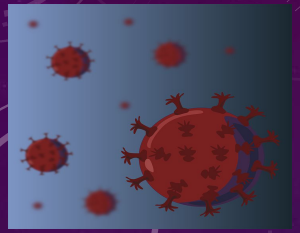
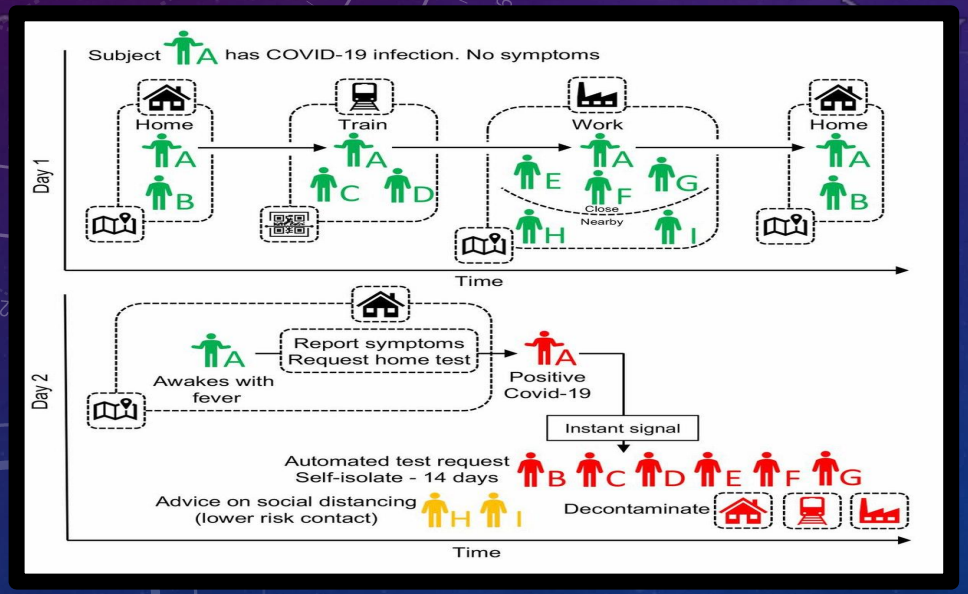


TYL C++ HACKATHON

PROBLEM STATEMENT :-
MODELING THE COVID-19 SPREAD AND RECOVERY



TEAM:

