

SE Use Cases & Diagram

1. Generate Region Reports:

- **Actor:** User
- **Description:** This use case allows users to generate reports containing information about regions.
- **Flow:**
 1. User selects the option to generate a region report.
 2. System retrieves data from the database including name, continent, population, and other relevant information for each region.
 3. System formats the retrieved data into a report.
 4. System presents the report to the user.

2. Generate District Reports:

- **Actor:** User
- **Description:** This use case allows users to generate reports containing information about districts.
- **Flow:**
 1. User selects the option to generate a district report.
 2. System retrieves data from the database including name, country, region, population, and other relevant information for each district.
 3. System formats the retrieved data into a report.
 4. System presents the report to the user.

3. Calculate Population Percentage:

- **Actor:** User
- **Description:** This use case allows users to calculate the percentage of the world population represented by a specific geographical area.
- **Flow:**
 1. User selects the option to calculate population percentage.
 2. User specifies the geographical area (continent, region, country, etc.).

3. System retrieves population data from the database for the specified area.
4. System calculates the percentage of the world population represented by the specified area.
5. System presents the calculated percentage to the user.

4. **View Population Distribution by Continent/Region/Country:**

- **Actor:** User
- **Description:** This use case allows users to view the distribution of population across continents, regions, or countries.
- **Flow:**
 1. User selects the option to view population distribution.
 2. User specifies the geographical area (continent, region, country, etc.).
 3. System retrieves population data from the database for the specified area.
 4. System presents the population distribution to the user.

5. **View Population of Specific Language Speakers:**

- **Actor:** User
- **Description:** This use case allows users to view the population of people speaking specific languages and their percentages relative to the world population.
- **Flow:**
 1. User selects the option to view language population.
 2. User specifies the language of interest (e.g., Chinese, English, Hindi, etc.).
 3. System retrieves data from the database regarding the population of speakers for the specified language.
 4. System calculates the percentage of language speakers relative to the world population.
 5. System presents the language population information to the user.

6. **Generate Country Reports:**

- **Actor:** User
- **Description:** This use case allows users to generate reports containing information about countries.
- **Flow:**

1. User selects the option to generate a country report.
2. System retrieves data from the database including code, name, continent, region, population, and capital for each country.
3. System formats the retrieved data into a report.
4. System presents the report to the user.

7. **Generate City Reports:**

- **Actor:** User
- **Description:** This use case allows users to generate reports containing information about cities.
- **Flow:**
 1. User selects the option to generate a city report.
 2. System retrieves data from the database including name, country, district, and population for each city.
 3. System formats the retrieved data into a report.
 4. System presents the report to the user.

8. **Generate Capital City Reports:**

- **Actor:** User
- **Description:** This use case allows users to generate reports containing information about capital cities.
- **Flow:**
 1. User selects the option to generate a capital city report.
 2. System retrieves data from the database including name, country, and population for each capital city.
 3. System formats the retrieved data into a report.
 4. System presents the report to the user.

9. **Generate Population Reports:**

- **Actor:** User
- **Description:** This use case allows users to generate reports containing population information.
- **Flow:**

1. User selects the option to generate a population report for a continent, region, or country.
2. System retrieves data from the database including total population, population living in cities, and population not living in cities.
3. System calculates the percentage of population living in cities and not living in cities.
4. System formats the retrieved data into a report.
5. System presents the report to the user.

10. **Provide Language Statistics:**

- **Actor:** User
- **Description:** This use case allows users to view statistics about languages spoken worldwide.
- **Flow:**
 1. User selects the option to view language statistics.
 2. System retrieves data from the database including the number of people speaking each language and calculates the percentage of the world population.
 3. System formats the retrieved data into a report sorted by the number of speakers.
 4. System presents the report to the user.

