

DATA VISUALIZATION

MARKET BASKET ANALYSIS

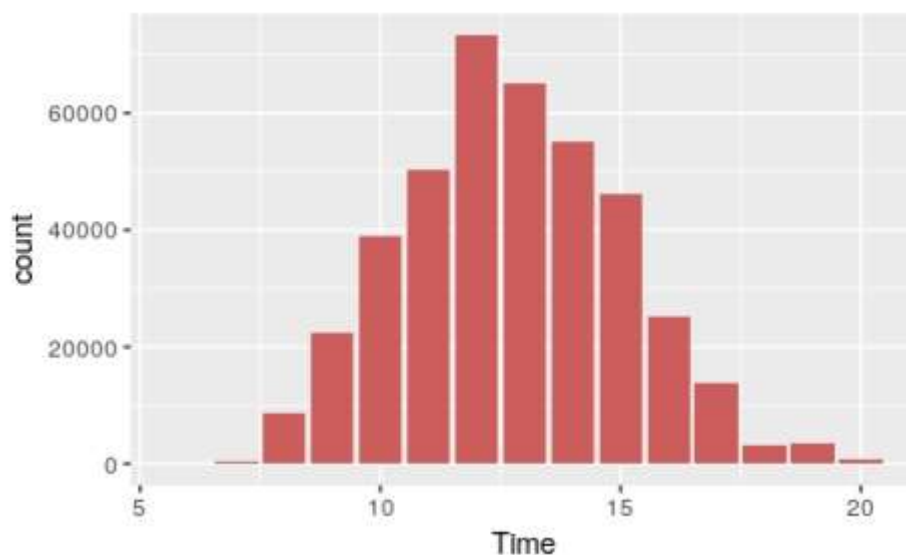
R CODE

Loading the dataset

```
retail<-read_excel('Online_retail.xlsx')
retail<-retail[complete.cases(retail)]
retail<-retail%>%mutate(Description=as.factor(Description))
retail<-retail%>%mutate(Country=as.factor(Country))
retail$Date<-as.Date(retail$InvoiceDat)
retail$Time<-format(retail$InvoiceDat,"%H:M:%S")
retail$InvoiceNo<-as.numeric(as.character(retail$InvoiceNo))
```

Plot 1:

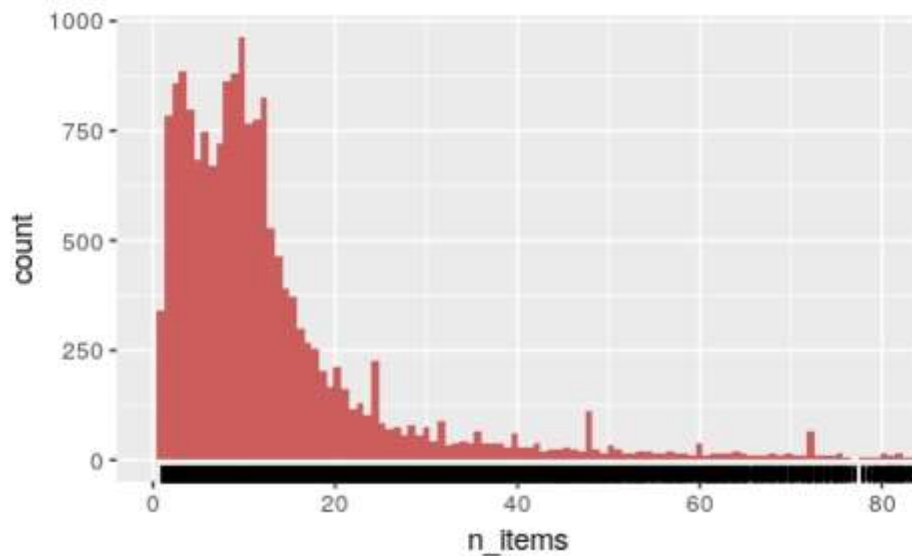
```
retail$Time<-as.factor(etail$Time)
a<-hms(as.character(etail$Time))
retail$Time=hour(a)
retail%>%
ggplot(aes(x=Time))+
geom_histogram(stat="count",fil="indianred")
```



