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REG NO:22MID0346

## TASK 02

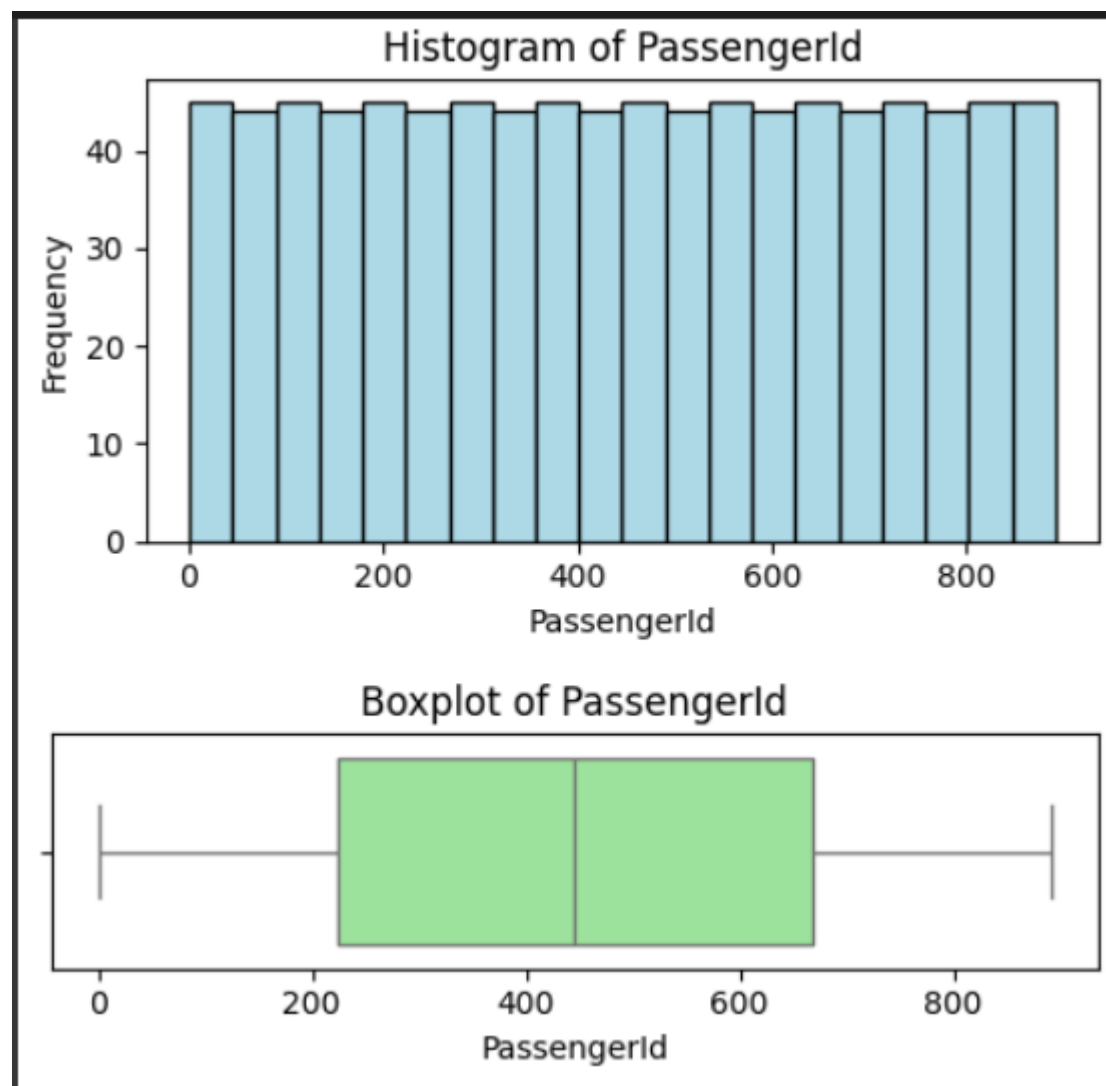
```
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
data = pd.read_csv('/content/Titanic-Dataset (1).csv')
print("Summary Statistics:")
print(data.describe())
print("\nMedian values:")
print(data.median(numeric_only=True))
