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REG NO:22MID0355

TASK 02

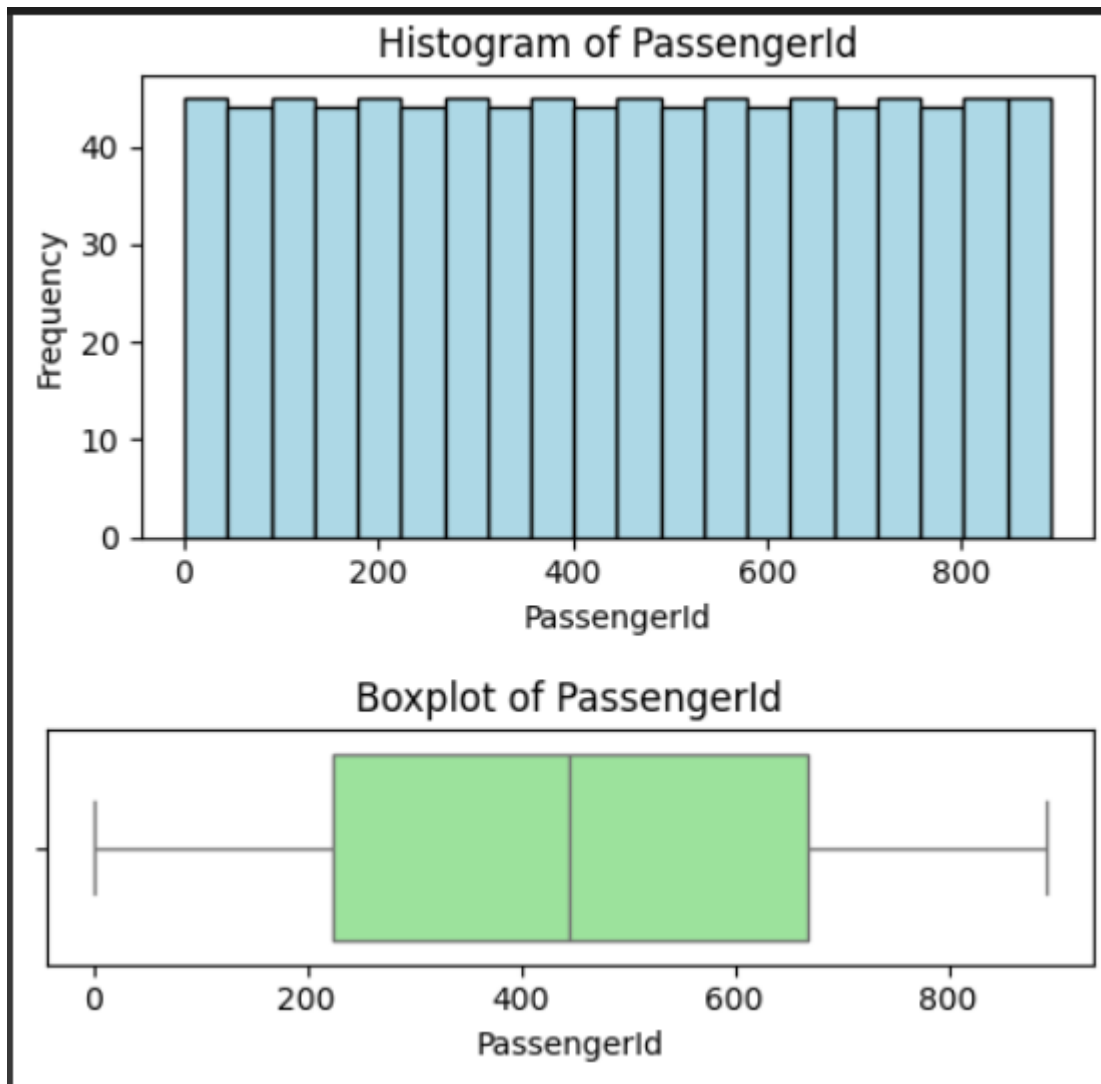
```
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
data = pd.read_csv('/content/Titanic-Dataset (1).csv')
print("Summary Statistics:")
