**Project Initialization and Planning Phase**

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| Date | 30 July 2025 |
| ID | SWUID20250188226 |
| Project Title | Global Food Production Report (1961-2023) |
| Maximum Marks | 3 Marks |

### Project Overview

#### ****Objective****

To analyze and visualize the global food production trends from 1961 to 2023 using Power BI, providing key insights into crop-wise growth, regional patterns, and food security indicators.

#### ****Scope****

This project covers the historical production data of major food crops (e.g., wheat, rice, maize, tea, fruits) across global regions. It involves data preprocessing, visualization in Power BI, and insight extraction to support agricultural planning and policy-making.

### Problem Statement

#### ****Description****

The global population continues to grow, putting increasing pressure on agricultural systems to produce sufficient food. However, stakeholders often lack accessible tools to explore production trends and regional contributions in a meaningful visual format.

#### ****Impact****

By understanding long-term food production trends, governments and organizations can make data-driven decisions for food security, sustainability, and climate-resilient agriculture.

### Proposed Solution

#### ****Approach****

The project will involve collecting and cleaning the dataset, importing it into Power BI, designing dashboards with charts and KPIs, and analyzing trends through slicers and filters. The result will be an interactive report for users to explore insights.

#### ****Key Features****

* Interactive Power BI dashboard
* Crop-wise and year-wise analysis
* Regional breakdown of production
* Visualization using bar, line, and pie charts
* Insightful KPIs for decision-making

**Resource Requirements**

| **Resource Type** | **Description** | **Specification/Allocation** |
| --- | --- | --- |
| **Hardware** | Computing Resources | Standard Laptop with Intel i5/i7 |
|  | Memory | 8 GB RAM |
|  | Storage | 512 GB SSD |
| **Software** | Frameworks | Power BI Desktop |
|  | Libraries | pandas, numpy, matplotlib (for preprocessing) |
|  | Development Environment | Jupyter Notebook, Git |
| **Data** | Data | world food production dataset (CSV), 1961–2023, 200+ countries |