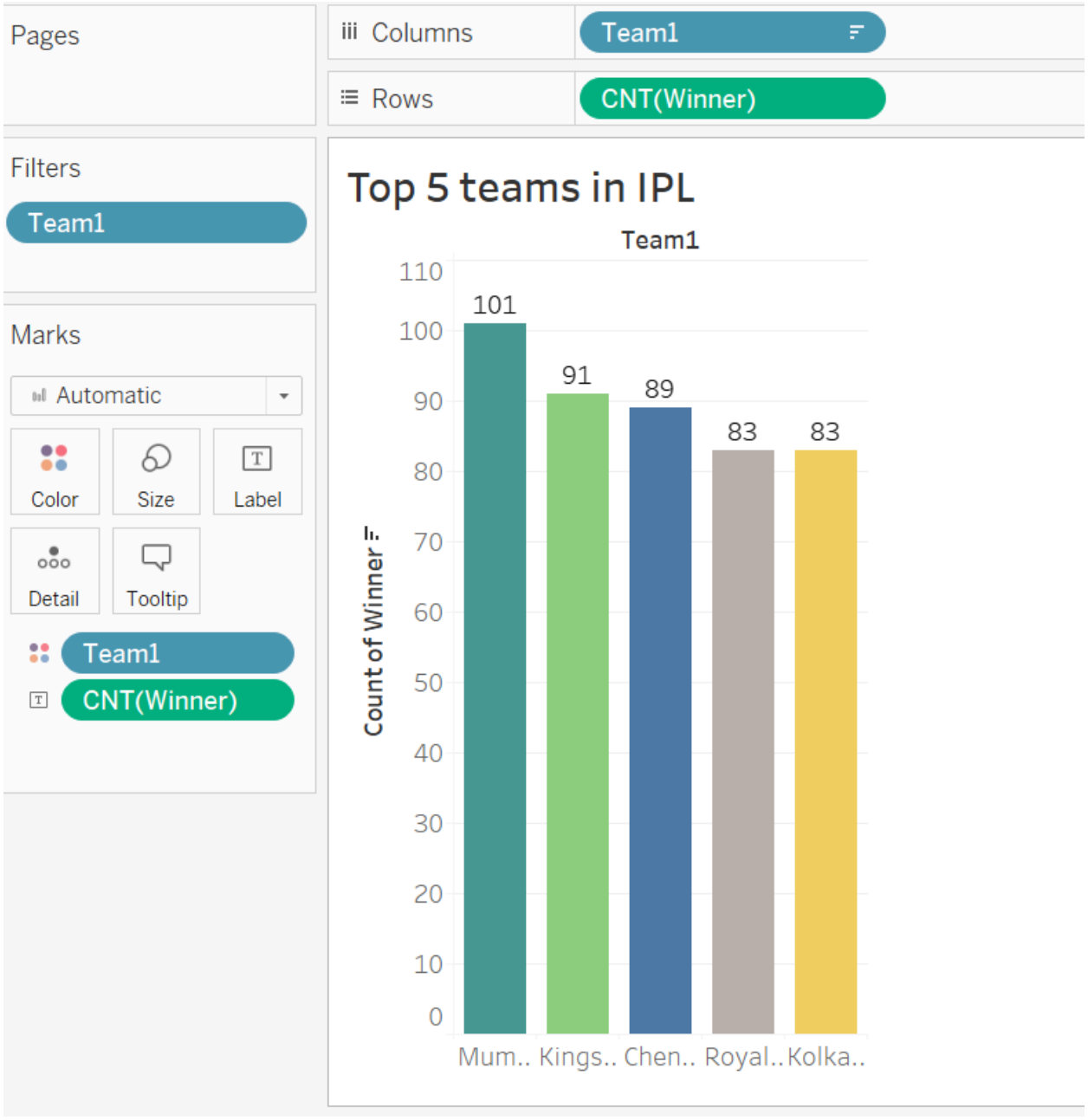
Practical 1

Aim: Visualizing matches in IPL dataset.

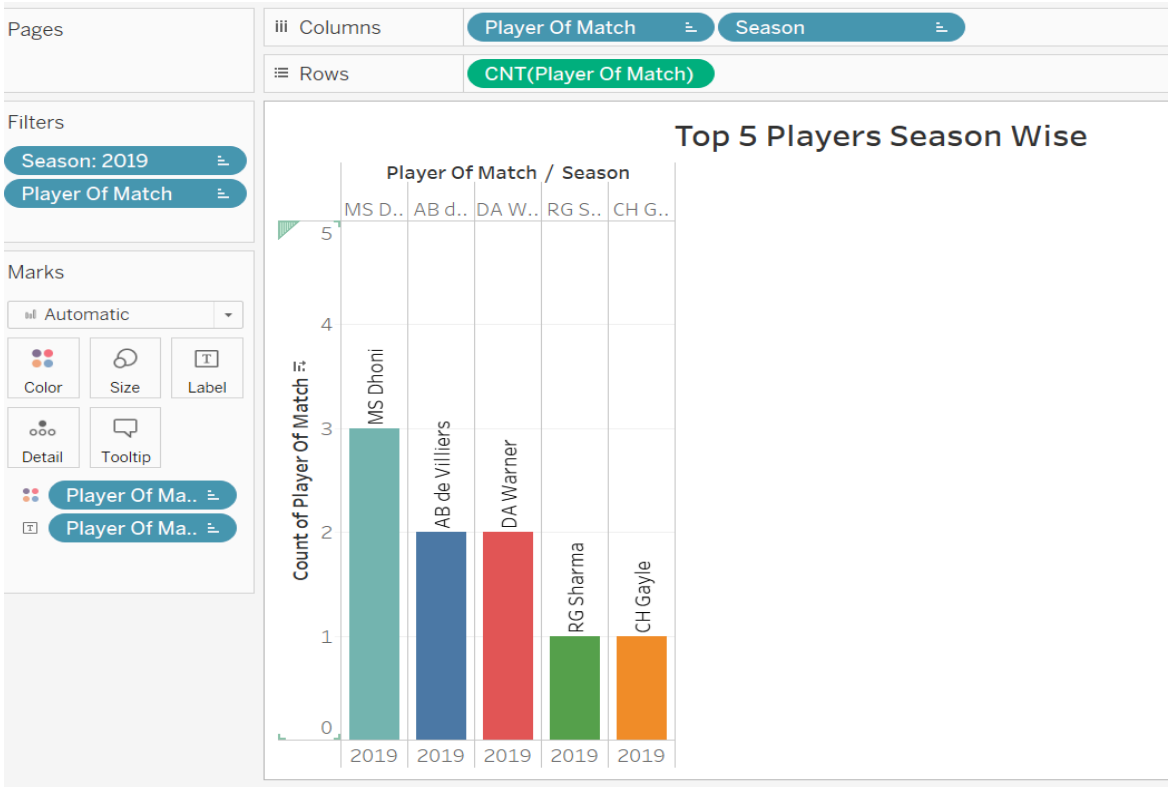
Description of the DB:

