

Entity – Relationship Diagram (CAMS)

Entities

The incorporation of the following entities along with their attributes has been undertaken for the purpose of initiating the creation of the **Entity–Relationship Diagram (ERD)** in this project (**COVID – 19 Analytics Management System**).

1. Country Attributes: <ul style="list-style-type: none">a. Country Id (PK).b. Country Name.c. Total Population.d. Continent Id (FK).e. Total Regions.	2. State/Region Attributes: <ul style="list-style-type: none">a. Region Id (PK).b. Region Name.c. Population.d. Country Id (FK).
3. Daily Covid-19 Reports Attributes: <ul style="list-style-type: none">a. Report Id (PK).b. Date.c. Total No. Of Cases.d. Total No. Of Deaths.e. Total No. Of Recoveries.f. Region Id (FK).	4. Vaccination Data: Attributes: <ul style="list-style-type: none">a. Vaccination Id (PK)b. Date.c. Total No. Of Vaccinations.d. Region Id (FK).
5. Testing Data Attributes: <ul style="list-style-type: none">a. Testing Id (PK).b. Date.c. Total Tests.d. Positive Tests.e. Region Id (FK).	6. Public Health Measures Attributes: <ul style="list-style-type: none">a. Measures Id (PK).b. Measure Type.c. Start Date.d. End Date.e. Region Id (FK).
7. Continent Attribute: <ul style="list-style-type: none">a. Continent ID (PK).b. Continent Name.	

Relationships

The following possible relationship can be established among the above-mentioned entities:

- **Countries and States/Regions:** One-to-Many (1:N)
- **States/Regions and Daily COVID-19 Reports:** One-to-Many (1:N)
- **States/Regions and Vaccination Data:** One-to-Many (1:N)
- **States/Regions and Testing Data:** One-to-Many (1:N)
- **States/Regions and Public Health Measures:** One-to-Many (1:N)
- **Countries and Continent:** Many-to-One (N:1)

ERD

In the forthcoming ERD, these relationships will be depicted by lines connecting the entities. The cardinality, indicated by symbols such as 1:N or N:1, will follow Crow's Foot Notation, and primary keys will be clearly designated. Each entity will have its attributes outlined within an oval, and relationships will be visually represented by connecting lines.