CODEBLOODED

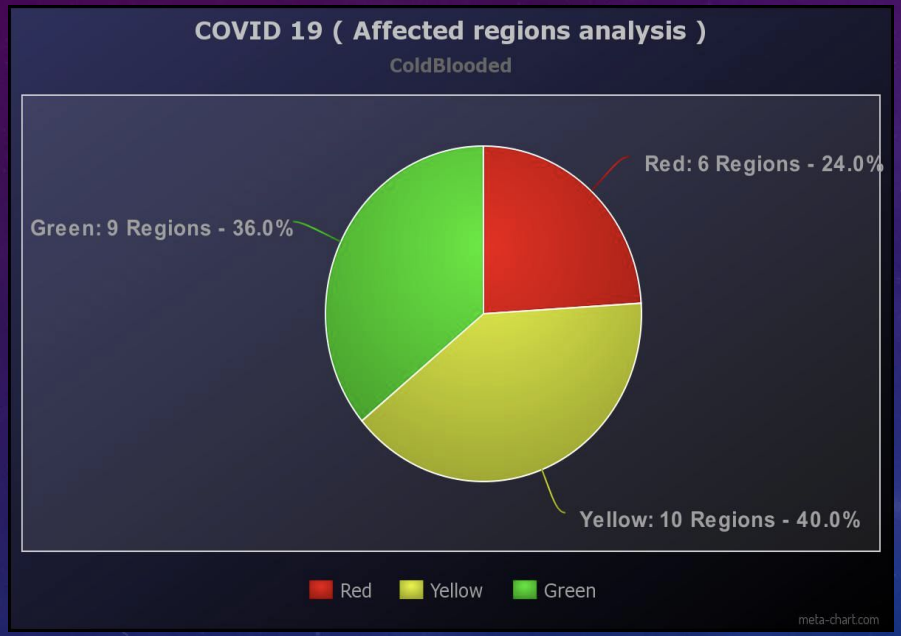
-AKANSHA AGARWAL

-ALAJANGI NIHARIKA

-AMAN KAPOOR

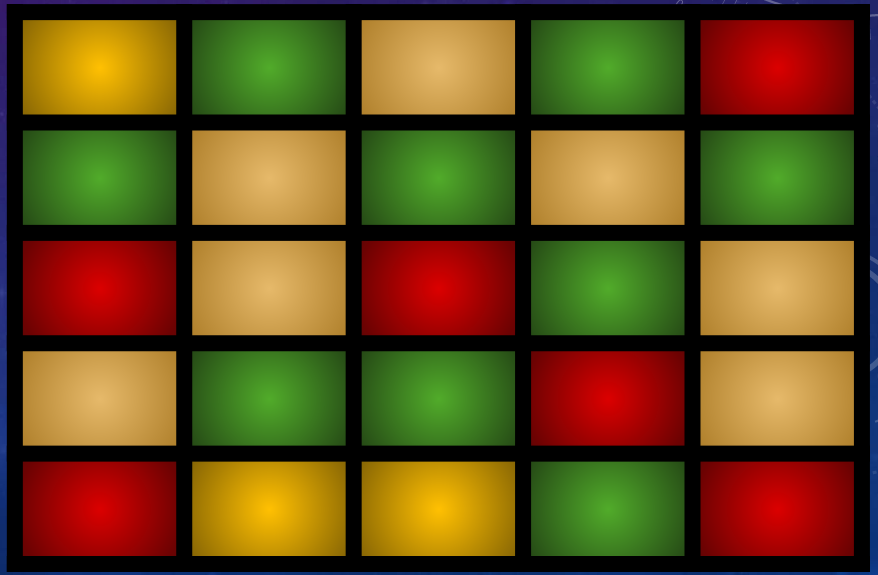
-AMAN KUMAR

INITIAL STAGE :



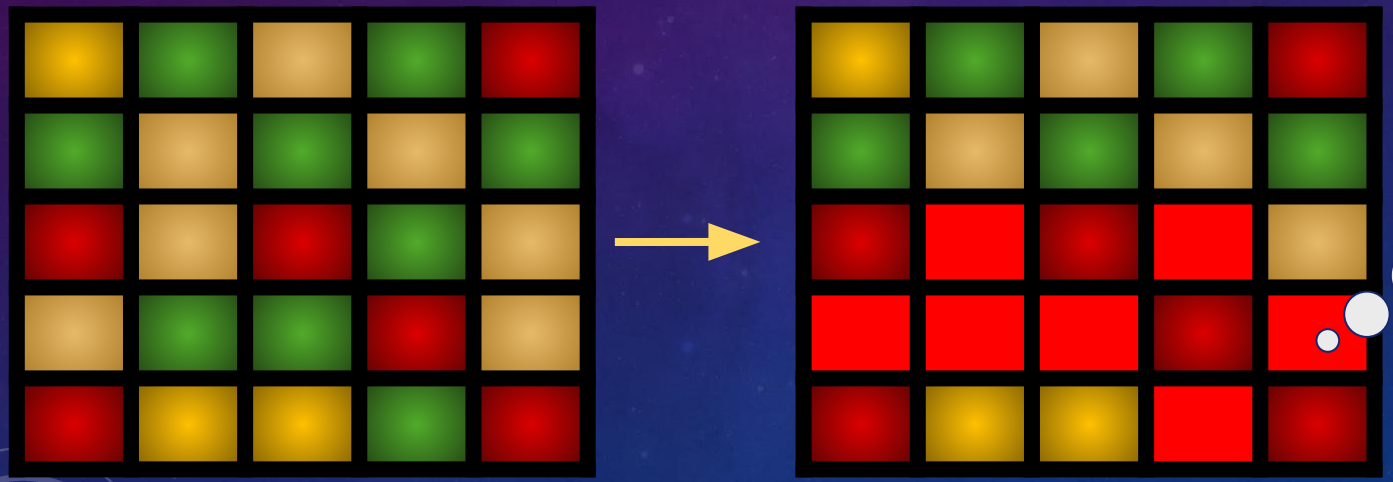
➨25 Regions, each represented by a cell in 2-D matrix.

