Project: Global Games Sales Analysis

Objective:

The primary goal of this analysis is to explore and extract valuable insights from the sales data of PS4 games.
This includes understanding global and regional sales trends, identifying top-performing games, genres, and publishers, and visualizing key patterns in the data.

Data Description

- **Game_Title**: The title or name of the video game.

- **Year**: The year in which the game was released.

- **Genre**: The category or genre that the game belongs to (e.g., Action, Shooter, Sports).

- **Publisher**: The company or organization responsible for publishing the game.

- **Regional Sales**: Sales figures broken down by geographic regions, including:

    o North America

    o Europe

    o Japan

    o Rest of World

    o Global (aggregate sales across all regions)

Data Preprocessing and Wrangling

1. Load the dataset using Python Library Pandas

2. Check types of data

3. Drop irrelevant columns

4. Rename columns where required

5. Check duplicate rows

6. Drop duplicate records

7. Check missing and null values

8. Drop missing and null values except Regional Sales Columns

9. Fill missing sales value by their median

Exploratory Data Analysis (Key Observations)

1. Identify the top 5 best-selling games globally
   → *Observe which titles dominate global sales and analyze their genres and publishers.*

2. Yearly trend with the highest number of game releases
   → *Review yearly release patterns to identify peak activity and possible reasons behind changes.*

3. Compare the sales growth trend for "Action" and "Shooter" genres over the years
   → *Analyze and compare how the popularity of these two genres has evolved over time.*

4. Total sales comparison for regions (pie chart)
   → *Visualize regional market shares and determine which regions lead or lag in sales.*

5. Trend of global sales over the years (line chart)
   → *Identify patterns of growth or decline in global sales across the timeline.*

6. Contribution of each genre to regional sales (stacked bar chart)
   → *Compare genre preferences by region to uncover cultural or market differences.*

7. Top 10 publishers having most game releases
   → *Examine which companies are the most active in publishing and their output volume.*

8. Compare Japan vs Europe sales market (combo chart)
   → *Contrast performance between these two markets and assess shifts in demand.*

9. Show correlations by heatmap (positive and negative correlation)
   → *Interpret the strength and direction of relationships between numerical features.*