Output:

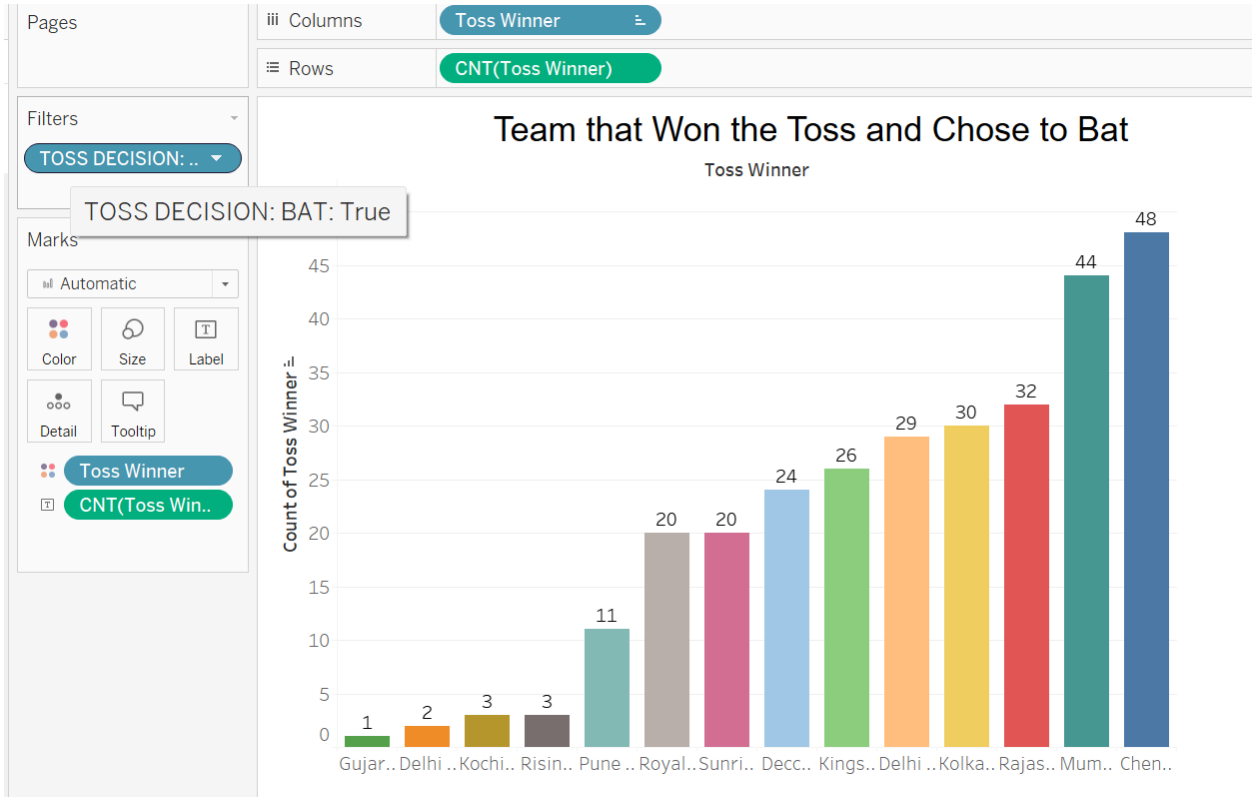
1.



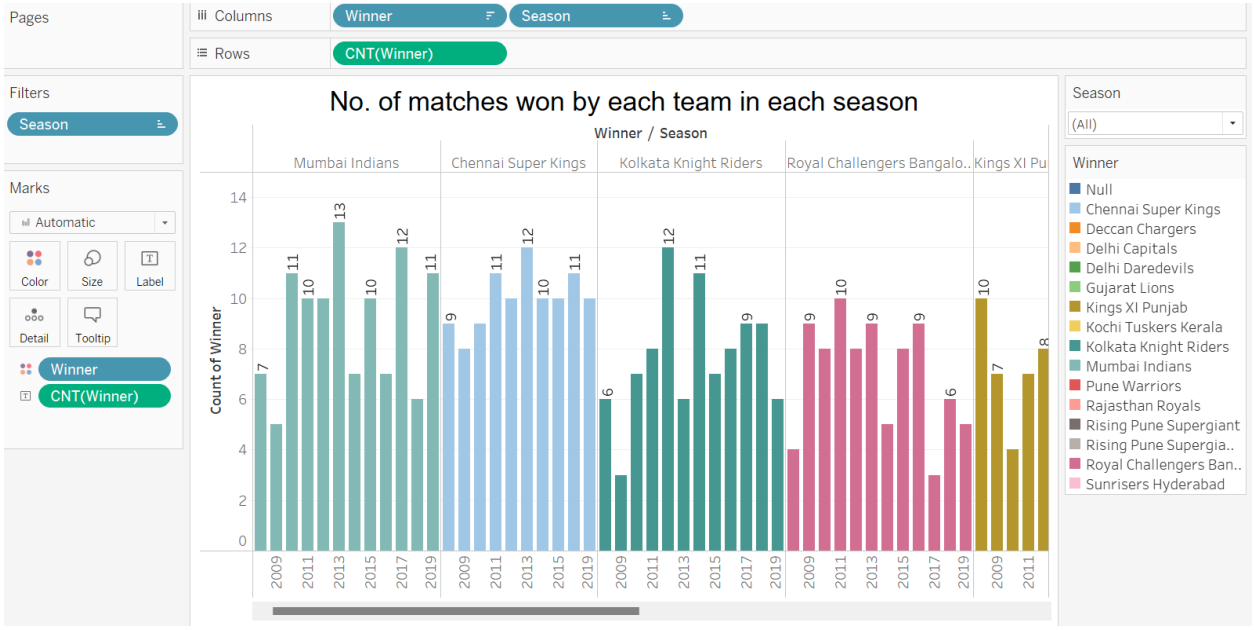
2.