➨Initially we assume 6 regions are declared as red zones, 10 regions as yellow zones and 9 regions as green zones.



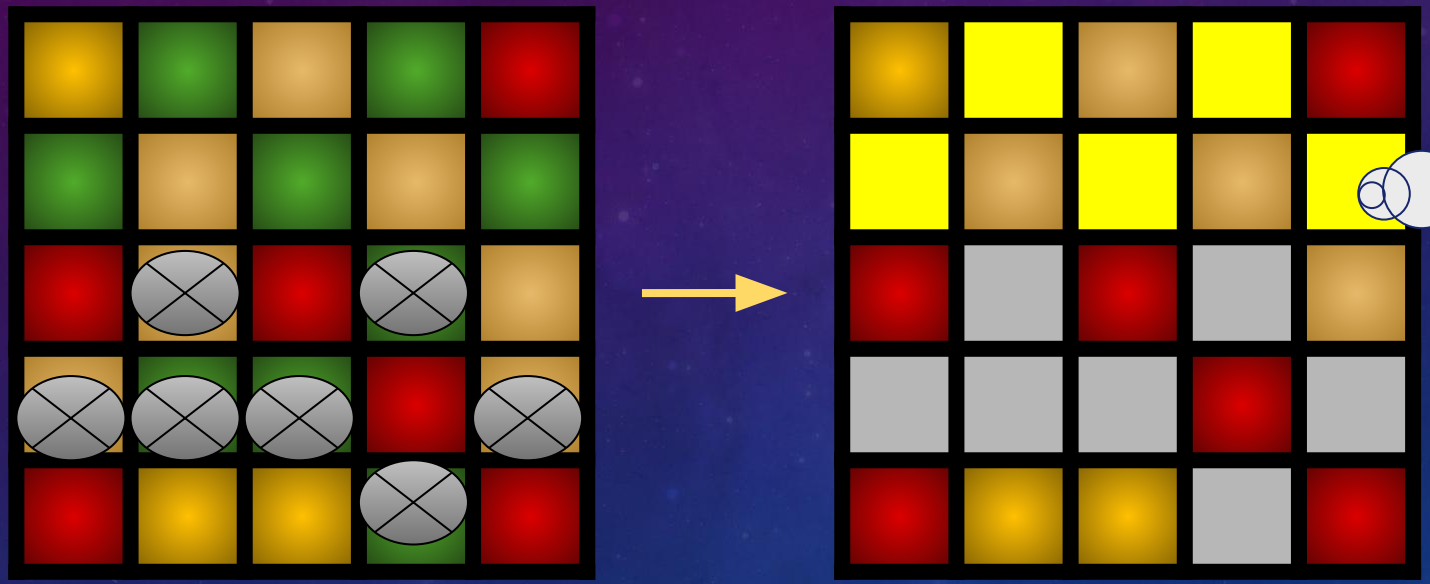
WEEK ONE :

1) **If a region has two neighbouring regions as Red zones, this region also moves to Red zone in 1 week.**



Bright red indicates the region has been moved to red zone.