print(data.describe())
print("\nMedian values:")
print(data.median(numeric_only=True))
numeric_cols = data.select_dtypes(include=['int64', '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()
```

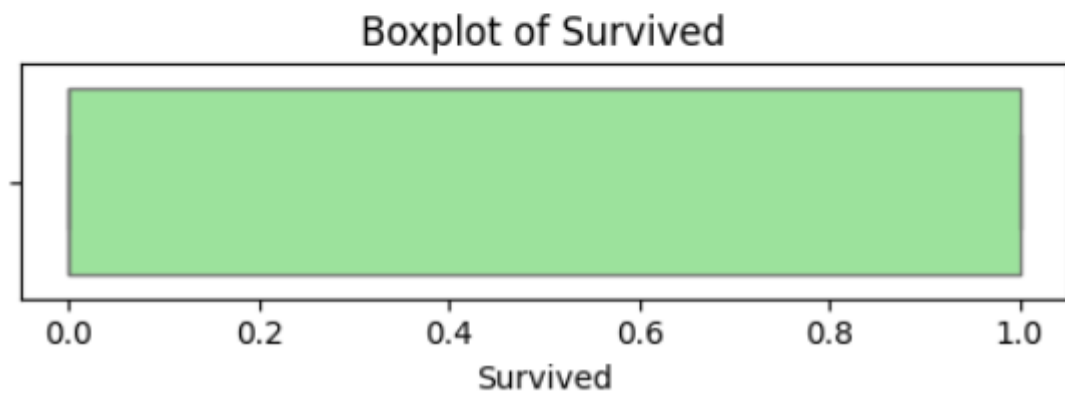
