CS480 – Course Project

Summer 2020

Database: Covid-19 Statistics by County

Description:

Consider the design of the following database system for Covid-19 statistics: Each state with Covid-19 statistics contains a unique (date, state) pair, a FIPS code which are the set of standards that describe document processing, the number of Covid-19 cases, and the number of Covid-19 deaths. Each state can contain statistics by county. In each county, if there exists cases of infection in the county there exists a date, county name, state, FIPS code, number of cases, and number of deaths. Each county has information associated with it. A county contains a county name, FIPS code, a state that it is in, a city that it is located in, and the estimated population of the county in the year 2019.

Part 2 – CRUD (Create, read, update, and delete)

List of entities:

1. StateCOVID

2. CountyCOVID

3. CountyInfo

1. Insert/delete/update/read a StateCOVID (all attributes)

2. Insert/delete/update/read a CountyCOVID (all attributes)

3. Insert/delete/update/read a CountyInfo (all attributes)

No additional attributes are needed to identify a tuple.

Part 3: Queries

Trivial Queries:

1. List all Covid-19 state statistics

2. List all Covid-19 county statistics

3. List all county information

Non-trivial Queries:

1. List all county statistics by a specific state

2. List the top 10 states with the highest cases of Covid-19

3. List the percentage of infected cases from a county

4. List each county in order of highest death count

5. List the county with the biggest increase of cases in a single day