Pages
Columns
Player Of Match
Season
Rows
CNT(Player Of Match)
Filters
Season: 2019
Player Of Match
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Player Of Ma..
Player Of Ma..
Top 5 Players Season Wise
Player Of Match / Season
MS D..
AB d..
DA W..
RG S..
CH G..
Count of Player Of Match
MS Dhoni
AB de Villiers
DA Warner
RG Sharma
CH Gayle
2019

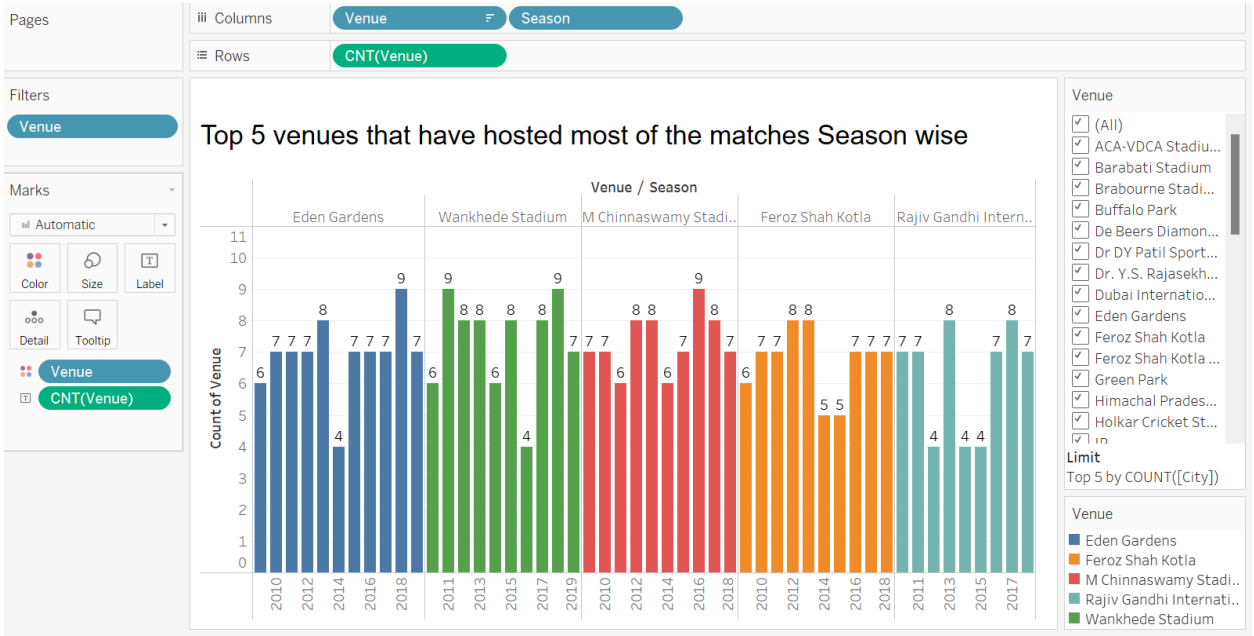
3.


Pages
Columns
Toss Winner
Rows
CNT(Toss Winner)
Filters
TOSS DECISION: ..
TOSS DECISION: BAT: True
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Toss Winner
CNT(Toss Win..
Team that Won the Toss and Chose to Bat
Toss Winner
Count of Toss Winner
Gujar..
Delhi ..
Kochi..
Risin..
Pune ..
Royal..
Sunri..
Decc..
Kings..
Delhi ..
Kolka..
Rajas..
Mum..
Chen..

4.


Pages
Columns
Winner
Season
Rows
CNT(Winner)
Filters
Season
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Winner
CNT(Winner)
No. of matches won by each team in each season
Winner / Season
Mumbai Indians
Chennai Super Kings
Kolkata Knight Riders
Royal Challengers Bangalo..
Kings XI Pu
Count of Winner
Season
(All)
Winner
Null
Chennai Super Kings
Deccan Chargers
Delhi Capitals
Delhi Daredevils
Gujarat Lions
Kings XI Punjab
Kochi Tuskers Kerala
Kolkata Knight Riders
Mumbai Indians
Pune Warriors
Rajasthan Royals
Rising Pune Supergiant
Rising Pune Supergia..
Royal Challengers Ban..
Sunrisers Hyderabad

5.