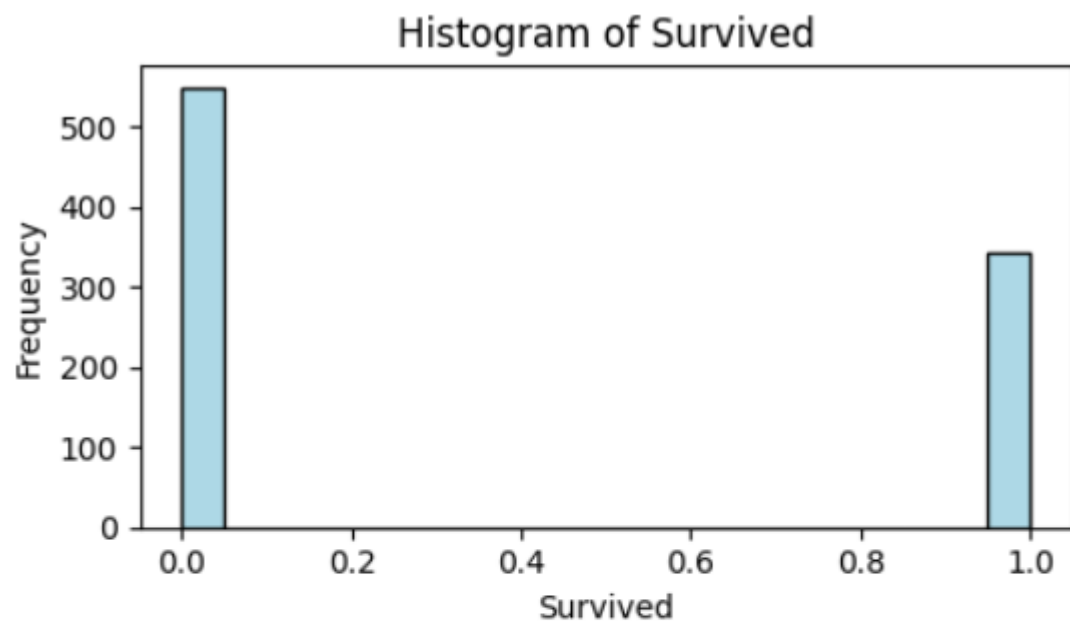
Output:

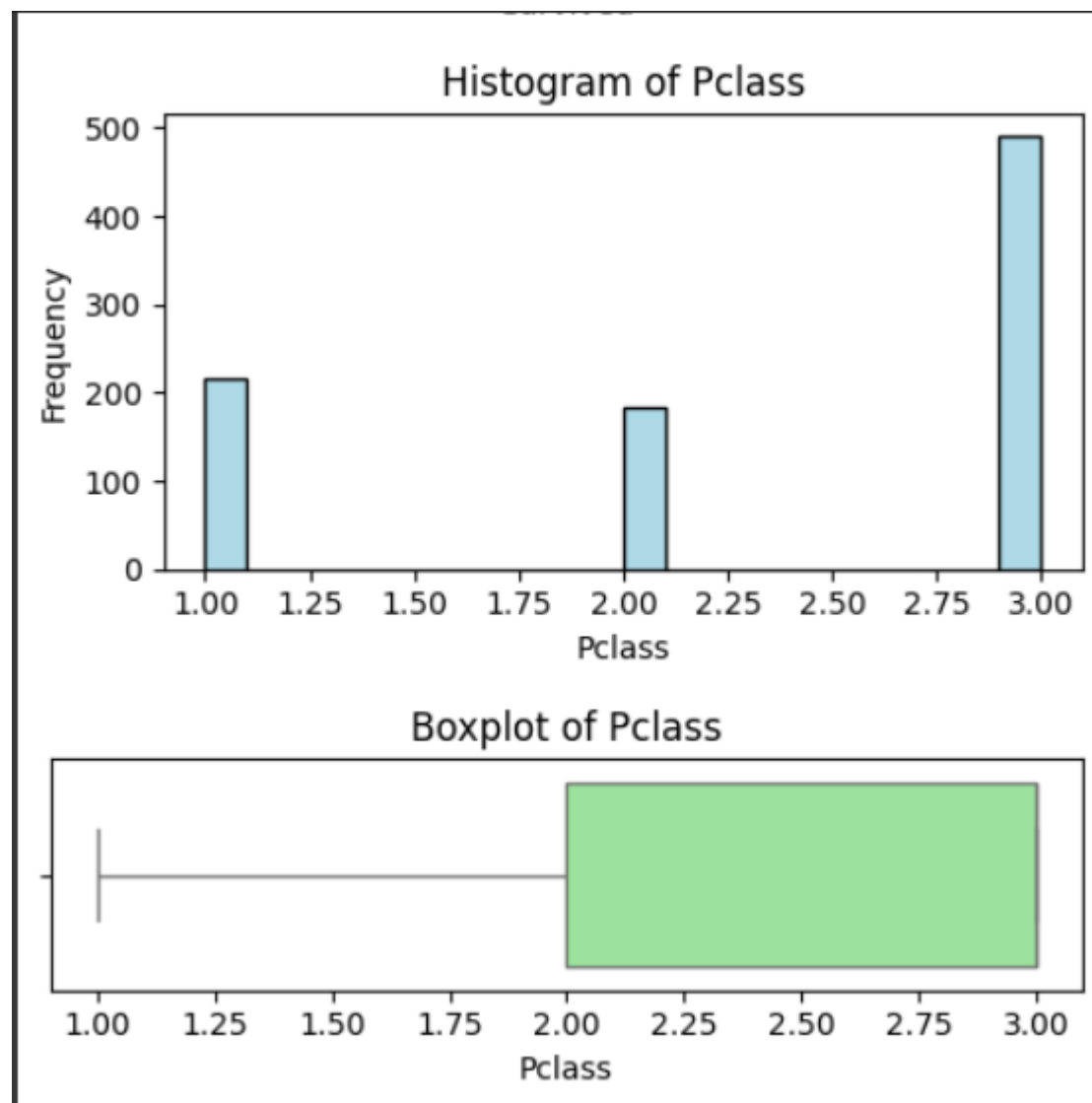
```
Summary Statistics:
count  891.000000  891.000000  891.000000  714.000000  891.000000
mean    446.000000   0.383838   2.308642  29.699118   0.523008
