Introduction

In this assignment, you will work with a dataset containing information about passengers on the Titanic. The dataset includes data on passenger details such as PassengerId, Survived, Pclass, Name, Sex, Age, SibSp, Parch, Ticket, Fare, Cabin, and Embarked. Your task is to analyse and visualise the data to gain insights into the survival rates and other characteristics of the passengers.

Dataset Description

- PassengerId: A unique identifier for each passenger.
- Survived: A binary variable indicating whether the passenger survived or not (0 = No, 1 = Yes).
- Pclass: The passenger's class (1 = 1st, 2 = 2nd, 3 = 3rd).
- Name: The name of the passenger.
- Sex: The gender of the passenger.
- Age: The age of the passenger.
- SibSp: The number of siblings/spouses aboard.
- Parch: The number of parents/children aboard.
- Ticket: The ticket number.
- Fare: The fare paid for the ticket.
- Cabin: The cabin number.
- Embarked: The port of embarkation (C = Cherbourg, Q = Queenstown, S = Southampton).

Instructions

- Download the provided Titanic passenger dataset and load it into Power BI.
- Create a new report and add a new page for each analysis and visualisation.
- Use appropriate visualisations to represent the data effectively.
- Provide necessary filters and interactions to make the dashboard interactive.
- Include titles, axis labels, and data labels as required for clarity and understanding.
- Ensure the visualisations are well-organised and visually appealing.
- Use DAX expressions where necessary to perform calculations for specific visualisations.

Questions

1. Create a bar chart to show the count of survivors and non-survivors.
2. Create a pie chart to show the distribution of male and female passengers.
3. Build a histogram to visualise the age distribution of the passengers. (0-10,-11-20,21-30 …..)
4. Create a scatter plot to analyse the relationship between age and fare paid for the ticket.
5. Build a donut chart to display the percentage of passengers embarked from each port.
6. Create a table to show the top 10 passengers with the highest fares, including their names and ticket numbers.
7. Build a card to display the average age of passengers and avg fare

8. Create a table to display the names of passengers who were under 18 years old and did not survive.(Hint: Use the "**Name**," "**Age**," and "**Survived**" attributes to filter the data and create the table).
9. Create a **multi-row card** to display the passenger details (Name, Age, Sex, Ticket, Fare, Cabin) for a selected passenger. (**Hint:** Use the "Name", "Age", "Sex," "Ticket", "Fare" and "Cabin" attributes to create the multi-row card).
10. Create a stacked column chart to compare the number of male and female passengers in each passenger class.(**Hint**: Use the "Pclass" and "Sex" attributes to create the stacked column chart)