Pages
Columns
Venue
Season
Rows
CNT(Venue)
Filters
Venue
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Venue
CNT(Venue)
Top 5 venues that have hosted most of the matches Season wise
Venue / Season
Eden Gardens
Wankhede Stadium
M Chinnaswamy Stadi..
Feroz Shah Kotla
Rajiv Gandhi Intern..
Count of Venue
Venue
(All)
ACA-VDCA Stadiu...
Barabati Stadium
Brabourne Stadi...
Buffalo Park
De Beers Diamon...
Dr DY Patil Sport...
Dr. Y.S. Rajasekh...
Dubai Internatio...
Eden Gardens
Feroz Shah Kotla
Feroz Shah Kotla ...
Green Park
Himachal Prades...
Holkar Cricket St...
Limit
Top 5 by COUNT([City])
Venue
Eden Gardens
Feroz Shah Kotla
M Chinnaswamy Stadi..
Rajiv Gandhi Internati..
Wankhede Stadium

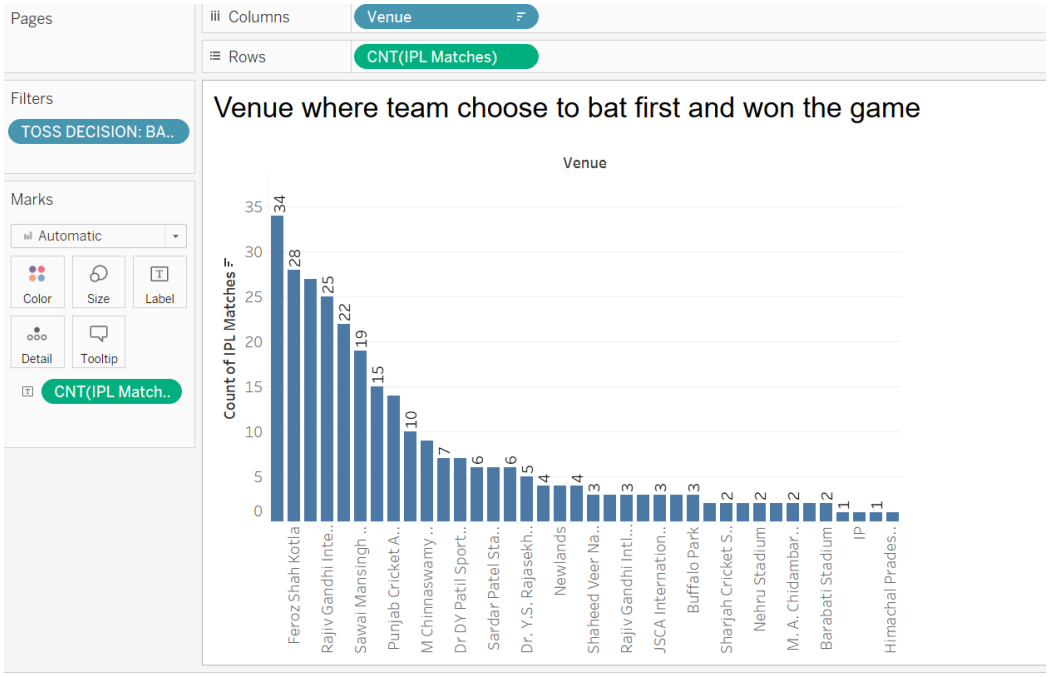
Practical 2

Aim: Visualizing matches and deliveries sheets in IPL dataset.

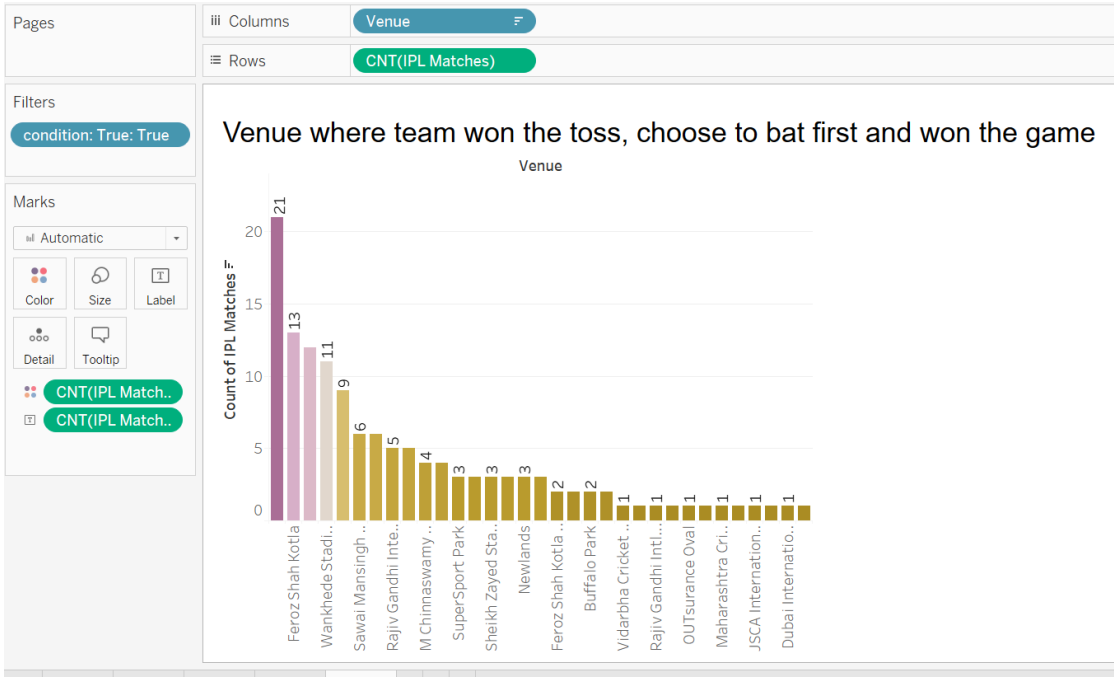
Description of the DB:

Output:

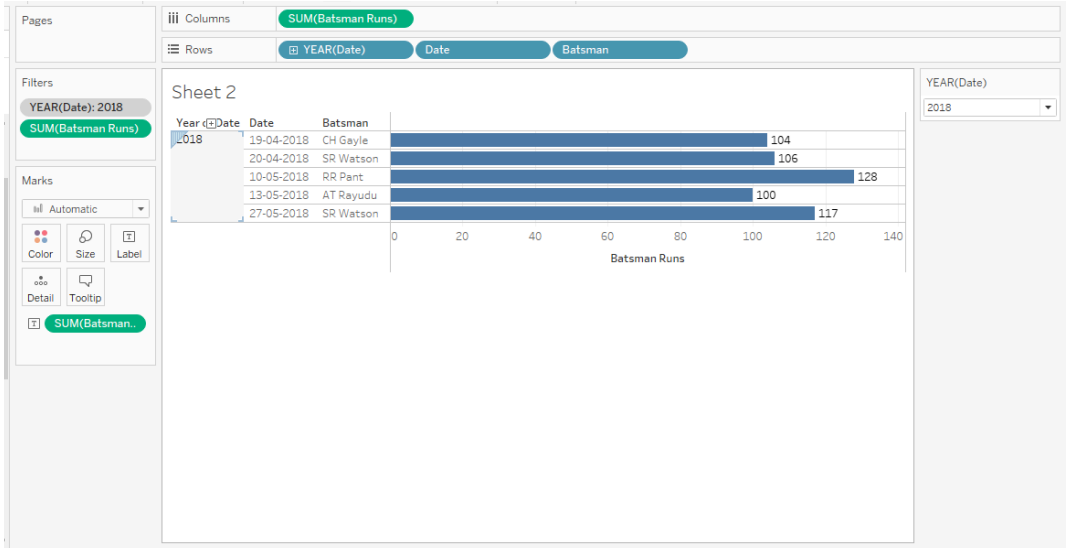
1.



2.

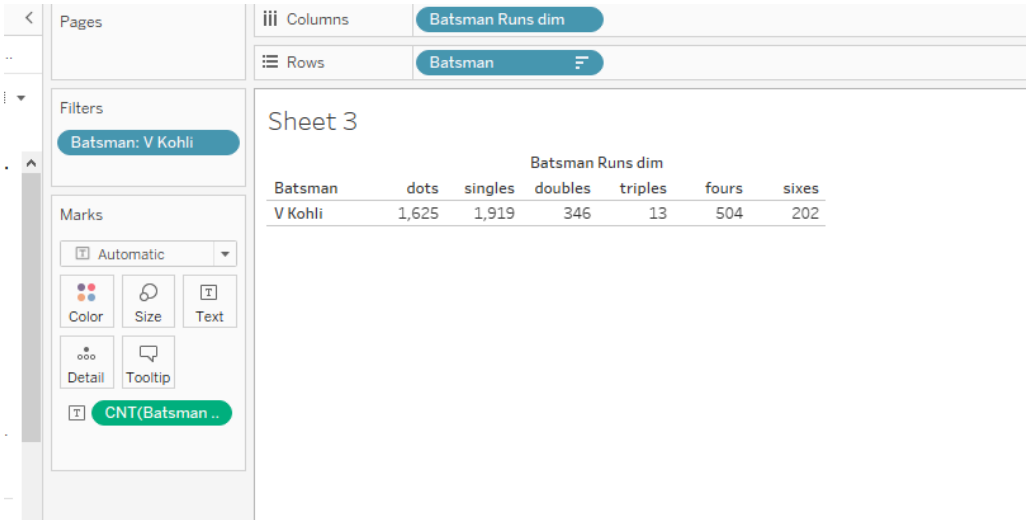


3. Player scored a century in each year



4. Player statistics in ipl career:

Dotballs, singles, fours, sixes in entire IPL career



Practical 3

Aim: To make a dashboard to visualize the title winner, orange cap winner and purple cap winner of each season

Description of the DB:

Output:

Title Winner

Year of Date
2008
Winner
Rajasthan R..
Batsman
SE Marsh
Bowler
Sohail Tanvir

ORANGE CAP WINNER

PURPLE CAP WINNER

Title Winner

Year of Date
2009

Winner
Deccan Char..

Batsman
ML Hayden

Bowler
RP Singh

ORANGE CAP WINNER

PURPLE CAP WINNER

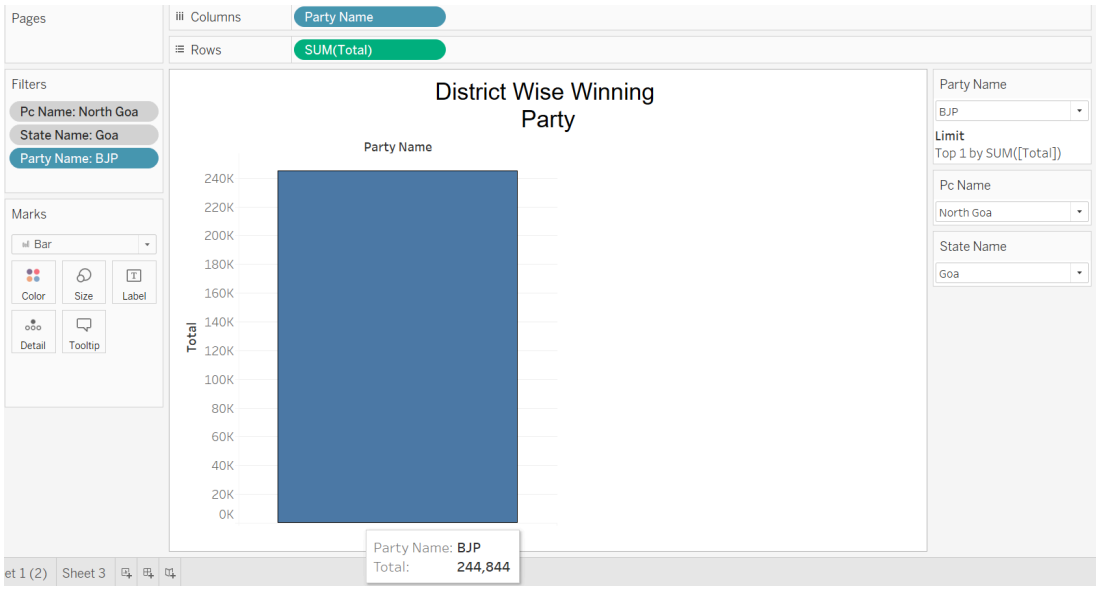
Practical 4

Aim: To Visualize the dataset: Constituency Wise Detailed Result.