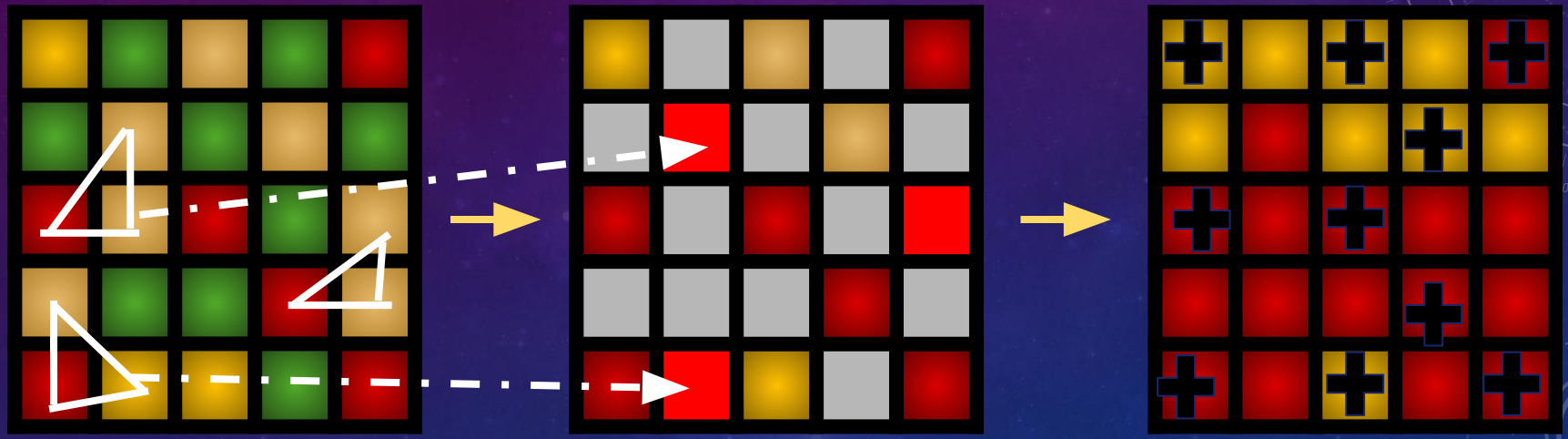
2) If a non-Red zone has 2 neighbouring non-Green zones, this moves to the next level in 1 week.



Bright yellow indicates the region has been moved to next level zone i.e yellow zone.

GREY INDICATES THE CELL HAS ALREADY BEEN UPDATED FOR WEEK 1

3) If triangular nodes (3 neighbouring regions) are non-green zones, all nodes move to the next level in 1 week.



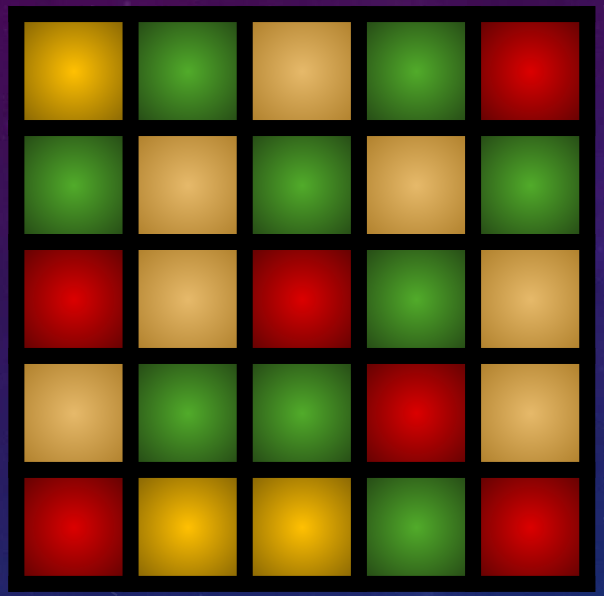
INITIAL STAGE

AFTER 3 CONDITIONS

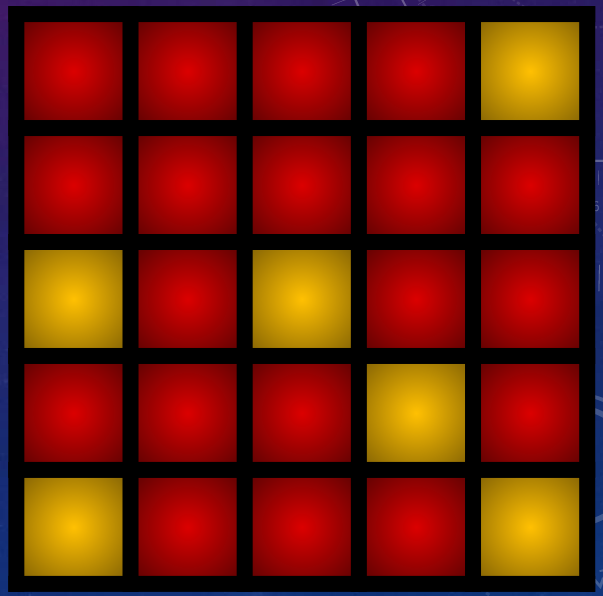
AFTER 1 WEEK

INDICATES THE CELL REMAINS UNCHANGED AFTER 1ST WEEK

4) If a zone stays in the same level (colour) for 4 consecutive weeks, then it moves down one level.



