Olympic Dataset Analysis Instructions

A person running on a track

Description automatically generated

*Alex Yee of Lewisham becomes triathalon gold medalist at 2024 Summer Olympics Games*

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# 1. Dataset

Download and open the **Olympics\_dataset.csv** file in Excel.

# 2. Formatting

* **Format the worksheet** (*see dessert exercise if need guidance*):
  + Format the worksheet as **Table**.
  + Set the **Medals Won** and **Total Events** columns to number format.
  + Format the table column width to **autofit the contents**.
  + Use **conditional formatting** to highlight athletes with Medal Percentage of 75% and above in gold.

# 3. Calculating Medal Percentage and Age Group

* **Calculate Medal Percentage** in column H using the formula =F2/G2\*100 and drag down to apply to all rows.
* **Classify athletes into age groups**:
  + Create a new column Age Group next to Age.
  + Use an IF function to classify athletes as "Under 25", "25-30", "31-35", "Above 35".

# 4. Functions and Formulas

* **Determine the average age** of athletes using the AVERAGE function.
* **Calculate the total number of medals** won by athletes from each country using the SUMIFS function.

# 5. Macros

* **Record a macro** named *UpdateMedalData* that:
  + Updates the Medals Won for "Usain Bolt" to 4.
  + Updates the Medal Percentage and other related calculations accordingly.
* **Run the macro** to verify the updates are applied correctly.

# 6. Data Visualisation Using Charts and Graphs

* Create a **bar chart** showing Medals Won by Sport.
* Create a **pie chart** representing the distribution of athletes by Gender.

# 7. Filters and Custom Sort

* **Apply a filter** to the data range.
* **Sort the data** by Country in alphabetical order and then by Medals Won in descending order.

# 8. What-If Analysis

* Use **Goal Seek** to determine the number of events Michael Phelps would need to participate in to maintain a 90% Medal Percentage if he won 7 medals.

# 9. Security

* **Protect the worksheet** with a password (Olympics2024) to prevent editing of the Medals Won and Medal Percentage columns.

# 10. Lookup Function

* In a new sheet, use a **VLOOKUP** function to find the Total Events participated in by an athlete when their name is entered in a separate cell.

# 11. Pivot Table

* Create a **Pivot Table** to summarise medals won by Country and Sport.
* Place the Pivot Table in a new worksheet and format it for readability.

# 12. SWITCH Function

* Add a new column Medal Status next to Medal Percentage.
* Use the **SWITCH function** to classify athletes as:
  + "Excellent" if Medal Percentage is 80% and above
  + "Very Good" if 60%-79%
  + "Good" if 40%-59%
  + "Needs Improvement" if below 40%