# COMP3162
# Mid Semester
# 2024

You have been given a dataset on World Cup 2022 statistics. Complete the following and submit an ipynb file.

1. Data Loading and Inspection:
   a. Load the dataset into a pandas DataFrame and display the first few rows.
   b. Print out the summary statistics for numerical columns like goals scored, minutes played, and average age.
2. Data Manipulation:
   a. Filter the dataset to only include teams with an average age (**Age)** above 25.
   b. Sort the dataset by the number of goals (**Gls)** scored in descending order.
3. Data Visualization:
   a. Create a bar chart to visualize the total goals (**Gls)** scored by each team in the tournament.
   b. Plot a scatter plot showing the relationship between average age (**Age)** and minutes played for all teams.
   c. Visualize the distribution of minutes(**Min)** played using a box plot.
4. Data Filtering and Selection:
   a. Find the team(s) that played the most minutes and show their details.
   b. Filter the dataset to only include teams that scored more than 10 goals (**Gls)** and played more than 500 minutes (**Min)**.
5. Advanced Analysis
   a. Utilize numpy to calculate the mean and standard deviation of goals scored per minute (**Gls90)**