Plot 2:

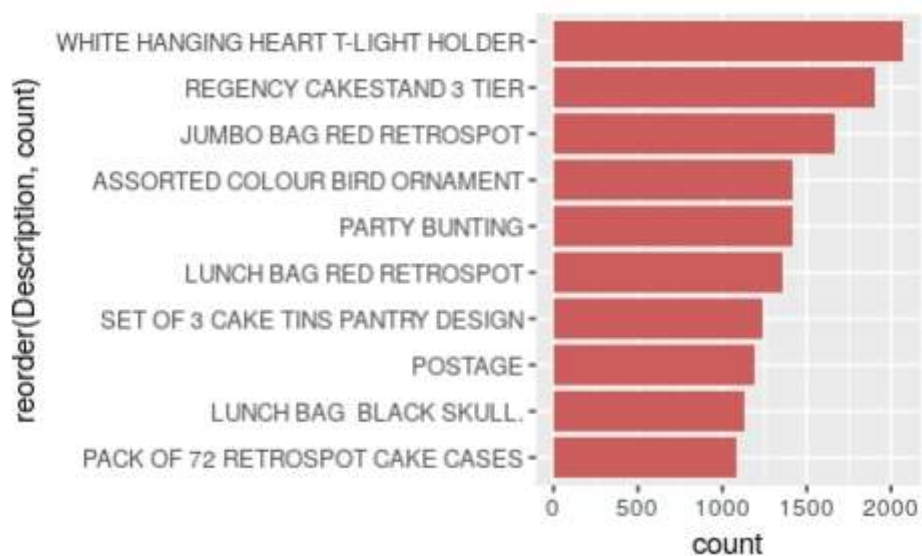
```
detach("package:lyr",unload=TRUE)
retail%>%
group_by(InvoiceNo)%>%
summarize(n_items=mean(Quantity)%>%
```

```
ggplot(aes(x=n_items))+
geom_histogram(fil="indianred",bins=100000)+
geom_rug()+ coord_cartesian(xlim=c(0,80))
```



Plot 3:

```
tmp<-retail%>%
group_by(StockCode,Desription)%>%
summarize(count=n())%>%
arrange(desc(count))
tmp<-head(tmp,n=10)
tmp%>%ggplot(aesx=reorder(Description,count),y=count)+
geom_bar(stat="identity",fil="ndianred")+coord_flip()
```