numeric_cols = data.select_dtypes(include=['int64', 'float64']).columns
for col in numeric_cols:
    plt.figure(figsize=(5, 3))
    plt.hist(data[col], bins=20, color='lightblue', edgecolor='black')
    plt.title(f'Histogram of {col}')
    plt.xlabel(col)
    plt.ylabel('Frequency')
    plt.tight_layout()
    plt.show()
    plt.figure(figsize=(5, 2))
    sns.boxplot(x=data[col], color='lightgreen')
    plt.title(f'Boxplot of {col}')
    plt.tight_layout()
    plt.show()
sns.pairplot(data[numeric_cols])
plt.suptitle("Pairplot of Numeric Features", y=1.02)
plt.show()
plt.figure(figsize=(10, 6))
sns.heatmap(data[numeric_cols].corr(), annot=True, cmap='coolwarm', fmt=".2f")
plt.title("Correlation Matrix")
plt.show()
```

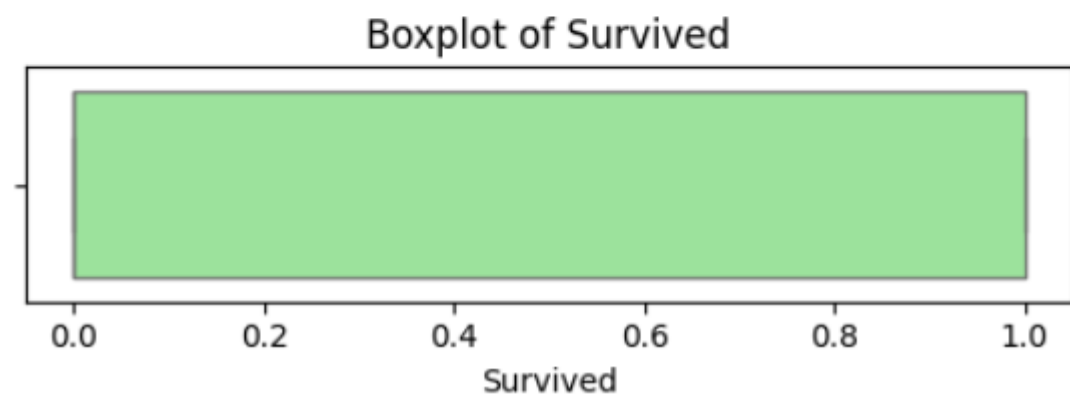
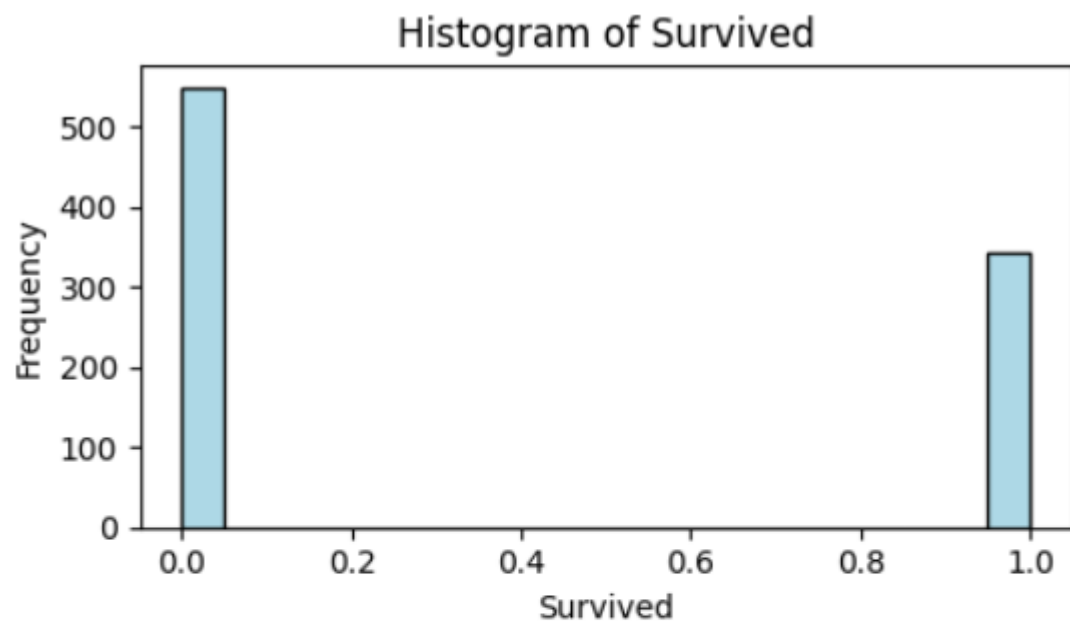
**Output:**

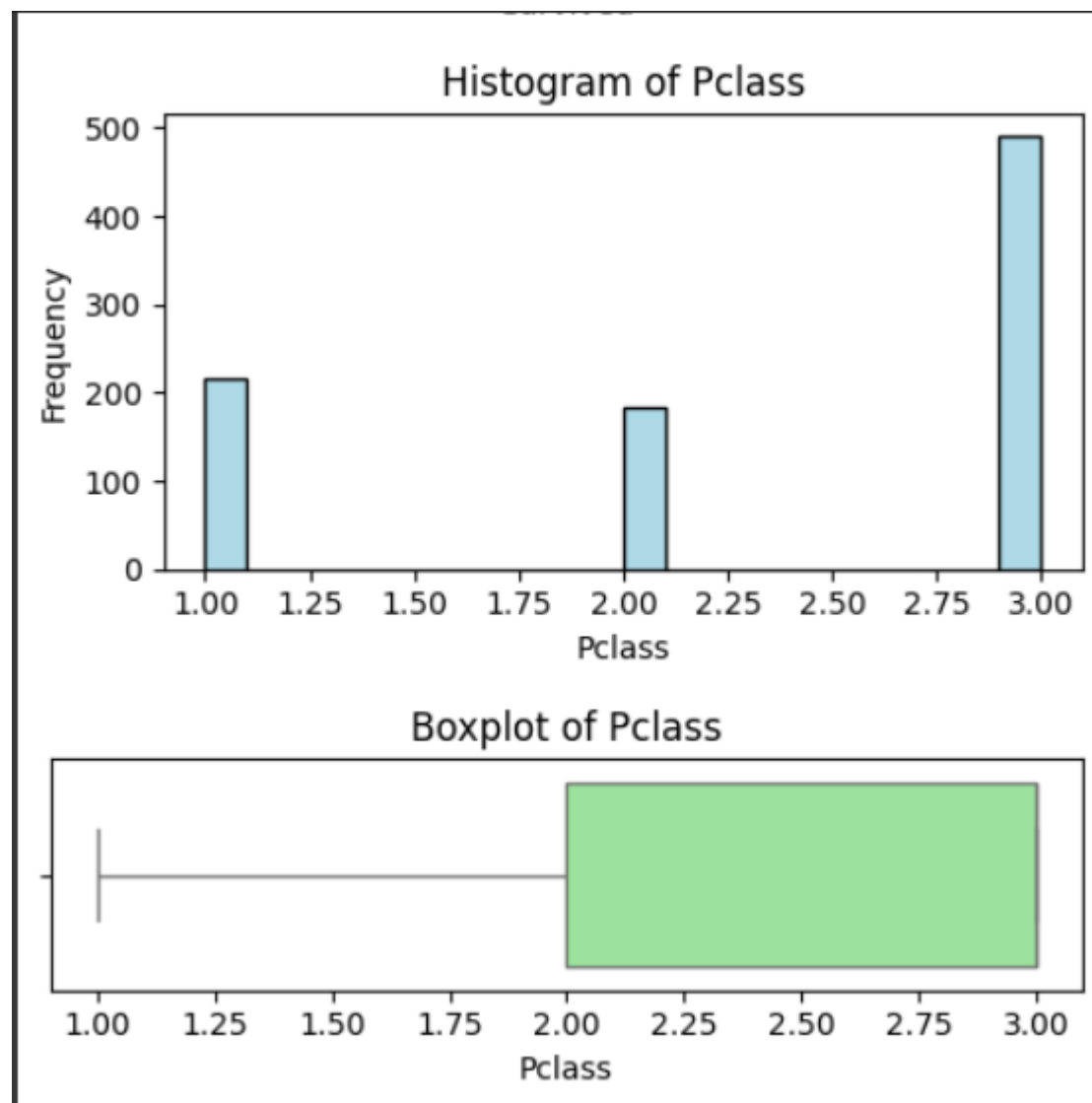
```
Summary Statistics:
count    PassengerId    Survived    Pclass    Age    SibSp  \
mean     446.000000     0.383838     2.308642    29.699118    0.523008
