###### Suitable Development Goal

### Problem: Tracking Vaccination Rates to Reduce Infant Mortality

**Development Goal:** Focus on reducing infant mortality rates, which is a critical aspect of SDG 3 (Good Health and Well-Being). One effective strategy to address this issue is to improve and monitor vaccination rates across different regions. Vaccinations play a crucial role in preventing diseases that can lead to infant mortality.

**Definition of the Problem:** Infant mortality rates can be significantly impacted by the availability and uptake of vaccinations. Tracking vaccination rates helps identify regions with lower coverage and potential gaps in healthcare services. This can lead to targeted interventions and better resource allocation to ensure more children receive the necessary immunizations.

### Expanded Explanation

**1. Importance of Tracking Vaccination Rates:**

* **Preventive Health:** Vaccinations prevent diseases that can cause severe health complications or death in infants. Tracking rates ensures that children are protected from common and preventable illnesses.
* **Identify Gaps:** Monitoring helps identify regions or communities with low vaccination coverage, enabling targeted health campaigns and resource distribution.
* **Evaluate Programs:** Assess the effectiveness of vaccination programs and health interventions. It provides data to refine strategies and improve public health policies.

**2. Data-Driven Approach:**

* **Database Design:** To effectively track vaccination rates, a well-designed database is necessary. The database should include information on vaccinations administered, patient demographics, and healthcare facilities.
* **Data Collection:** Collect data from health clinics, hospitals, and vaccination records. Ensure the data is accurate and up-to-date.
* **Analysis:** Analyze the data to understand vaccination coverage, identify regions with low rates, and evaluate the impact of vaccination programs on infant health.

**3. Example Database Design:**

**Entities:**

* **Regions:** Represents geographical areas where vaccinations are administered.
* **Vaccinations:** Details about different types of vaccines.
* **Health Clinics:** Facilities that administer vaccinations.
* **Patients:** Individuals receiving vaccinations.

**ERD Example:**

* **Regions:** RegionID, RegionName
* **Vaccinations:** VaccineID, VaccineName
* **Health Clinics:** ClinicID, ClinicName, RegionID
* **Patients:** PatientID, Name, Age, VaccineID, ClinicID