std     257.353842   0.486592   0.836071  14.526497   1.102743
min       1.000000   0.000000   1.000000   0.420000   0.000000
25%     223.500000   0.000000   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

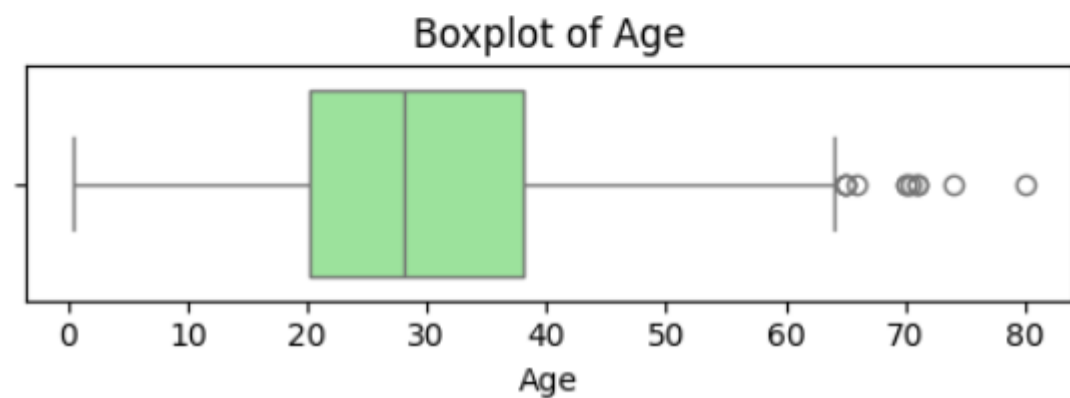
