

Code File 1

```

1 df <- read.csv("C:\\Users\\DELL\\Desktop\\DU MSC\\Maths\\Presentation\\RS_Session_248_AS_9.csv", header=TRUE, stringsAsFactors = FALSE, fill = TRUE)
2 str(df, vec.len = 1)
3 head(df)
4
5
6 library(ggplot2)
7
8 d1 <- data.frame(GirlsToilet <- df$Schools.with.Girls..Toilet, Locations <- df$States.UTs)
9
10 #barplot(data$Schools.with.Girls..Toilet, names.arg = data$X.1 )
11
12 d1
13
14 d2 <- data.frame(FunctionalGirlsToilet <- df$Schools.with.functional.Girls..Toilet, Locations <- df$States.UTs)
15 d1 <- d1[order(d1$GirlsToilet, decreasing = TRUE)]
16
17 ggplot(d1, aes(y=Locations, x=GirlsToilet)) +
18   geom_bar(stat='identity') +
19   coord_flip() +
20   coord_cartesian(xlim = c(85.0, 100.0)) +
21   ggtitle("Percentage of Girls' Toilets in Schools")
22
23 ggplot(d2, aes(y=Locations, x=FunctionalGirlsToilet)) +
24   geom_bar(stat='identity') +
25   coord_flip() +
26   coord_cartesian(xlim = c(85.0, 100.0)) +
27   ggtitle("Percentage of Fuctional Girls' Toilets in Schools")
28
29
30 x<- ggplot(df, aes(fill=df$Schools.with.functional.Girls..Toilet,
31                   x=df$Schools.with.Girls..Toilet,
32                   y=df$States.UTs)) +
33   geom_bar(position="dodge", stat="identity")
34 x + coord_cartesian(xlim = c(85.0, 100.0))
35
36 boxplot(df$Schools.with.Girls..Toilet, data = df) +
37   title("Girls Toilets")
38
39 boxplot(df$Schools.with.functional.Girls..Toilet, data = df) +
40   title("Functional Girls Toilets")

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Code File 2

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1 df <- read.csv("Dataset/RS_Session_248_AS_9.csv", header=TRUE, stringsAsFactors = FALSE, fill = TRUE, row.names = 1)
2
3 cat("\nStructure of Dataset in Consideration:\n")
4 str(df, vec.len = 1)
5
6 cat("\nColumn names:- \n")
7 print(names(df))
8
9 cat("\nFirst Five records of the Dataset:\n")
10 print(head(df))
11
12 cat("\nSummary of the Dataset:\n")
13 print(summary(df))
14
15 # library(hash)
16 library(ggplot2)
17 library(devtools)
18 # library(highcharter)
19
20 h<-c(
21   "==100"= nrow(df[df$Schools.with.Girls..Toilet==100, ])
22 )
23 i <- 98
24
25 while (i >= 94) {
26   h[paste(">=", i)] = nrow(df[df$Schools.with.Girls..Toilet>=i, ])
27   i <- i-2
28 }
29
30 h[">89"] = nrow(df[df$Schools.with.Girls..Toilet>89, ])
31
32 print(h)
33
34 print(barplot(h))

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35
36 temp = tail(df[order(df$Schools.with.Girls..Toilet, decreasing = TRUE), ])
37 print(temp)
38
39 print(ggplot(temp, aes(y = States.UTS,x=Schools.with.Girls..Toilet)) +
40   geom_bar(stat='identity')+
41   coord_flip()+
42   xlab("Percentage") +
43   ylab("States") +
44   ggtitle("Last 6 states Percentage of Girls' Toilets in Schools"))
45
46 temp1 = df[df$Schools.with.Girls..Toilet>=99 & df$Schools.with.functional.Girls..Toilet==100, ]
47 print(temp1)
48
49 print(ggplot(temp1, aes(y = States.UTS,x=Schools.with.Girls..Toilet)) +
50   geom_bar(stat='identity')+
51   coord_flip()+
52   xlab("Percentage") +
53   ylab("States") +
54   ggtitle("States with 100% functional and more than 99% of Girls' Toilets in Schools"))
55
56 # print(nrow(df[df$Schools.with.Girls..Toilet==100, ]))
57
58 df$aggregated.functional.percentage <- (df$Schools.with.Girls..Toilet * df$Schools.with.functional.Girls..Toilet)/100
59
60 last_six = tail(df[order(df$aggregated.functional.percentage, decreasing = TRUE), ])
61 print(last_six[,c(1,4)])
62
63 print(ggplot(last_six, aes(y = States.UTS,x=aggregated.functional.percentage)) +
64   geom_bar(stat='identity')+
65   coord_flip()+
66   xlab("Aggregated Percentage") +
67   ylab("States") +
68   ggtitle("States with lowest aggregated percentage of Functional and total Toilets"))
69

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69
70 print(summary(df$aggregated.functional.percentage))
71
72 print(ggplot(df, aes(x=Schools.with.Girls..Toilet)) +
73   geom_boxplot() +
74   coord_flip()+
75   xlab("Percentage") +
76   # ylab("Percentage") +
77   ggtitle("Summary of Aggregated Girls' Toilets Percentage in Schools"))
78

```