Database Rough Draft

Tables

Regions

- region_id (Primary Key, **INT**)
- name (Name of the region, **VARCHAR(255)**)

States

- state_id (Primary Key, **INT**)
- name (Name of the state, **VARCHAR(255)**)
- abbreviation (State abbreviation, **CHAR(2)**)
- region_id (Foreign Key to Regions, **INT**)

Counties

- county_id (Primary Key, **INT**)
- name (Name of the county, **VARCHAR(255)**)
- state_id (Foreign Key to States, **INT**)

Precipitation Records

- record_id (Primary Key, **INT**)
- region_id (Foreign Key to Regions, **INT**, **NULLABLE**)
- state_id (Foreign Key to States, **INT**, **NULLABLE**)
- county_id (Foreign Key to Counties, **INT**, **NULLABLE**)
- timestamp (Date and time of the record, **DATETIME**)
- precipitation_amount (Recorded amount of rainfall in mm, **DECIMAL(6, 2)**)

Relationships

Regions and States:

- The relationship between **Regions** and **States** is **one-to-many**:
    - Each **State** belongs to one **Region**.
    - Each **Region** can have multiple **States**.
- The region_id in the **States** table represents this relationship.

Counties:

- Each **County** is linked to a **State** via state_id.
- This means each **County** belongs to a specific **State**.

Precipitation Records:

- **Precipitation Records** can be linked to a **County**, **State**, or **Region**.
- The region_id, state_id, and county_id fields allow flexibility in recording rainfall data at any geographic level.