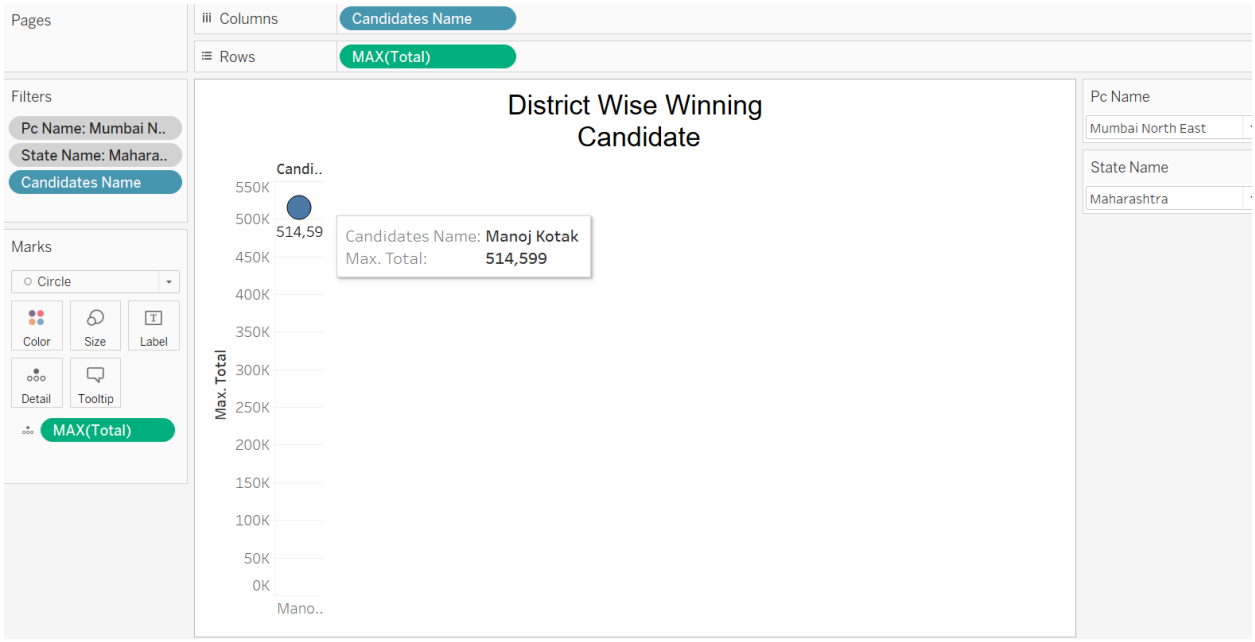
Description of the DB:

Output:

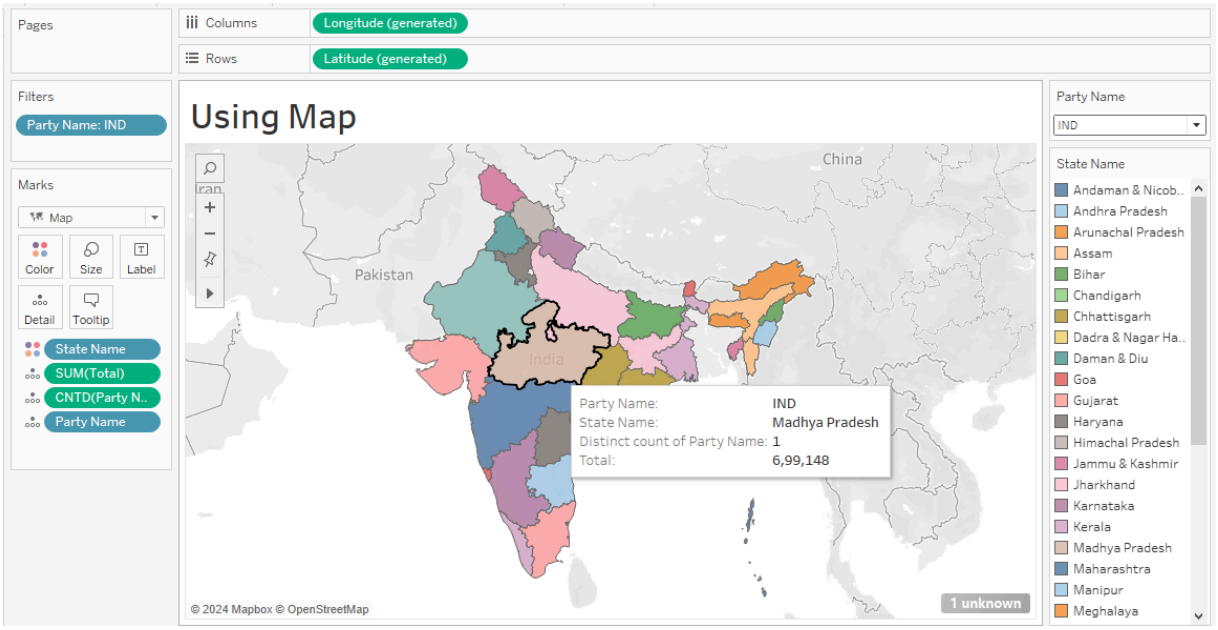
1.



2.