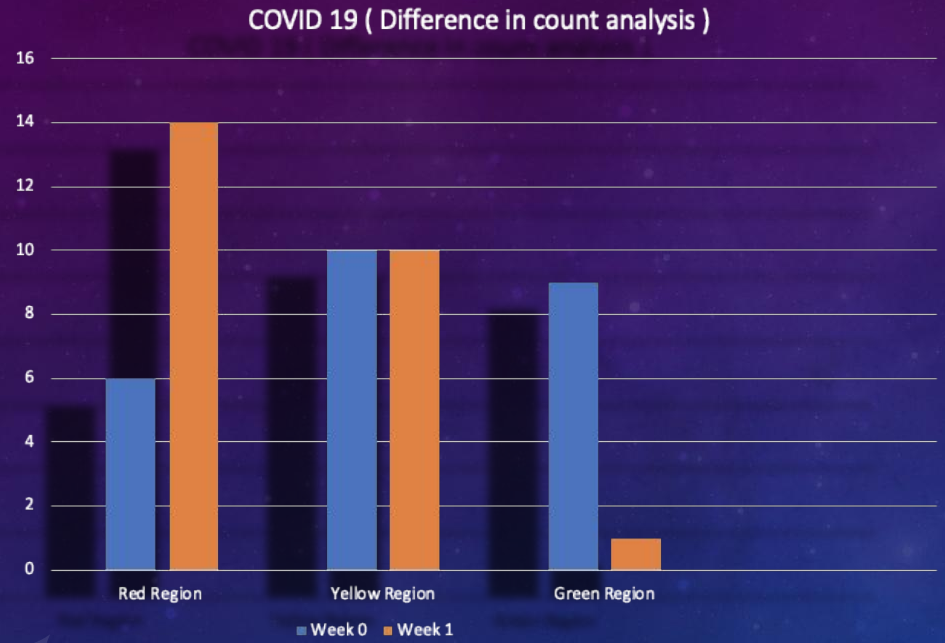
TIME LAPSE: AFTER 4 WEEKS



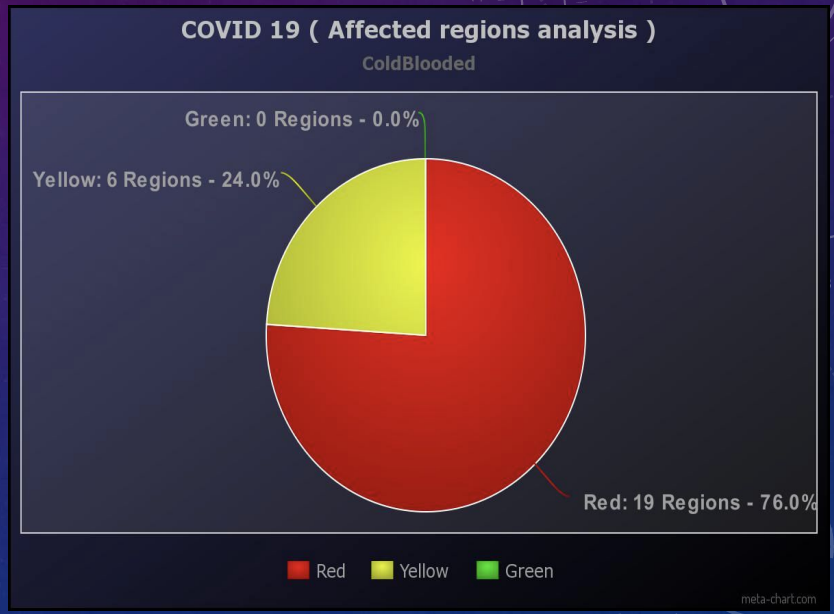
Initial stage:

After WEEK four:

SPREAD AND RECOVERY: (FOR 25 REGIONS)



AFTER WEEK ONE:



AFTER WEEK FOUR: