DATA ANALYST

Task 5

*Visual Observation :*

* Survival Count : Most passengers did not survive. The number of non-survivors is significantly higher than survivors.
* Survival by Sex : Females had a much higher survival rate compared to males, indicating 'women first' rescue priority.
* Survival by Class : Higher-class passengers (1st class) had a better survival rate compared to 2nd and 3rd class passengers.
* Age Distribution : Most passengers were between 20 and 40 years old. Few children and elderly were on board.
* Survival by Age : Children had higher survival rates than adults, while middle-aged adults had the lowest survival rates.
* Fare Distribution : Most passengers paid low fares, but there were some outliers with very high fares, indicating luxury bookings

***Summary of Findings :***

**Passenger Demographics :**

Majority of passengers were male (~65%).

Most passengers were in the 20–40 years age range.

There were also many children and elderly passengers, but in smaller proportions.

**Class Distribution :**

Largest group of passengers travelled in 3rd class.

1st class passengers had a much higher survival rate compared to 2nd and 3rd class.

**Survival Trends :**

Females had a significantly higher survival rate than males (consistent with “women and children first”).

Younger passengers had better chances of survival, especially children.

Higher ticket class was strongly correlated with higher survival chances.

**Fare and Class Relationship :**

Fare was highest for 1st class passengers, moderate for 2nd class, and lowest for 3rd class.

Some outliers in fare indicate passengers who may have booked luxury suites or multiple tickets.

**Embarkation Port :**

Most passengers boarded from Southampton, followed by Cherbourg and Queenstown.

Passengers from Cherbourg had a relatively higher survival rate, likely because many were from 1st class.

**Family Size Effect :**

Passengers traveling with small families (1–3 members) had a slightly better survival rate.

Very large families had lower survival chances, possibly due to difficulties staying together in evacuation.

**Correlation Insights :**

Strong positive correlation between Fare and Pclass (lower class number = higher fare).

Survival is positively correlated with being female, younger, and traveling in higher class.