3. State wise Party votes



Practical 5

Aim: To make a dashboard to visualize the winning party symbol, candidate who won, percentage of votes

Description of the DB:

Output:

WINNING PARTY

State Name
Maharashtra

Pc Name
Mumbai North

Party Name
BJP

Candidates Name
Gopal Shetty

WINNING CANDIDATE	Percentage of winning
	71.38

Practical 6

Aim: To visualize domestic crimes and crimes that happen on the streets

Code:

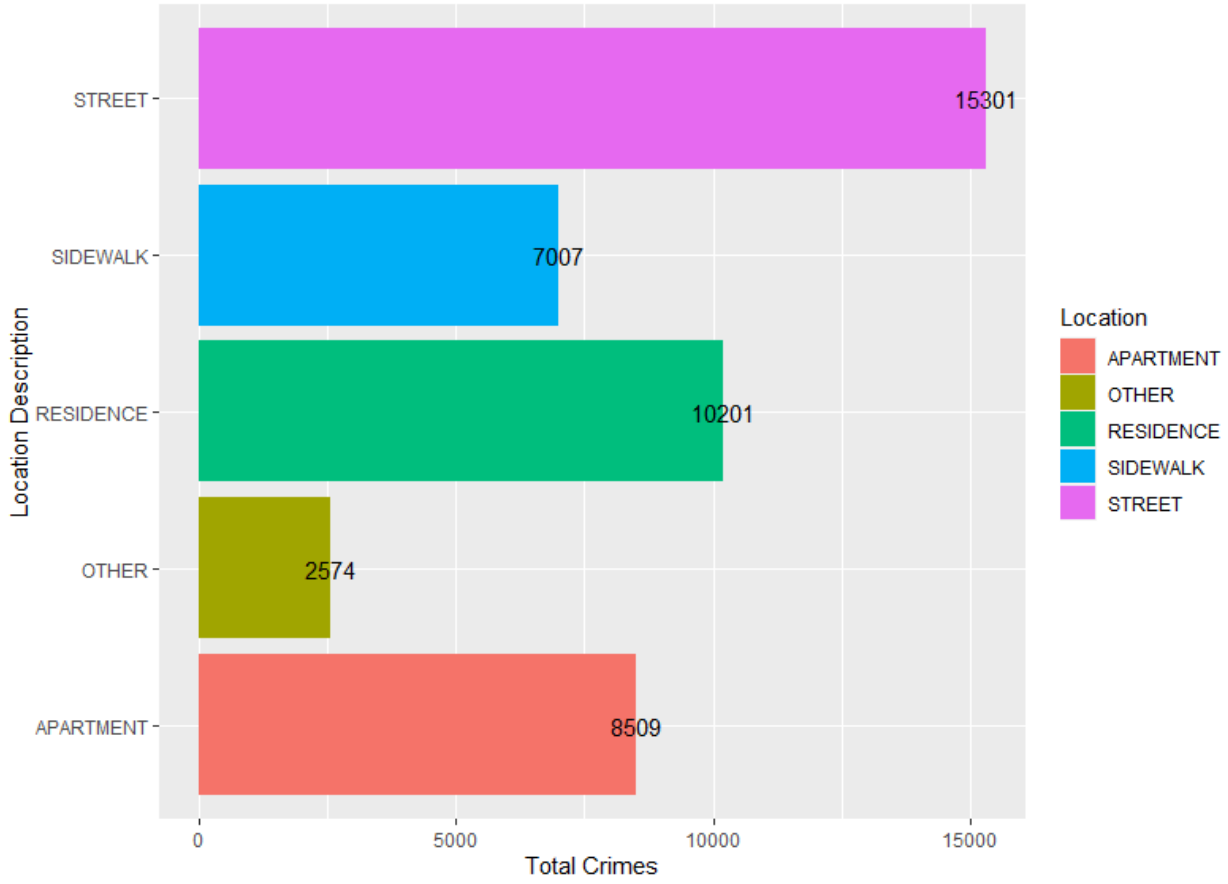
1. Aim: Code:

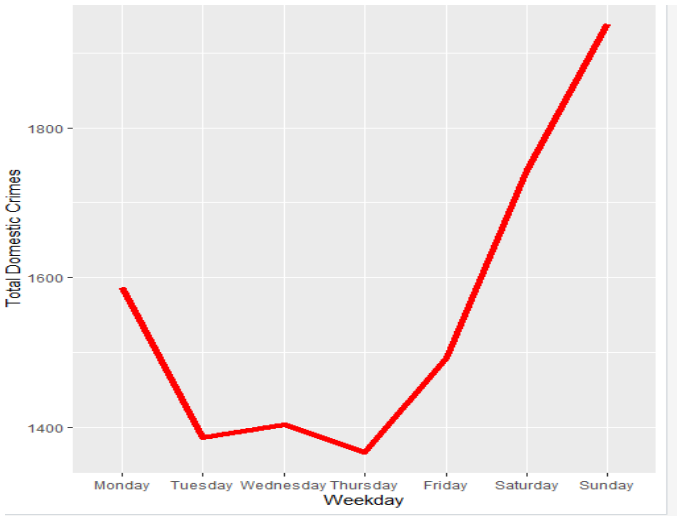
```
# install.packages("mongolite")
 library(mongolite)
# install.packages("dplyr")
 library(dplyr)
# install.packages("ggplot2")
 library(ggplot2)
 library(lubridate)
 library(hms)

crimedata=mongo(collection="crimes", db="tyit")

crime = crimedata$aggregate('[{"$group":{"_id":"$Location Description",
"count":{"$sum":1}}}]')%>%na.omit()%>%arrange(desc(count))%>%head(5)

# Convert the result to a data frame
crime = data.frame(crime)
names(crime)[1] <- "Location"

ggplot(crime, aes(x = reorder(Location, count), y = count)) +
  geom_bar(stat = "identity", fill = "skyblue") +
  labs(title = "Top 5 Crime Locations",
       x = "Location",
       y = "Number of Crimes")
```

