1.Read the csv data file.

hotel\_bookings\_data=read.csv(file=file.choose(),header = TRUE)

2.Display head of data

head(hotel\_bookings\_data)

3.Display first n rows specified.

head(hotel\_bookings\_data,n=10)

4.Display tail of data.

tail(hotel\_bookings\_data)

5.Display n rows specified from bottom

tail(hotel\_bookings\_data,n=10)

6.Determining Type of data class(hotel\_bookings\_data)

7.Table command table(hotel\_bookings\_data$Adults)

table(hotel\_bookings\_data$CHILDREN)

8.Determine the structure of data

str(hotel\_bookings\_data)

9.Summarising the data

summary(hotel\_bookings\_data)

10.Displaying Dimension of the data

dim(hotel\_bookings\_data)

11.Displaying length of adults column

length(hotel\_bookings\_data$Adults)

12.Displaying column names of data

colnames(hotel\_bookings\_data) 13.Displaying structure of some columns in the data

class(hotel\_bookings\_data$Name)typeof(hotel\_bookings\_data$Name)

14.Displaying type of some data structure in the data

typeof(hotel\_bookings\_data$Total)

15.List of variables present in hotel\_bookings data ls(hotel\_bookings\_data)

16.Some pattern matching operations on variable of hotel\_bookings\_data

ls(hotel\_bookings\_data,pattern="^Sp")

ls(hotel\_bookings\_data,pattern="^[AD]")

ls(hotel\_bookings\_data,pattern="t.l")

ls(hotel\_bookings\_data,pattern="ce$")

17.Display 1st row and all columns of data frame hotel\_bookings\_data[1,]

18.Display all rows and 1st column of data frame

hotel\_bookings\_data[,1]

19.Display data in 2nd row and 3rd column of the data frame

hotel\_bookings\_data[2,3]

20.Display 1st and 2nd row and all columns hotel\_bookings\_data[1:2,]

21.Display all rows and first 3 columns

hotel\_bookings\_data[,3]

22.Selecting data where hotel\_bookings name is Venusar with subset operator

temp\_data=subset(hotel\_bookings\_data,Name=="Venusaur") temp\_data

23.Renaming a column in data frame temp\_hotel\_bookings=hotel\_bookings\_datanames(temp\_hotel\_bookings)[names(temp\_hotel\_bookings)=="Total"]<-"Total\_Number") temp\_hotel\_bookings[1,]

24.Adding a new column to dataframe temp\_hotel\_bookings[["New\_col"]]<-rep(c(1,2,3,4,5),209) temp\_hotel\_bookings[1:10,]

25.Display Sum of Adults column sum(hotel\_bookings\_data[4])

26.Display the maximum value of the Adults column

max(hotel\_bookings\_data[4])

27.Display the minimum value of the Adults column

min(hotel\_bookings\_data[4])

28.Attaching Hotel\_bookings data

attach(hotel\_bookings\_data)

29.Now we can use variables inside hotel\_bookings data min(Adults)

tail(Speed)

30.Sorting Adults variable in ascending order

sort(Adults) 31.Sorting Adults variable in descending order sort(Adults,decreasing = TRUE)

32.Detaching Hotel\_bookings data detach(hotel\_bookings\_data) 33.Using with operator to use variables inside data with(hotel\_bookings\_data,Adults)

34.Finding median of data median(hotel\_bookings\_data$Adults)

35.Finding mean of data mean(hotel\_bookings\_data$Adults)

36.Finding standard deviation of data sd(hotel\_bookings\_data$Adults)

37.Finding variance of data var(hotel\_bookings\_data$Adults)

38.Order the Adults column in ascending order order(hotel\_bookings\_data[4])

39.Order the adults column in descending order order(hotel\_bookings\_data$Adults,decreasing =TRUE)

40.Rank of Speed column rank(hotel\_bookings\_data$Speed)

41.Rank of speed column with average as tie breaker rank(hotel\_bookings\_data$Speed,ties.method = "average")

DPLYR operations

42.Usage of mutate function library(dplyr) Attaching package: 'dplyr' head(hotel\_bookings\_data %>%mutate(mutated\_Adults=Adults-mean(Adults)))

43.Adding extra column with user created vector vec = rep(c(1,2,3,4,5),209) head(hotel\_bookings\_data %>% mutate(newcol = vec))

44.Group by function new\_pok=hotel\_bookings\_data %>% group\_by(Name) head(new\_pok)

45.Summarise function head(hotel\_bookings\_data %>% group\_by(Adults,CHILDREN) %>% summarise(weight\_Defence=mean(Defence))) summarise() has grouped output by 'Adults'. You can override using the .groups argument.

46.Rename operation copy\_hotel\_bookings=hotel\_bookings\_data pd\_mod <- copy\_hotel\_bookings %>% rename(renamed\_Adults = Adults) head(pd\_mod)

47.Selecting specific columns copy\_hotel\_bookings=hotel\_bookings\_data copy\_hotel\_bookings %>% select(Name,CHILDREN,Adults,Speed,Total)

48.Reordering of columns using select function copy\_hotel\_bookings=hotel\_bookings\_data copy\_hotel\_bookings %>% select(CHILDREN,Adults,Name)

49.Filter command copy\_hotel\_bookings=hotel\_bookings\_data copy\_hotel\_bookings %>% filter(Total >= 500 & Total <=505)

50.Histogram ggplot(hotel\_bookings\_data, aes(x = Adults)) +geom\_histogram()

51.Histogram of Adults column and its density ggplot(hotel\_bookings\_data,aes(x=Adults))+ geom\_histogram(fill="cornsilk",color="blue", size=0.2)+geom\_density(color="black")

52.Line graph of Adults column and its density ggplot(hotel\_bookings\_data,aes(x=Adults))+ geom\_density(fill="blue",alpha=.4)

53.Line graph of Adults column taking two alpha values ggplot(hotel\_bookings\_data,aes(x=Adults))+ geom\_line(stat="density")+ geom\_line(stat="density",adjust=0.25, color="red")+geom\_density(fill='blue',alpha=0.2)

52.Dot Plot library(ggplot2) ggplot(hotel\_bookings\_data,aes(x=Adults,y=CHILDREN))+geom\_dotplot(binaxis="y",stackdir = "center", binwidth = 4,fill="green")

53.Box Plot ggplot(hotel\_bookings\_data, aes(x=Adults,y=CHILDREN))+geom\_boxplot(width=0.1,fill='black')+stat\_summary(func='median',fill='white',shape=21)

54.Density plot for Adults and CHILDREN ggplot(hotel\_bookings\_data,aes(x=Adults,y=CHILDREN))+geom\_density2d(aes(colour=..level..))

55.Violin Plot Adults and CHILDREN ggplot(hotel\_bookings\_data,aes(x=Adults,y=CHILDREN))+geom\_violin()