**EXPERIMENT - 1**

**AIM:**

The aim of this project is to analyze and explore the **Autism Screening Dataset** to gain insights into the data, identify patterns, and prepare it for further analysis or modeling. The goal is to understand the characteristics of the dataset, handle missing values and duplicates, and visualize the distribution of features to better understand the data structure.

**Procedure:**

1. **Import Libraries:**
   * **pandas for data manipulation.**
   * **matplotlib.pyplot and seaborn for data visualization.**
2. **Load Data:**
   * **pd.read\_csv() loads the dataset into a DataFrame.**
3. **Check for Missing Values:**
   * **isnull().sum() calculates the number of missing values in each column.**
4. **Clean Column Names:**
   * **str.strip() removes any extra spaces in column names.**
5. **Handle Duplicates:**
   * **duplicated().sum() counts duplicate rows.**
   * **drop\_duplicates() removes duplicate rows.**
6. **Explore Data:**
   * **head() and tail() display the first and last rows of the dataset.**
   * **describe() provides summary statistics for numerical columns.**
7. **Visualize Data:**
   * **hist() creates histograms for all numerical columns to visualize their distributions.**

**OUTPUT :**