Aim: To draw a Graph(weekly - domestic)

```
# install.packages("mongolite")
 library(mongolite)
# install.packages("dplyr")
 library(dplyr)
# install.packages("ggplot2")
 library(ggplot2)
 library(lubridate)
 library(hms)

crimedata=mongo(collection="crimes", db="tyit")
```

```
domestic= crimedata$find('{"Domestic":true}', fields= '{"_id":0, "Domestic":1, "Date":1}')

domestic = data.frame(domestic)

domestic$Date = mdy_hms(domestic$Date)
domestic$Weekday = weekdays(domestic$Date)
domestic_counts <- domestic %>%
  group_by(Weekday) %>%
  summarise(count = n())
domestic_counts <- domestic_counts %>%
  mutate(Weekday = factor(Weekday, levels = c("Monday", "Tuesday", "Wednesday",
"Thursday", "Friday", "Saturday","Sunday")))

# Arrange the data by Weekday
domestic_counts <- domestic_counts %>%
  arrange(Weekday)

# Plotting using ggplot2
p <- ggplot(domestic_counts, aes(x = Weekday, y = count)) +
  geom_line(aes(group=2), size=2, color='red') +
  xlab("Weekday") + ylab("Total Domestic Crimes")
```

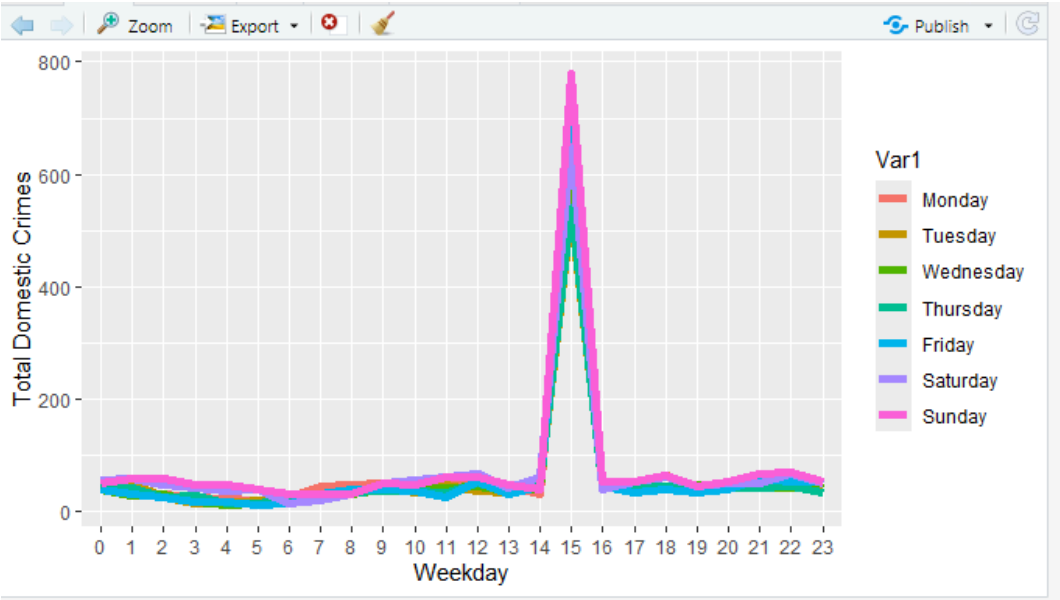




PRACTICAL 7

Aim: To draw a graph to understand the weekly peak in every day of the week in domestic crimes

```
# install.packages("mongolite")
library(mongolite)
# install.packages("dplyr")
library(dplyr)
# install.packages("ggplot2")
library(ggplot2)
library(lubridate)
library(hms)

crimedata=mongo(collection="crimes", db="tyit")


domestic= crimedata$find('{"Domestic":true}', fields= '{"_id":0, "Domestic":1, "Date":1}')
domestic = data.frame(domestic)
domestic$Date = mdy_hms(domestic$Date)
domestic$Weekday = weekdays(domestic$Date)
domestic$Hour = hour(domestic$Date)

hours_crimes = as.data.frame(table(domestic$Weekday,domestic$Hour))
hours_crimes <- hours_crimes %>%
  mutate(Var1 = factor(Var1, levels = c("Monday", "Tuesday", "Wednesday", "Thursday",
"Friday", "Saturday","Sunday")))

hours_crimes <- hours_crimes %>%
  arrange(Var1)

# Plotting using ggplot2
p <- ggplot(hours_crimes, aes(x = Var2, y = Freq)) +
  geom_line(aes(group=Var1, color=Var1), size=2) +
  xlab("Weekday") + ylab("Total Domestic Crimes")
```



IPL DATASET
1- Top 5 teams in IPL
2- Top 5 Players Season Wise
3- Team that Won the Toss and Chose to Bat
4- No. of matches won by each team in each season
5- Top 5 venues that have hosted most of the matches Season wise
6- Venue where team choose to bat first and won the game
7- Venue where team won the toss, choose to bat first and won the game

Ball by Ball Dataset & IPL Matches Dataset
1- Orange Cap winner season wise
2- Purple Cap winner season wise
3- Title winner each season
4- Display the player who scored a century in each season
5- Player statistics (Dotballs, singles, fours, sixes in entire IPL career)
6- Dashboard (Title winner, orange cap & purple cap for each season)

Election dataset
1- District wise winning party.
2- District wise winning candidate.
3- Integrating Maps
4- Dashboard using Election dataset. (Display winning party symbol, candidate who won, percentage of votes)

MongoDB and RStudio
1- Connection and Importing Crimes dataset
2- Queries

a) Count of Location Description as STREET and Arrest took place
b) Total number of crimes in each location
c) Bar chart for top 5 total number of crimes in each location