

```
In [55]: import numpy as np
import pandas as PD
import seaborn as sns
import matplotlib.pyplot as plt
```

```
In [62]: df = sns.load_dataset("titanic")

print(df.isnull().sum())

df['age'].fillna(df['age'].median(), inplace=True)
df.dropna(subset=['embarked'], inplace=True)

df['age'].isnull().sum()
```

```
survived      0
pclass        0
sex           0
age          177
sibsp         0
parch         0
fare          0
embarked       2
class         0
who           0
adult_male    0
deck         688
embark_town    2
alive         0
alone         0
dtype: int64
```

Out[62]: 0

```
In [63]: df['age'].isnull().sum()
```

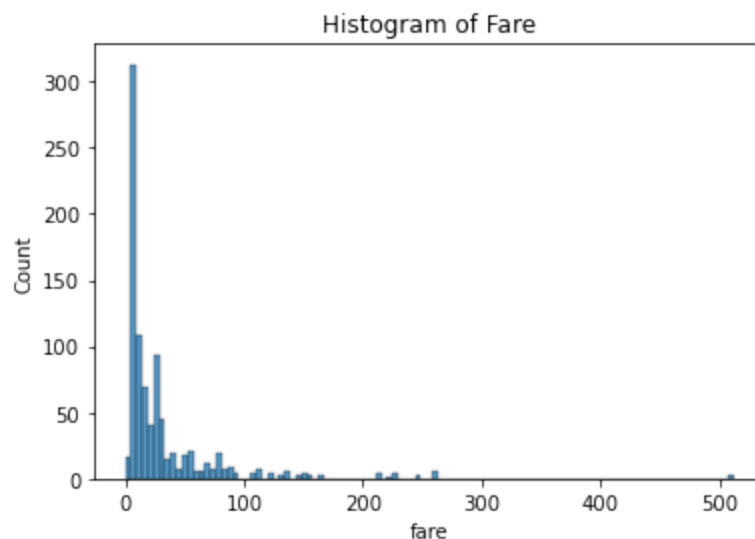
Out[63]: 0

```
In [64]: df.describe()
```

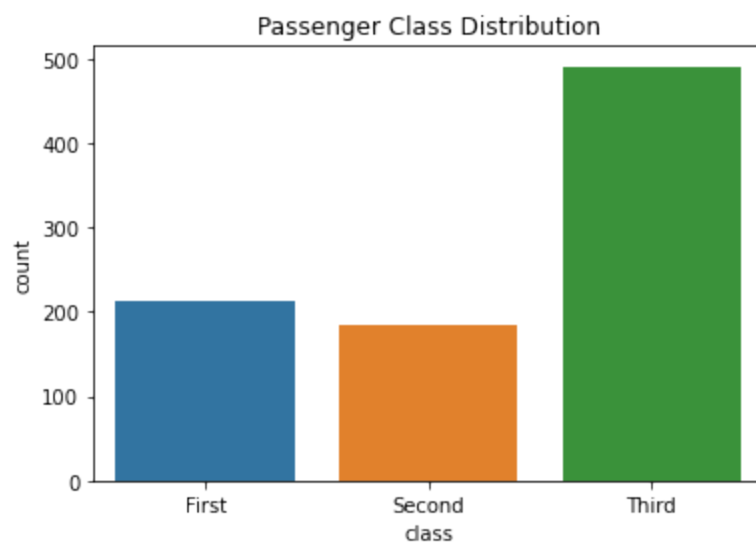
```
Out[64]:
```

	survived	pclass	age	sibsp	parch	fare
<b>count</b>	889.000000	889.000000	889.000000	889.000000	889.000000	889.000000
<b>mean</b>	0.382452	2.311586	29.315152	0.524184	0.382452	32.096681
<b>std</b>	0.486260	0.834700	12.984932	1.103705	0.806761	49.697504
<b>min</b>	0.000000	1.000000	0.420000	0.000000	0.000000	0.000000
<b>25%</b>	0.000000	2.000000	22.000000	0.000000	0.000000	7.895800
<b>50%</b>	0.000000	3.000000	28.000000	0.000000	0.000000	14.454200
<b>75%</b>	1.000000	3.000000	35.000000	1.000000	0.000000	31.000000
<b>max</b>	1.000000	3.000000	80.000000	8.000000	6.000000	512.329200

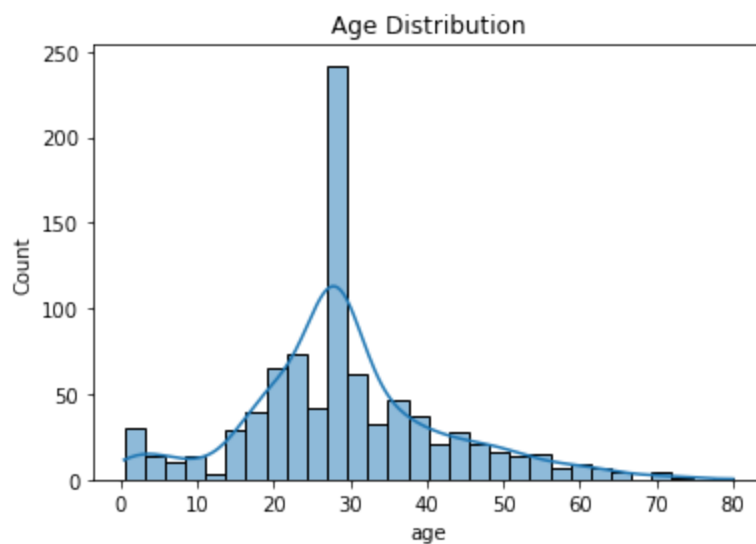
```
In [65]: sns.histplot(df['fare'])  
plt.title("Histogram of Fare")  
plt.show()
```