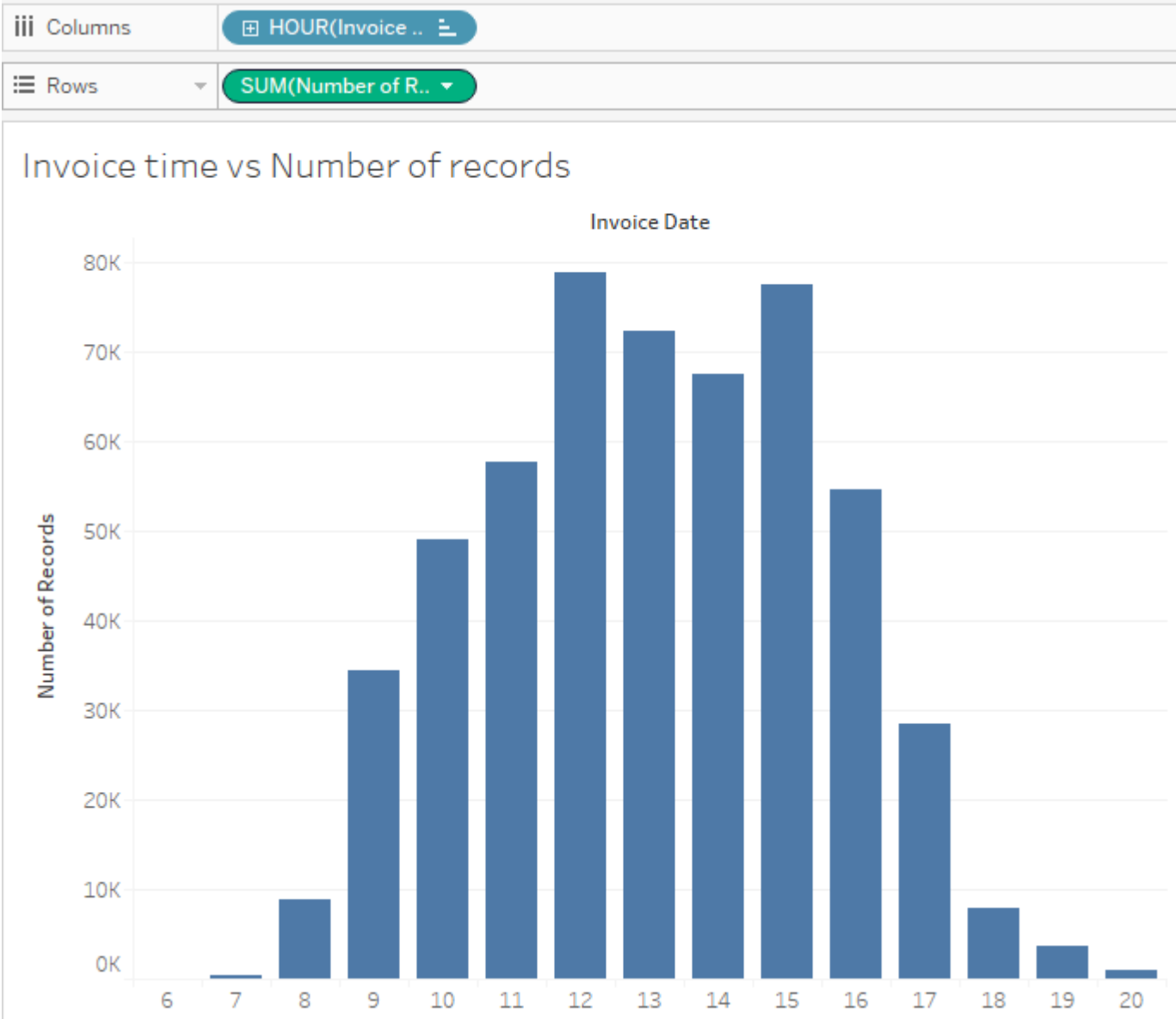
DEPLOYING ANOTHER TOOL TO IMPLEMENT SIMILAR VISUALIZATIONS

TOOL: Tableau

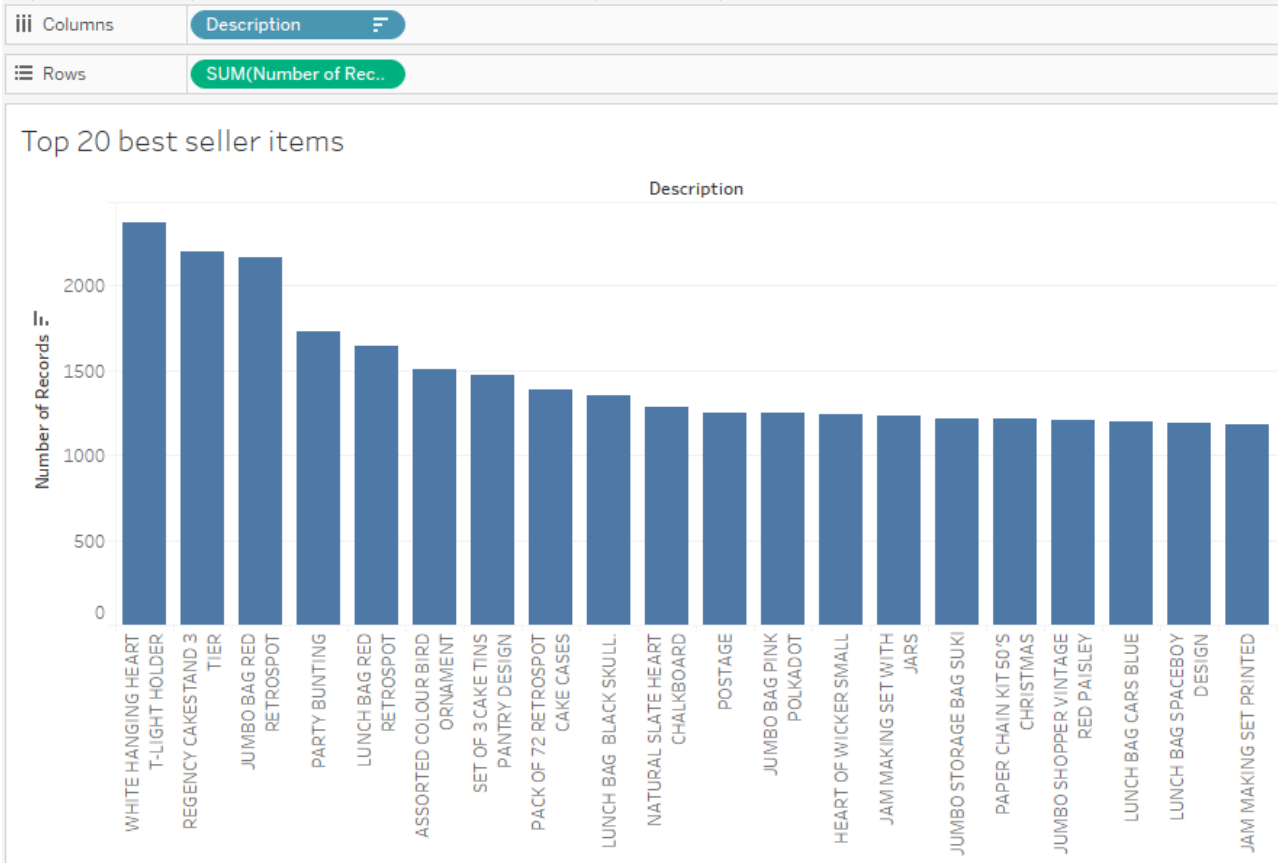
Import dataset into Tableau

# Online Retail Invoice No	Abc Online Retail Stock Code	Abc Online Retail Description	# Online Retail Quantity	📅 Online Retail Invoice Date	# Online Retail Unit Price	# Online Retail Customer ID	🌐 Online Retail Country
536,365	85123A	WHITE HANGING HEA...	6	01-12-2010 08:26:00	2.550	17850	United Kingdom
536,365	71053	WHITE METAL LANTE...	6	01-12-2010 08:26:00	3.390	17850	United Kingdom
536,365	84406B	CREAM CUPID HEART...	8	01-12-2010 08:26:00	2.750	17850	United Kingdom
536,365	84029G	KNITTED UNION FLAG...	6	01-12-2010 08:26:00	3.390	17850	United Kingdom
536,365	84029E	RED WOOLLY HOTTIE ...	6	01-12-2010 08:26:00	3.390	17850	United Kingdom
536,365	22752	SET 7 BABUSHKA NES...	2	01-12-2010 08:26:00	7.650	17850	United Kingdom
536,365	21730	GLASS STAR FROSTED...	6	01-12-2010 08:26:00	4.250	17850	United Kingdom
536,366	22633	HAND WARMER UNIO...	6	01-12-2010 08:28:00	1.850	17850	United Kingdom
536,366	22632	HAND WARMER RED ...	6	01-12-2010 08:28:00	1.850	17850	United Kingdom