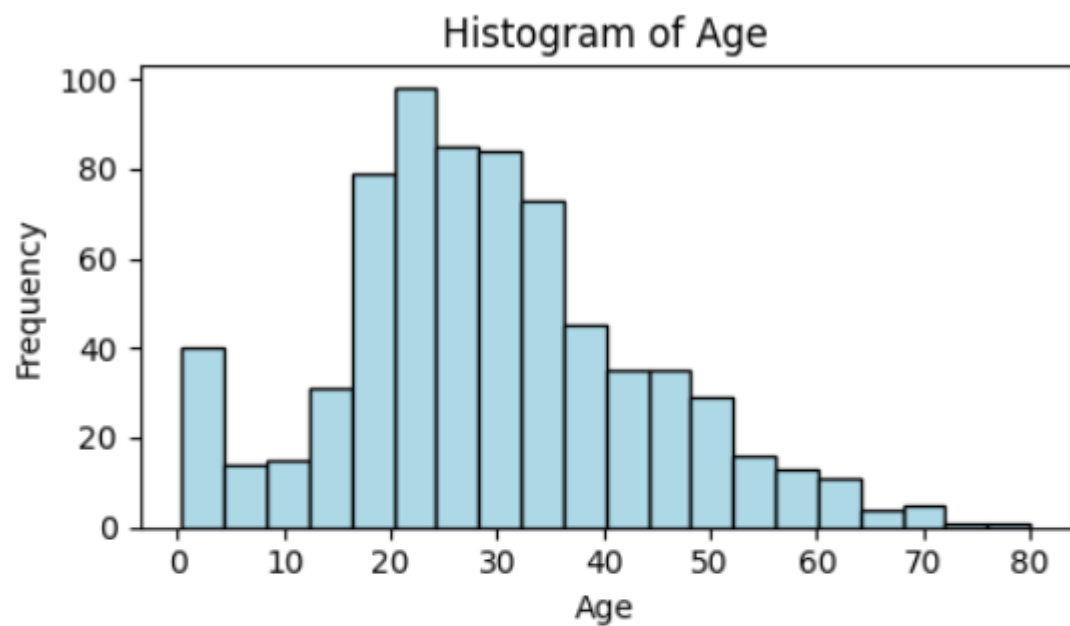
      Parch      Fare
count  891.000000  891.000000
mean     0.381594  32.204208
std     0.806057  49.693429
min     0.000000   0.000000
25%     0.000000   7.910400
50%     0.000000  14.454200
75%     0.000000  31.000000
