584471	-0.035322
parch	-0.189119	0.414838	1.000000	0.216225	-0.583398	0.081629
fare	0.096067	0.159651	0.216225	1.000000	-0.271832	0.257307
alone	0.198270	-0.584471	-0.583398	-0.271832	1.000000	-0.203367
survived	-0.077221	-0.035322	0.081629	0.257307	-0.203367	1.000000

```
corr = dataset.corr()
sns.heatmap(corr)
```

```
<AxesSubplot:>
```