11. **Add New Dataset to Database:**

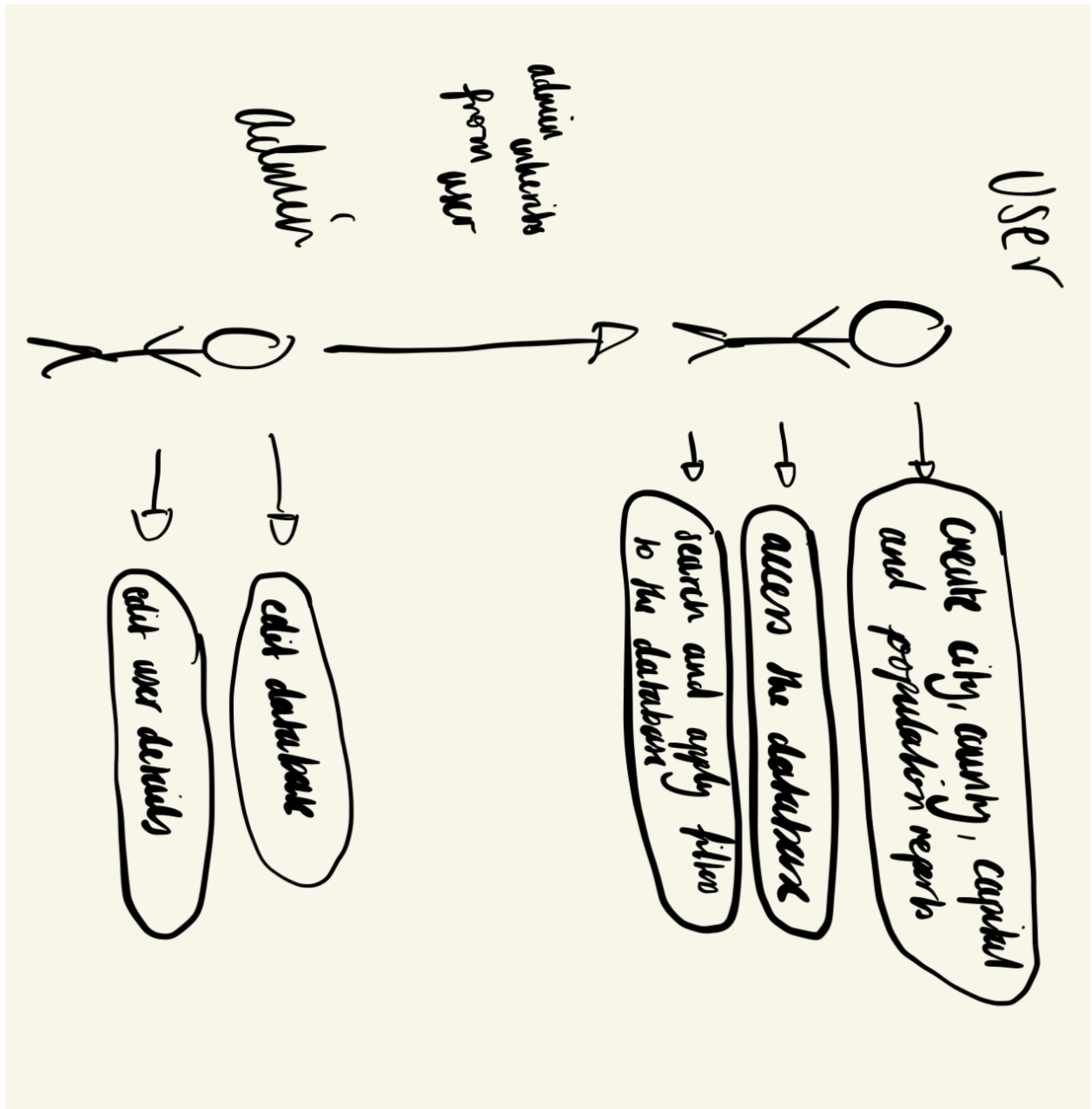
- **Actor:** Admin
- **Description:** This use case allows admins to add new datasets to the database.
- **Flow:**
 1. Admin selects the option to add a new dataset.
 2. System prompts the user to input the new dataset.
 3. System validates and adds the dataset to the database.
 4. System confirms successful addition to the user.

12. **Apply Login Credentials:**

- **Actor:** User

- **Description:** This use case involves implementing security measures such as login credentials to ensure data security and access control.
- **Flow:**
 1. User attempts to access the system.
 2. System prompts the user to enter login credentials (username and password).
 3. System verifies the credentials against the stored credentials.
 4. If credentials are valid, the user is granted access to the system; otherwise, access is denied.

Very Simplified Use Case Diagram



Class Diagram (WIP)