max     6.000000 512.329200

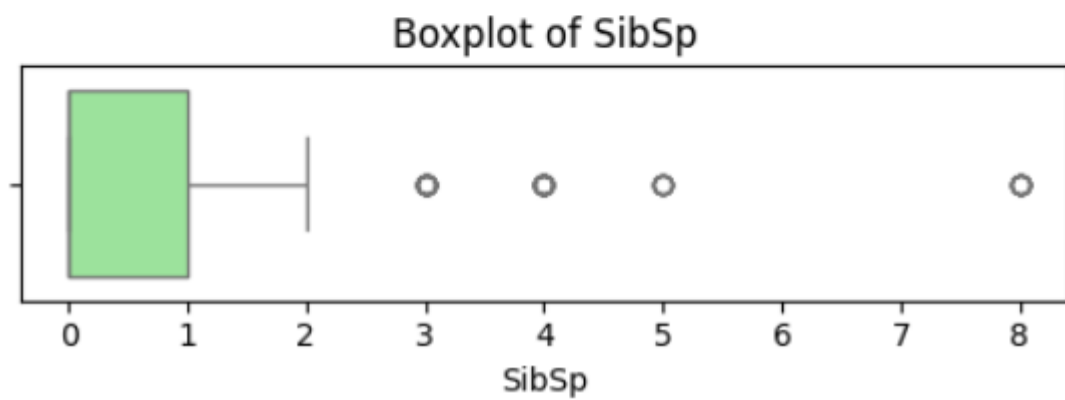
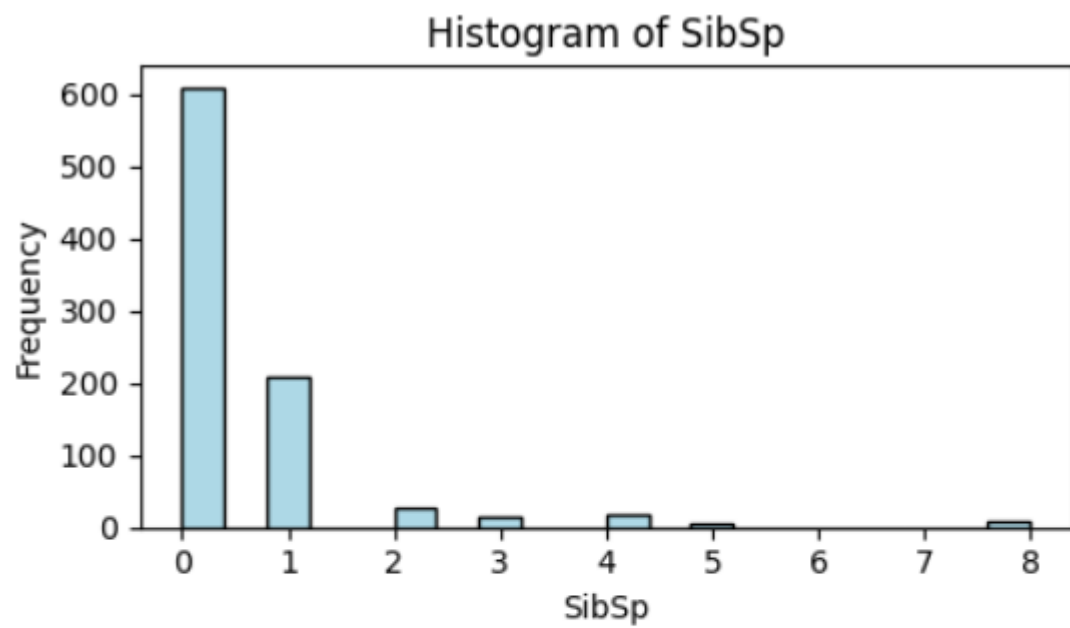
Median values:
PassengerId  446.0000
Survived      0.0000
Pclass        3.0000
Age           28.0000
SibSp         0.0000
Parch         0.0000
