Product Backlog

**Features:**

Produce results with columns for countries, cities, ands capital cities.

**Country Report:**

A country Report should contain the following columns:

-code

-name

-continent

-region

-population

-capital

**City report**:

The columns listed below are essential for city reports.

-name

-country

-District

-population

**Capital City Report**:

The following Columns are required for city reports.

-name

-country

-population

**Population Report.**

The following data is asked for the population reports.

-The name of continent/ region/ country.

-The total population of the continent/ region/ country.

-The total population of the continent/ region/ country living in cities. (Also include %)

-The total population of the continent/ region/ country not living in cities (Also include %)

**Prioritization**

**High Priority**

- User Registration and Login

- Data Ingestion, Update, and Deletion

- Population Overview Reports

**Medium Priority**:

- Advanced Search and Filtering

- Data Export

- Dashboard Interface

- Database Optimization

**Low Priority:**

- Role-Based Access Control

- Notification

- Data Encryption

- Regular Backups

This prioritization is based on providing immediate value to the users, ensuring core functionalities are in place, and then progressively enhancing the system with advanced features and optimizations.

**User story:**

**1.User Story 1**:

0 As a new user, I want to register an account so that I can access the system.

   - Tasks:

     - Design registration form UI.

     - Implement backend logic for user registration in C#.

     - Validate user input (e.g., email, password strength).

     - Store user data in MySQL database.

**2. User Story 2**:

As a registered user, I want to log in so that I can access my account and system features.

   - Tasks:

     - Design login form UI.

     - Implement backend logic for user authentication in C#.

     - Create session management for logged-in users.

     - Validate user credentials against MySQL database.

**3. User Story 3**:

As an admin, I want to upload population data so that it can be stored and processed.

   - Tasks:

     - Design data upload UI.

     - Implement backend logic to parse and store uploaded data in MySQL using C#.

     - Validate and clean uploaded data.

**4. User Story 4**:

As an admin, I want to update existing population data so that it remains accurate.

   - Tasks:

     - Design data update UI.

     - Implement backend logic for updating records in MySQL using C#.

     - Ensure data integrity during updates.

**5. User Story 5**

: As an admin, I want to delete obsolete or incorrect population data to maintain database integrity.

   - Tasks:

     - Design data deletion UI.

     - Implement backend logic for deleting records in MySQL using C#.

     - Implement data verification before deletion.

**6. User Story 6**:

As a user, I want to view summary reports of population data to gain insights.

   - Tasks:

     - Design report UI.

     - Implement backend logic to generate summary reports using C#.

     - Query MySQL database for required data.

     - Display data in user-friendly formats (charts, tables).