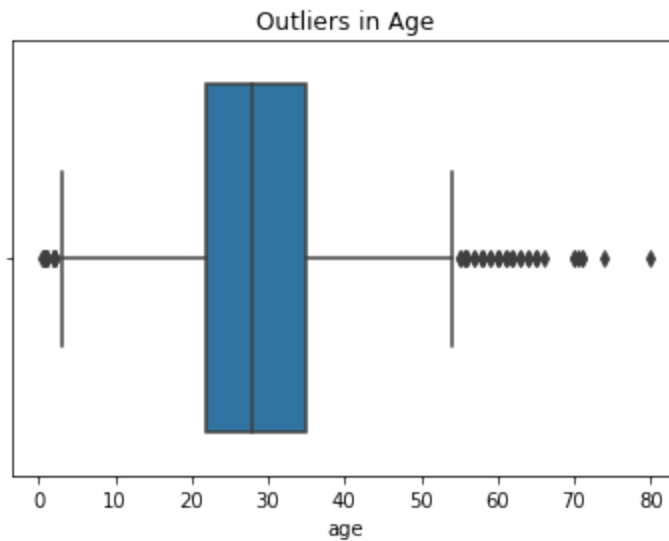
```
In [66]: sns.countplot(x='class', data=df)
plt.title("Passenger Class Distribution")
plt.show()
```



```
In [67]: sns.histplot(df['age'], kde=True)
plt.title("Age Distribution")
plt.show()
```



```
In [68]: sns.boxplot(x='age',data=df)
plt.title("Outliers in Age")
plt.show()
```

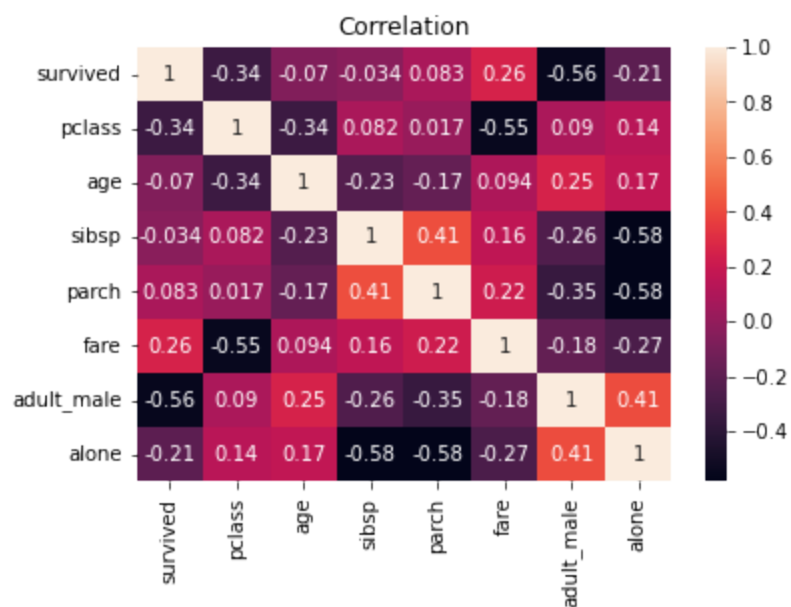


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In [ ]:
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```
In [69]: correlation = df.corr()
print("Correlation ", correlation)
```

	Correlation	survived	pclass	age	sibsp	parch
fare	adult_male	alone				
survived	1.000000	-0.335549	-0.069822	-0.034040	0.083151	0.255290
55520	-0.206207					
pclass	-0.335549	1.000000	-0.336512	0.081656	0.016824	-0.548193
90098	0.138553					
age	-0.069822	-0.336512	1.000000	-0.232543	-0.171485	0.093707
53491	0.169518					
sibsp	-0.034040	0.081656	-0.232543	1.000000	0.414542	0.160887
55401	-0.584186					
parch	0.083151	0.016824	-0.171485	0.414542	1.000000	0.217532
51945	-0.583112					
fare	0.255290	-0.548193	0.093707	0.160887	0.217532	1.000000
79851	-0.274079					
adult_male	-0.555520	0.090098	0.253491	-0.255401	-0.351945	-0.179851
00000	0.407992					
alone	-0.206207	0.138553	0.169518	-0.584186	-0.583112	-0.274079
07992	1.000000					

```
In [72]: sns.heatmap(correlation,annot=True)
plt.title('Correlation')
plt.show()
```



```
In [ ]:
```