**Data Collection and Preprocessing Phase**

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| Date | 01 October 2025 |
| Team ID | SWUID20250181698 |
| Project Title | Global Inflation Dynamics (1980-2024): A Comparative Time-Series Analysis |
| Maximum Marks | 10 Marks |

**Data Exploration and Preprocessing Template**

Identifies data sources, assesses quality issues like missing values and duplicates, and implements resolution plans to ensure accurate and reliable analysis.

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| **Section** | **Description** |
| Data Overview | The dataset contains inflation data for 196 countries across 45 years (1980-2024). It measures the Annual Average Inflation (Consumer Prices) rate. |
| Data Cleaning | **1. Missing Values:** Rows with null Inflation\_Rate were dropped.  **2. Country Filtering:** Countries with fewer than 23 years (50% of the 45-year range) of non-missing data were removed using a Group By function in Power Query.  **3. Duplicate Handling:** No duplicates were found at the (country\_name, Year) level after unpivoting. |
| Data Transformation | The core transformation used Power Query's **Unpivot Other Columns** feature. This converted the data from a **Wide Format** (47 columns) to a **Long Format** (approx. 7,952 rows), which is essential for time-series plotting. |
| Data Type Conversion | The Year column (originally Attribute) was converted to a Whole Number, and the Inflation\_Rate column (Value) was converted to a Decimal Number. |
| Column Splitting and Merging | A new column, **Bloc**, was created using Power Query's **Conditional Column** feature to categorize countries as 'G7 (Developed)', 'BRICS (Emerging)', or 'Other', which is crucial for the comparative analysis visualization. |
| Data Modeling | **Measures Creation (DAX):** Since this is a single table, the primary modeling task is defining the **DAX measures**, specifically the **Median Inflation** measure, to handle outliers. |
| Save Processed Data | The processed and cleaned table is loaded from Power Query into the Power BI data model for visualization. |