Fare          14.4542
dtype: float64
```

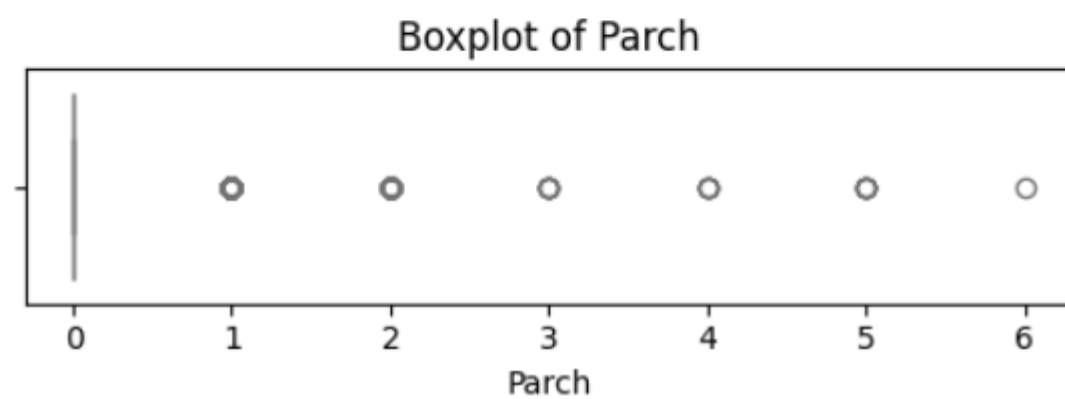


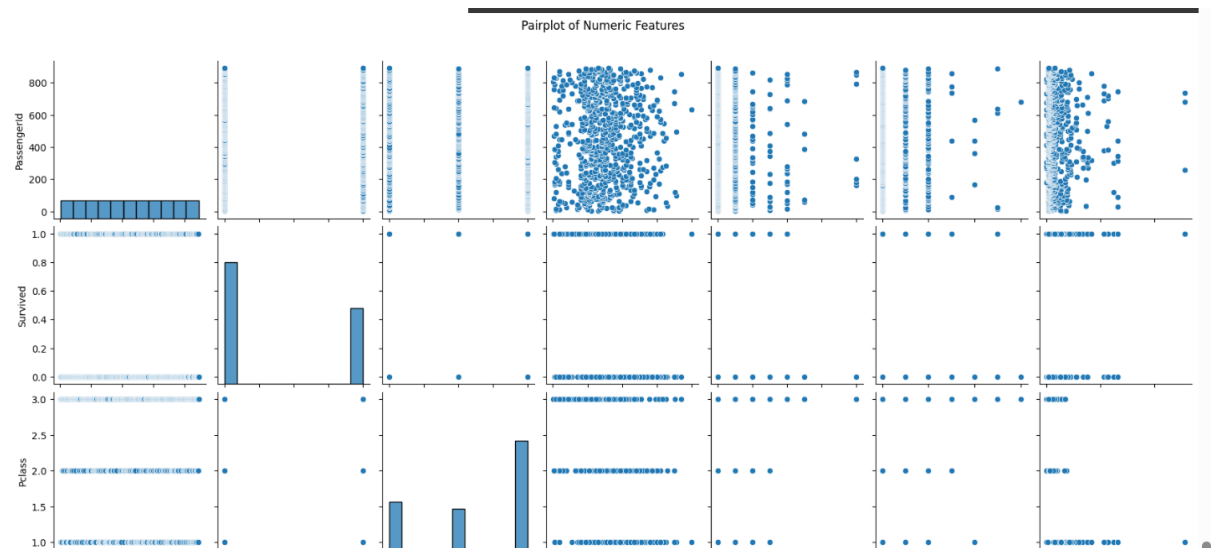
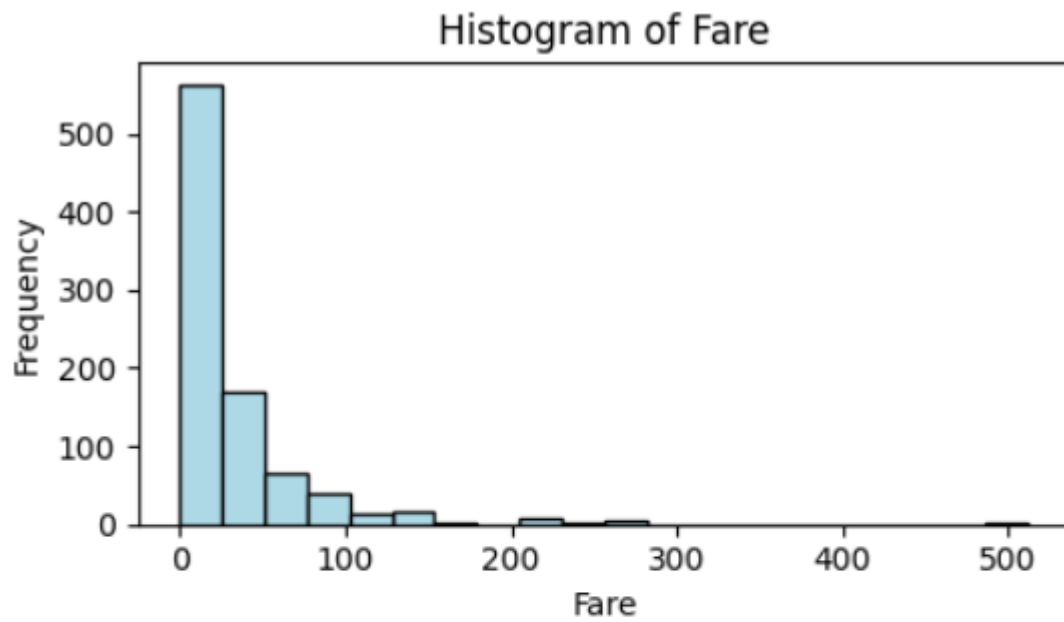


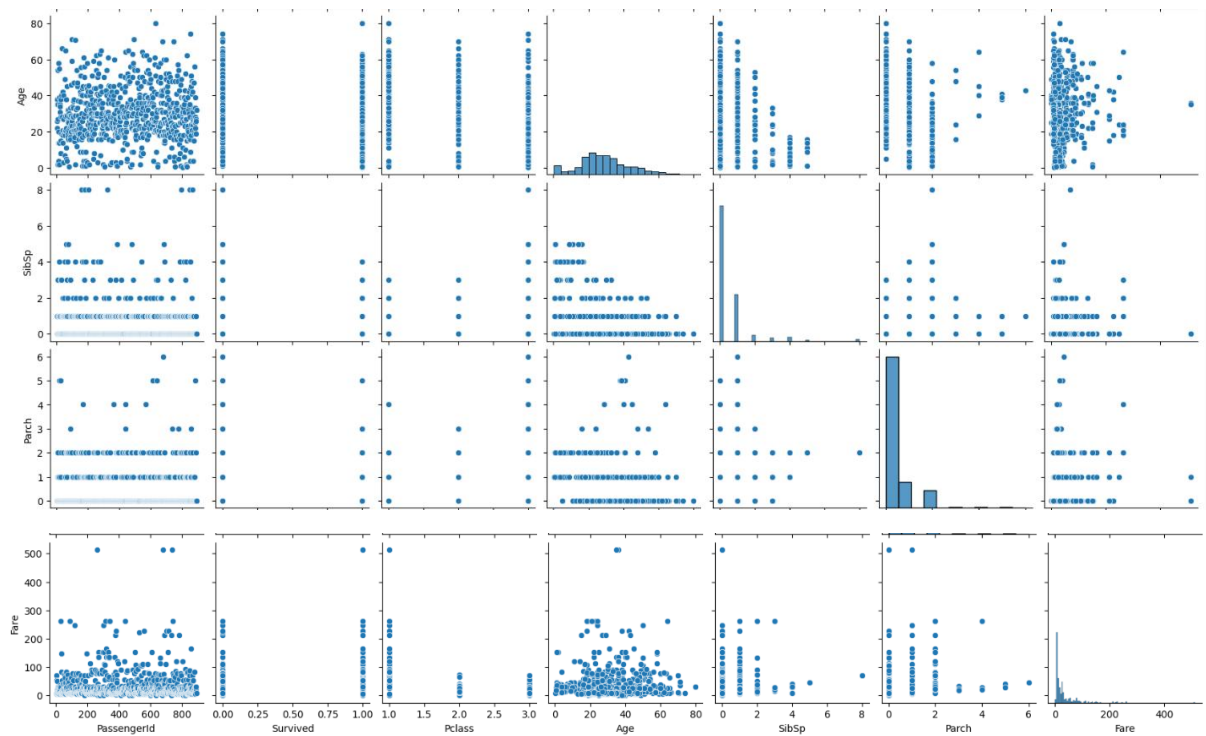












Correlation Matrix

