Link to observable notebook for Question1:

<https://observablehq.com/@rautnikita77/heatmap>

You will have run each section one by one. Observe the by hovering on the map you will see the number of allegations in that area. A slider has also been provided with the following labelling

0: Allegation of years before 1950

1: Allegation of years between 1950 - 2000

2: Allegation of years between 2000 - 2003

3:Allegation of years between 2003 - 2006

4:Allegation of years between 2006 - 2009

5:Allegation of years between 2009 - 2012

6:Allegation of years between 2012 - 2015

7:Allegation of years between 2015 - 2018

8:Allegation of years between 2018 - present

For questions 2-4, the dashboard files of Tableau have been attached. Screenshots of the same files are present in the findings.docx file.

**Steps to open the .twb files:**

* Open Tableau
* Go to File -> Open
* Go to src folder of our checkpoint and select the .twb file
* If the Postgres server is not connected by default, it will ask for connection information. If connection via Integrated authentication is not working perform the following steps:
  + go to edit connection
  + Make sure the server name is localhost and database is cpdb
  + Select authentication type as username and password -> put username as postgres and password as the password which you had used while setting up postgres. Then click on sign in.

The theme of the project is to analyse the trends before and after the cpdp went public. For example: to find changes in general behaviour of the officer, settlement amounts etc. and to predict for upcoming years. The questions are focussed towards finding out the things that have been tried to be hidden in the official record. For example, finding the relationship between the arrests and the allegation, because there are chances that if no arrest took place then the action taken by the officer might be illegal or looking for cases where things common between investigating officer and allegated officer impacted the case. So, for every question mentioned below, findings will be based on before and after cpdb release.

Questions:

* Heat map of areas in which the allegations take place while also considering the time of the day.

Using a slider bar for time and look at a heatmap of various complaint types over time for interactive visualization

* Visualizing whether there has been any decrease in allegations after the CPDP data has gone public with the help of line charts (Allegation vs Time) and histograms (Before vs After)
* Visualizing the trends in the race of people affecting number of allegations (percentage). With the data going public, the fact that people might be targeted based on race was highlighted. Visualizing using histograms for before and after or using line plot for the overall trend.
* Analysis of the number of incidents that used weapons vs the ones that did not. With the data going public, did smaller incidents (assuming using gun makes the the incident much severe) reduce in number?