std      257.353842     0.486592     0.836071    14.526497    1.102743
min       1.000000     0.000000     1.000000     0.420000    0.000000
25%      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

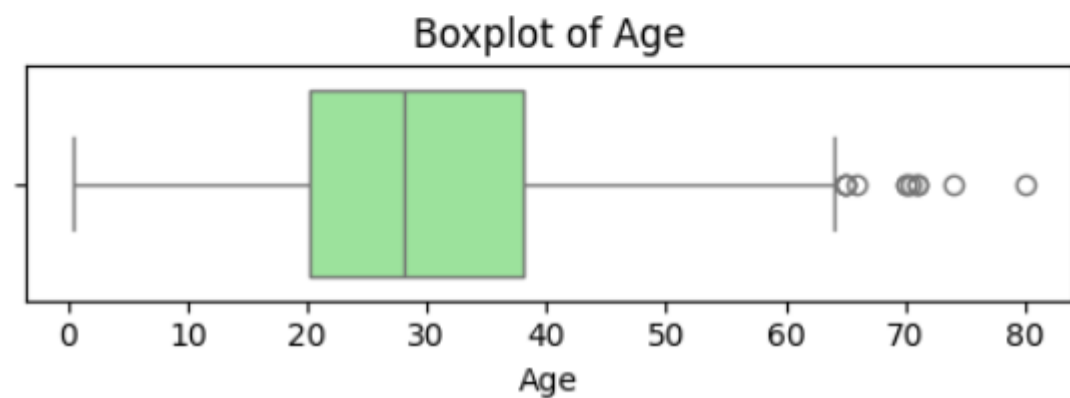
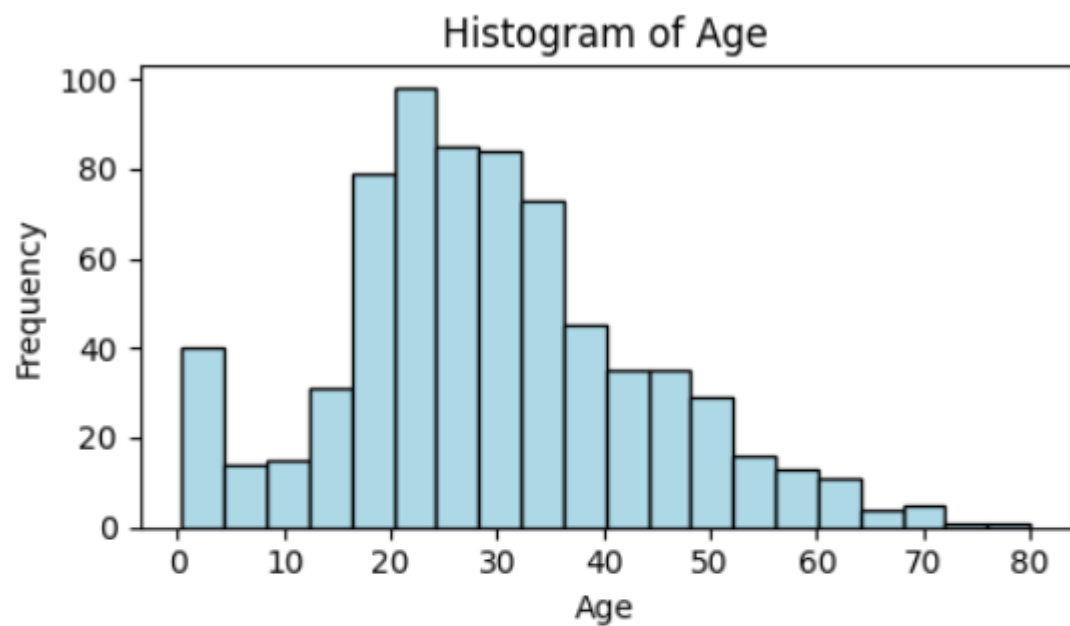
      Parch    Fare
count    891.000000    891.000000
mean      0.381594    32.204208
std       0.806057    49.693429
min       0.000000     0.000000
25%       0.000000     7.910400
50%       0.000000    14.454200
75%       0.000000    31.000000
max       6.000000   512.329200

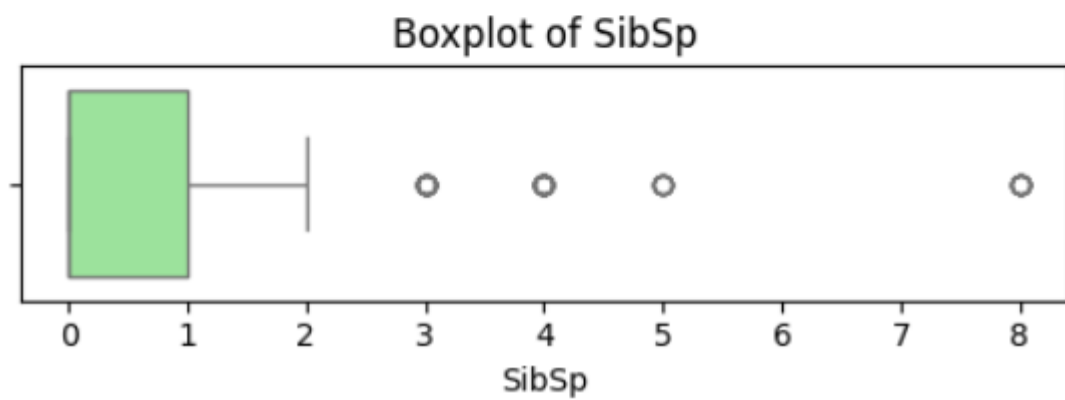
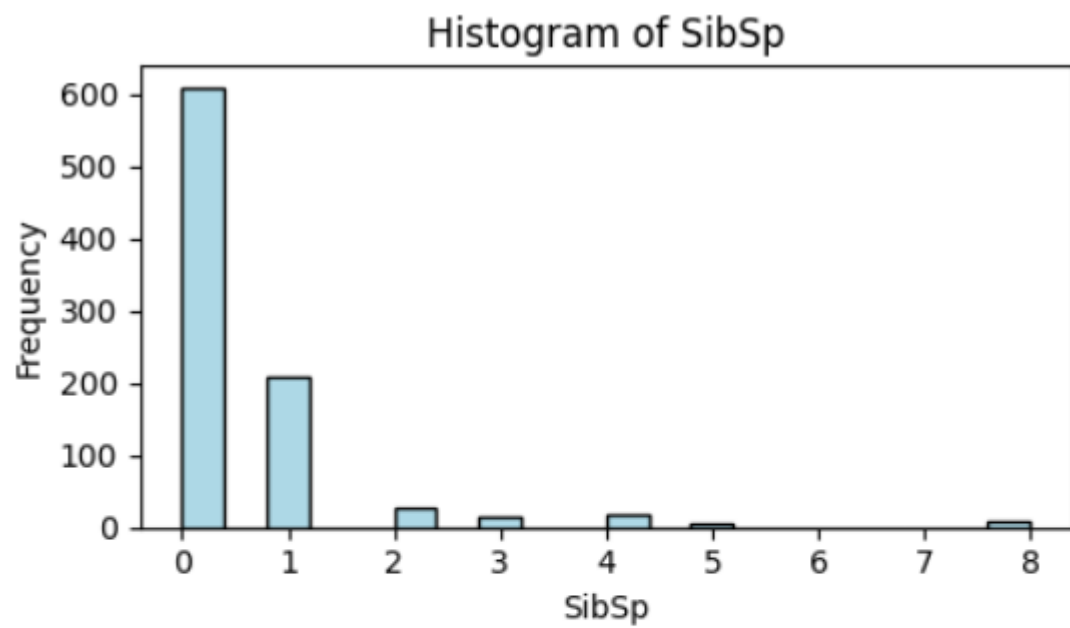
Median values:
PassengerId    446.0000
Survived        0.0000
