

## SQL PORTION

### CREATE:

User tests positive

--> enters visited address

--> new entry in Cases is created for each address they visit

--> update Address for each creation in Cases

--> check if Address of Case is in Addresses

--> if Address not found in Addresses

--> compute which Block the Address is in

--> add to Addresses table

--> increment num\_Cases in Addresses

--> increment num\_Cases\_blk in Block associated with Address

**READ:** Get cases by address or by block

### UPDATE:

User tests positive

--> enters visited address

--> new entry in Cases is created for each address they visit

--> update Address for each creation in Cases

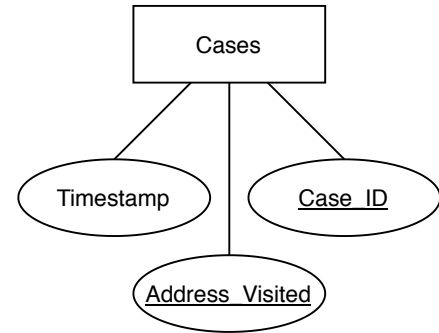
--> check if Address of Case is in Addresses

--> if found increment num\_Cases of that Address

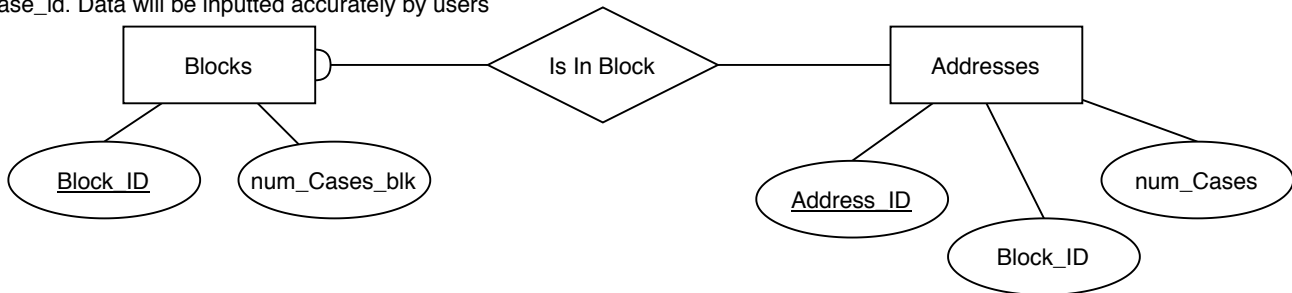
--> increment num\_Cases\_blk of the block for that address

### DELETE:

Delete cases after 14 days, then decrements "Cases" for associated address and block of that address



**ASSUMPTIONS:** Each address is only in 1 block, there will be multiple entries for the same Case\_ID since the primary key in Cases is (Case\_ID,Address\_Visited). If a person visits multiple locations, they will have an entry for each place they visited, all with the same case\_id. Data will be inputted accurately by users



## NoSQL PORTION

### CREATE:

Person reports business

--> data is parsed by application

--> check if Business reported is in Businesses table

--> if not, add Business to Businesses, update count of the rules reported

### READ:

heat map reads from Reports DB grouped on Business\_ID

### UPDATE:

Person reports business or agrees with a business's reports

--> data is parsed by application

--> find Business reported in Businesses table

--> increment <social\_distancing, mask\_wearing, sanitary>\_count by one

OR

Person "disagrees with" a reported business

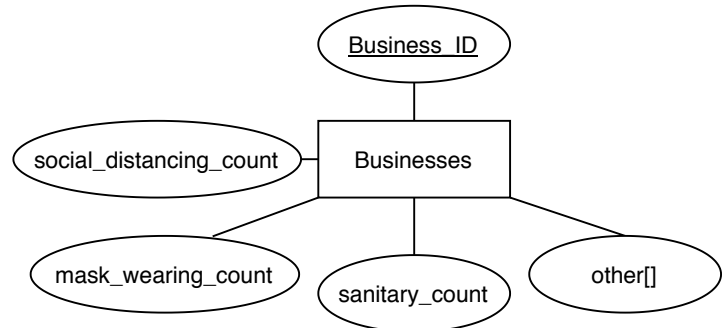
--> person selects which grievance they disagree with

--> find that Business in the Businesses table

--> decrement that rule's count for that Business

### DELETE:

if sd = mask = sanitary = 0, delete the business from the table



## Agree/Disagree Functionality

person reports a business (specify which business, specify what they're doing)

person is asked "masks? sd? sanitary? other?"

in MongoDB we go to the business, update "no mask" "sd" "sanitary"

heatmap pull data for each business

person looks at heatmap

clicks on a business

screen shows what rules the business is breaking

same screen has a button for "disagree" and "agree"

user clicks button

what do you agree/disagree with (they are/are not wearing masks, sd, sanitary...)

use the agreement/disagreement to update table by

incrementing/decrementing rule's field

