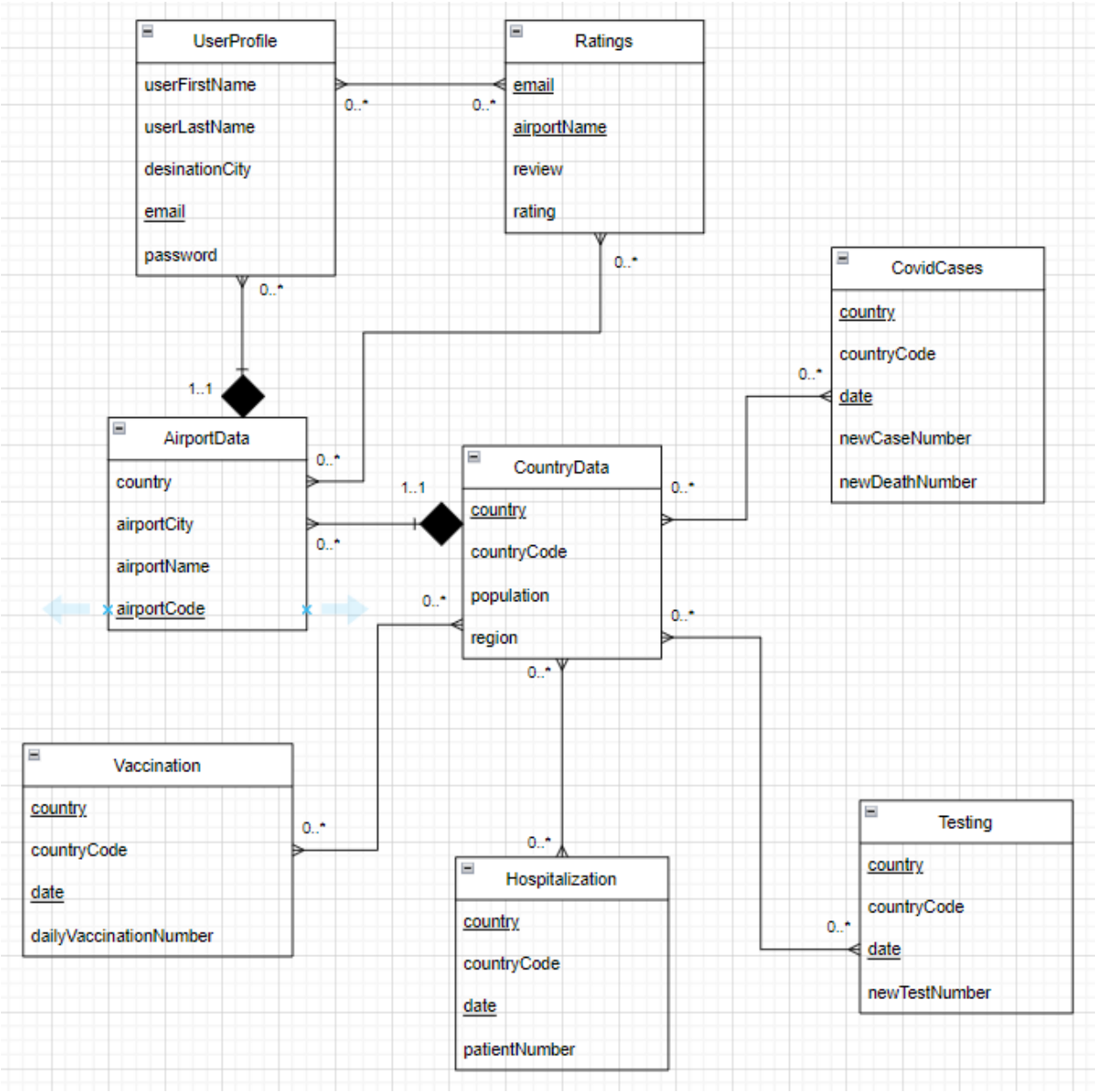
UML Diagram



Relational Schema

UserProfile(userFirstName:VARCHAR(100), userLastName:VARCHAR(100), destinationCity:VARCHAR(100)[FK to Airport Data], email:VARCHAR(100) [PK, FK to Ratings], password:VARCHAR(100))

CountryData(country:VARCHAR(100), countryCode:VARCHAR(3) [PK], population:INT, region:VARCHAR(100))

AirportData(country:VARCHAR(100) [FK to CountryData], airportCity:VARCHAR(100), airportName:VARCHAR(100), airportCode:VARCHAR(3) [PK])

CovidCases(country:VARCHAR(100) [PK, FK to CountryData], countryCode:VARCHAR(3), date:TIMESTAMP [PK], newCaseNumber:INT, newDeathNumber:INT)

Vaccination(country:VARCHAR(100) [PK, FK to CountryData], countryCode:VARCHAR(3), date:TIMESTAMP [PK], dailyVaccinationNumber:INT)

Hospitalization(country:VARCHAR(100) [PK, FK to CountryData], countryCode:VARCHAR(3), date:TIMESTAMP [PK], patientNumber:INT)

Testing(country:VARCHAR(100) [PK, FK to CountryData], countryCode:VARCHAR(3), date:TIMESTAMP [PK], newTestNumber:INT)

Ratings(airportName:VARCHAR(100) [PK], email:VARCHAR(100) [PK], rating:INT, review:TEXT)

Assumptions

We assume every airport is located in one country and that one country can have many airports. We're connecting the vaccine to the country the data is based in. We're connecting the hospitalizations to the country the data is based in. We're connecting the tests to the country the data is based in. We're connecting the covid cases to the country the data is based in. We are connecting the user profile to airport data because the way our website is structured is that you pick a city that is linked to airport data. We assume every people got the 3 vaccine shots.

Description of Relationship

All airports are located in one country and countries have multiple airports, so this relationship is many to one.

User Profiles can store one airport destination and airports may be a part of multiple User Profiles so this relationship is many-one.

Covid cases exist in multiple countries and multiple countries can have covid cases hence the relationship is many-many.

The relationship between countries and hospitalizations, vaccinations and testing is the same as the relationship between covid cases and countries.

Many people can rate many airports so ratings have a many-many relationship to UserProfiles and AirportData.