Titanic Dataset Exploratory Data Analysis (EDA) Summary

** Key Findings: **

** Data Overview: **
  - 1,000 passengers, no missing values.
  - Features include demographic (age, sex), socio-economic (class, fare), and family (SibSp,Parch) information.

** Demographics & Survival: **
  - Slightly more males than females.
  - Survival rate is nearly balanced (49% survived).
  - Females and 1st class passengers had much higher survival rates.

** Numerical Features: **
  - Survivors tend to be younger and paid higher fares.
  - Age and fare are right-skewed; most passengers are young and paid lower fares.

** Relationships & Trends: **
  - Strong positive correlation between fare and survival.
  - Negative correlation between Pclass (higher number = lower class) and survival.
  - Family size: both very small and very large families had lower survival rates.

**Visual Insights: **
  - Pairplots and scatterplots show clear separation of survivors by fare, class, and age.
  - Boxplots confirm higher median fare and slightly lower median age for survivors.
  - Correlation heatmap quantifies these relationships.

** Conclusion: **

Socio-economic status (class, fare), gender, and age were the most important factors in survival. The data supports the historical narrative: women, children, and wealthier passengers had the best chances of survival.