```
import numpy as np
import pandas as pd

import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
import plotly
import plotly.express as px

path='/content/drive/MyDrive/prodigy ds/ Titanic-Dataset.csv'
df=pd.read_csv(path)
```

```
df.head()
```

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500	NaN	S
1	2	1	1	Cumings, Mrs. John Bradley (Florence	female	38.0	1	0	PC 17599	71.2833	C85	C

Next steps: View recommended plots

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 891 entries, 0 to 890
Data columns (total 12 columns):
 #   Column       Non-Null Count  Dtype  
---  ------       --------------  -----  
 0   PassengerId  891 non-null    int64  
 1   Survived     891 non-null    int64  
 2   Pclass       891 non-null    int64  
 3   Name         891 non-null    object 
 4   Sex          891 non-null    object 
 5   Age          714 non-null    float64
 6   SibSp        891 non-null    int64  
 7   Parch        891 non-null    int64  
 8   Ticket       891 non-null    object 
 9   Fare         891 non-null    float64
 10  Cabin        204 non-null    object 
 11  Embarked     889 non-null    object 
dtypes: float64(2), int64(5), object(5)
memory usage: 83.7+ KB
```

```
df.describe()
```

	PassengerId	Survived	Pclass	Age	SibSp	
count	891.000000	891.000000	891.000000	714.000000	891.000000	89
mean	446.000000	0.383838	2.308642	29.699118	0.523008	
std	257.353842	0.486592	0.836071	14.526497	1.102743	
min	1.000000	0.000000	1.000000	0.420000	0.000000	
25%	223.500000	0.000000	2.000000	20.125000	0.000000	
50%	446.000000	0.000000	3.000000	28.000000	0.000000	
75%	668.500000	1.000000	3.000000	38.000000	1.000000	
max	891.000000	1.000000	3.000000	80.000000	8.000000	

df.shape

```
(891, 12)
```

df.size

```
10692
```

df.columns

```
Index(['PassengerId', 'Survived', 'Pclass', 'Name', 'Sex', 'Age', 'SibSp',
       'Parch', 'Ticket', 'Fare', 'Cabin', 'Embarked'],
      dtype='object')
```

df.index

```
RangeIndex(start=0, stop=891, step=1)
```

df.dtypes

```
PassengerId      int64
Survived         int64
Pclass           int64
Name            object
Sex             object
Age            float64
SibSp            int64
Parch            int64
Ticket          object
Fare           float64
Cabin           object
Embarked        object
dtype: object
```

df.isnull().sum()

```
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
```

```
df_mean=df.mean()
df_mean
```

```
<ipython-input-15-7ee7386dd92f>:1: FutureWarning: The default value of numeric_only in DataFrame.mean is de
  df_mean=df.mean()
PassengerId    446.000000
Survived         0.383838
Pclass           2.308642
Age             29.699118
SibSp            0.523008
Parch            0.381594
Fare            32.204208
dtype: float64
```

```
df_median=df.median()
df_median
```

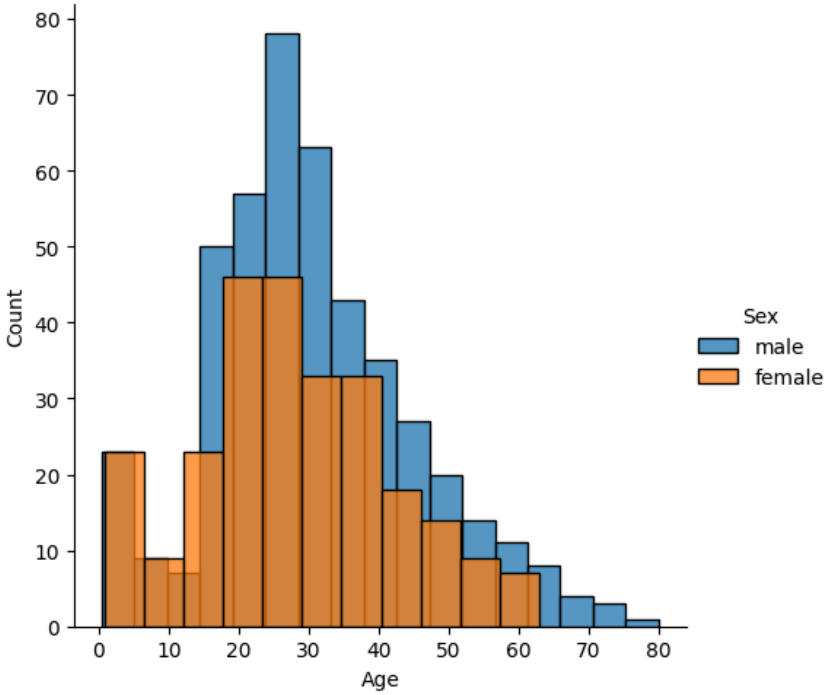
```
<ipython-input-17-7c11e4a4a06c>:1: FutureWarning: The default value of numeric_only in DataFrame.median is
  df_median=df.median()
PassengerId    446.0000
Survived         0.0000
Pclass           3.0000
Age             28.0000
SibSp            0.0000
Parch            0.0000
Fare            14.4542
dtype: float64
```

```
df_mode=df.mode()
df_mode
```

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Pa
0	1	0.0	3.0	Abbing, Mr. Anthony	male	24.0	0.0	
1	2	NaN	NaN	Abbott, Mr. Rossmore Edward	NaN	NaN	NaN	N
2	3	NaN	NaN	Abbott, Mrs. Stanton (Rosa Hunt)	NaN	NaN	NaN	N
3	4	NaN	NaN	Abelson, Mr. Samuel	NaN	NaN	NaN	N
4	5	NaN	NaN	Abelson, Mrs. Samuel (Hannah Wizosky)	NaN	NaN	NaN	N
...	...	...	...	...	...	...	...	

Next steps: View recommended plots

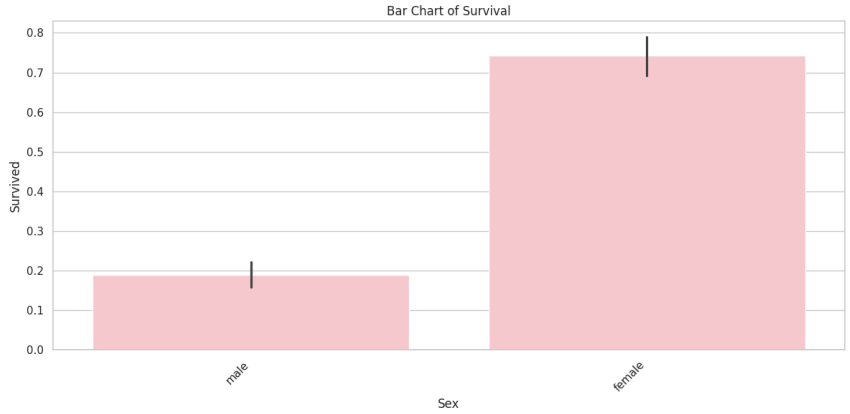
```
sns.FacetGrid(df, hue='Sex', height=5).map(sns.histplot, 'Age').add_legend()
plt.show()
```




```
sns.set(style="whitegrid")

# Create the stacked bar plot
plt.figure(figsize=(12, 6))

sns.barplot(x='Sex', y='Survived', data=df, color="pink")
plt.title('Bar Chart of Survival')
plt.xlabel('Sex')
plt.ylabel('Survived')
plt.xticks(rotation=45, ha="right")
plt.tight_layout()
plt.show()
plt.figure()
```




```
<Figure size 640x480 with 0 Axes>
<Figure size 640x480 with 0 Axes>
```