Pclass          3.0000
Age             28.0000
SibSp           0.0000
Parch           0.0000
Fare            14.4542
dtype: float64
```

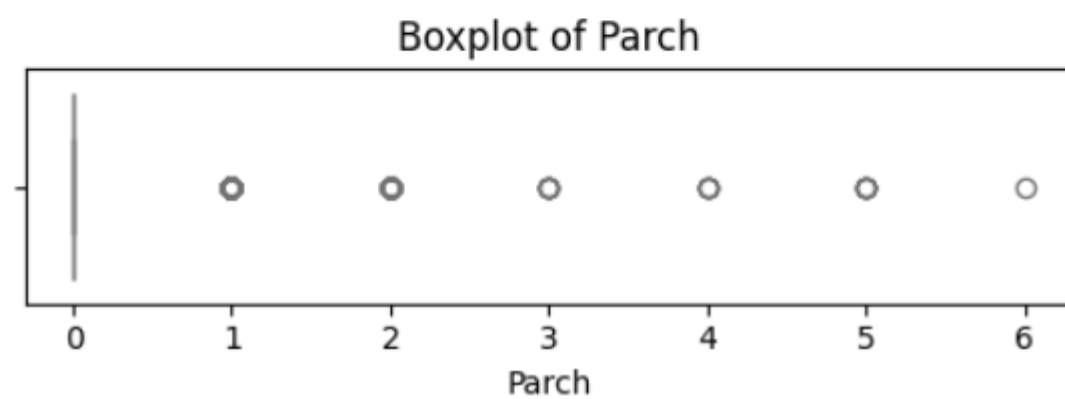




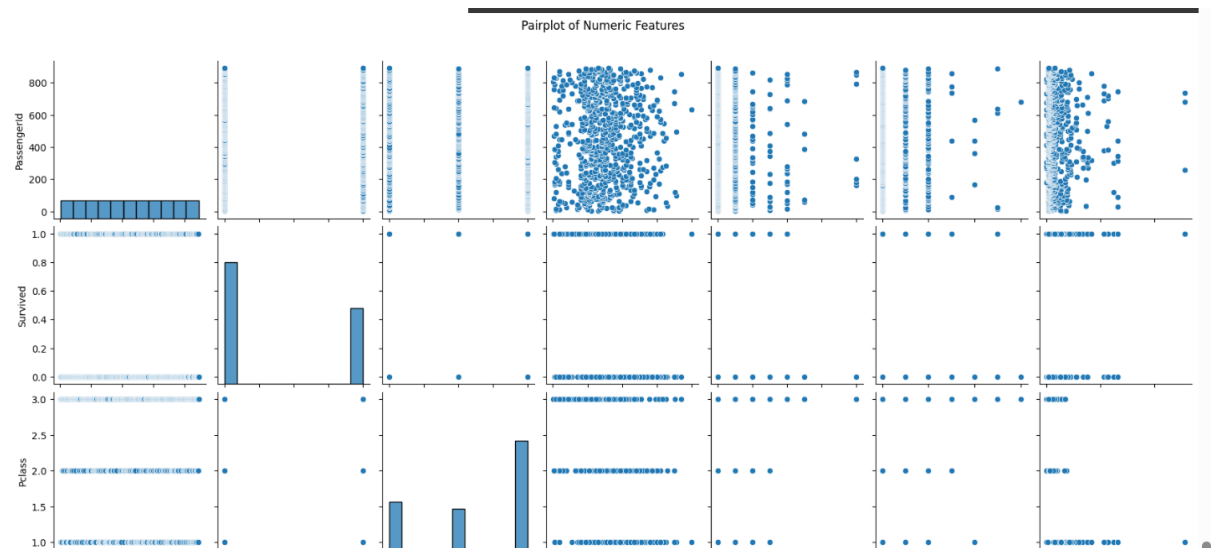
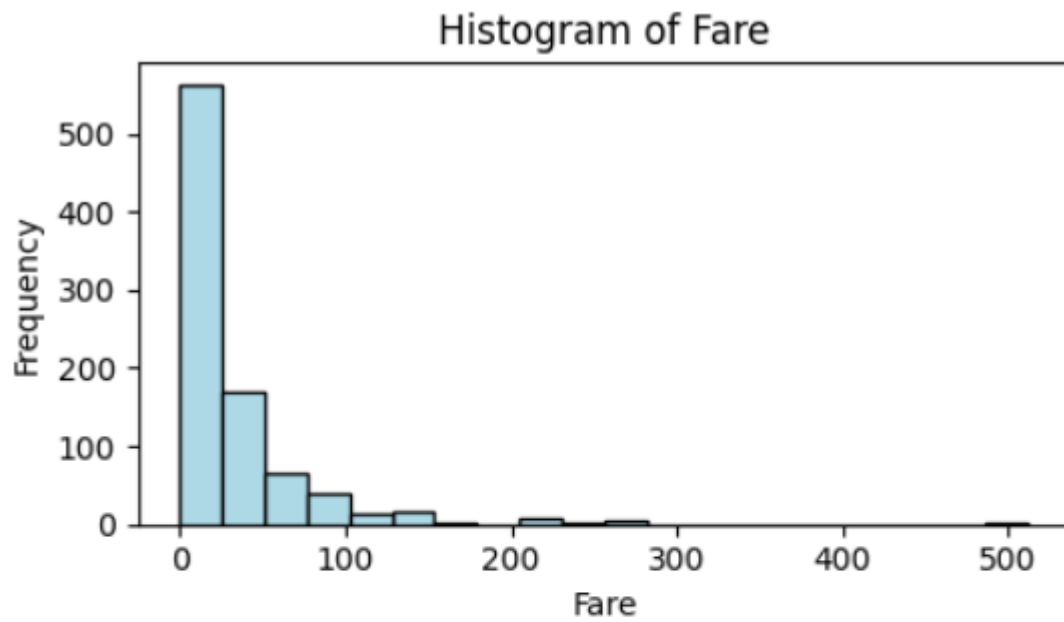


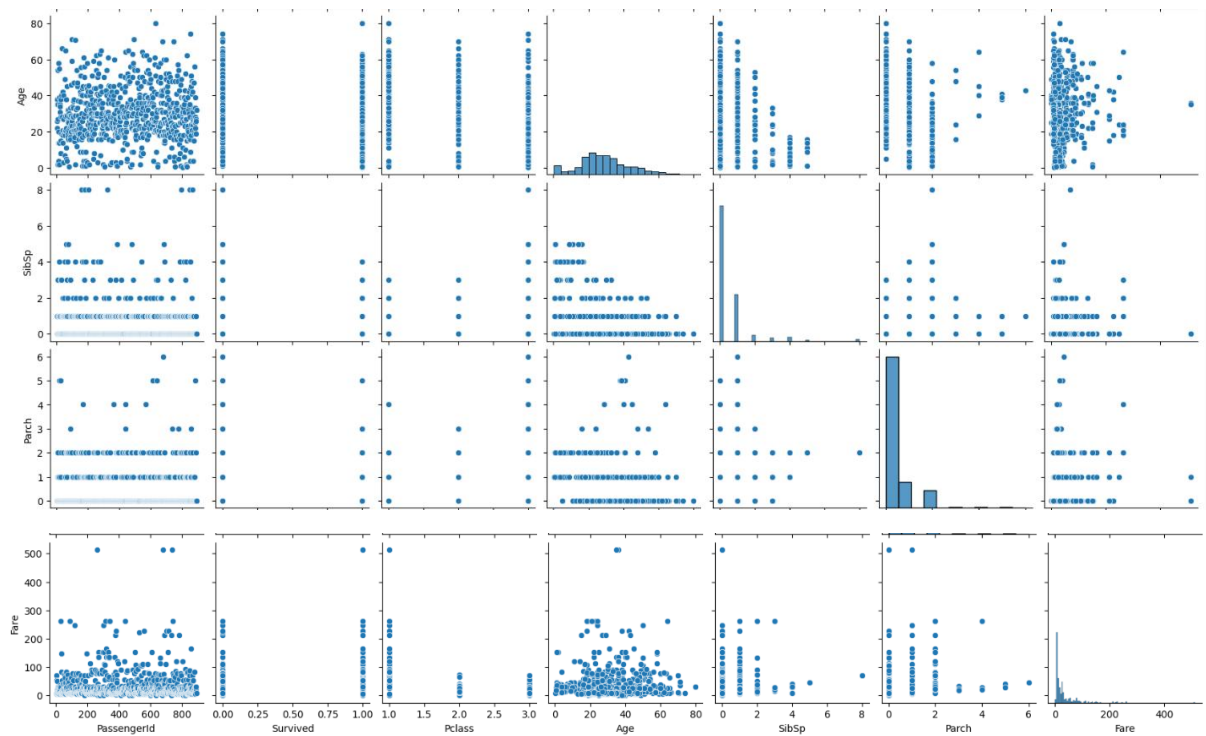












Correlation Matrix