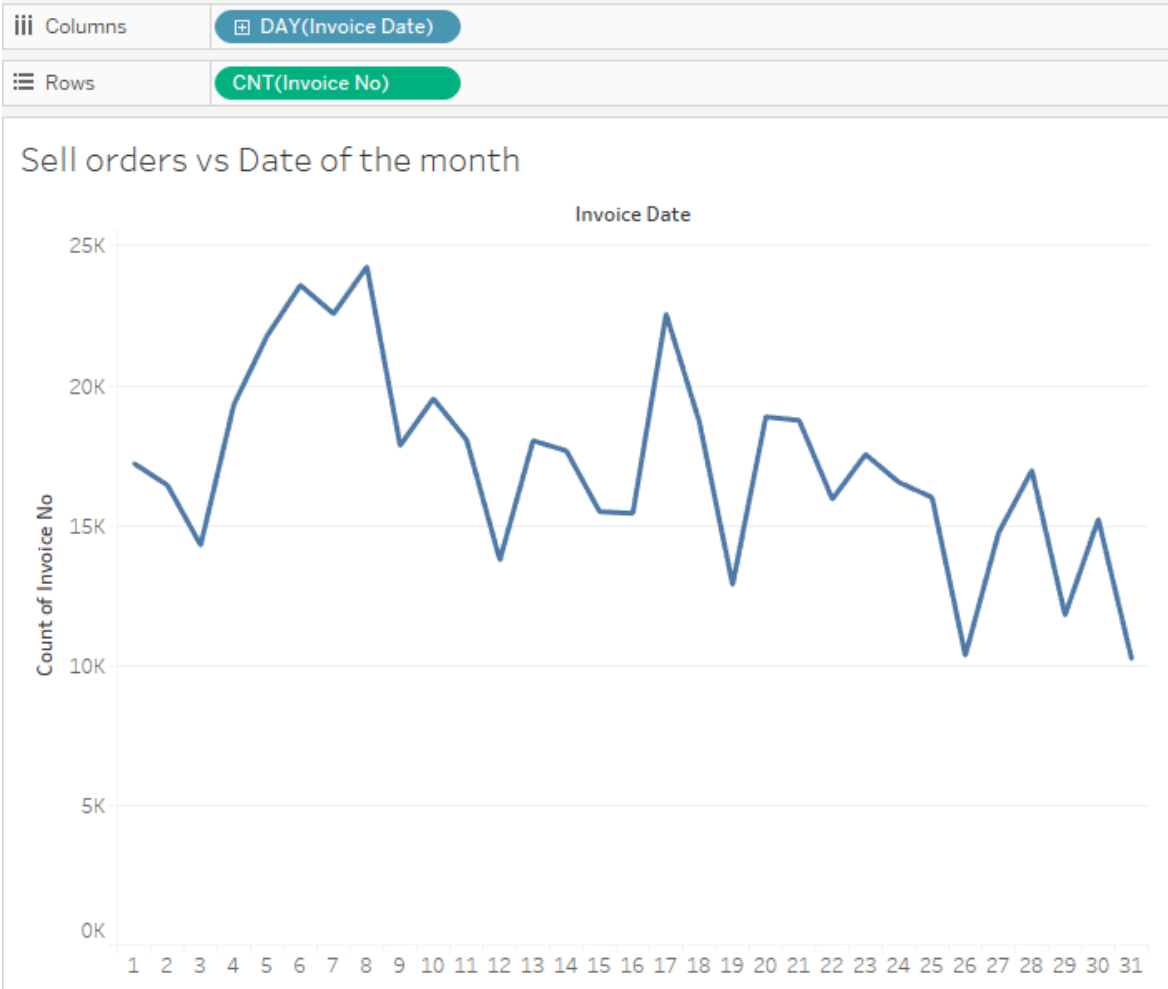
Plot 1:



Plot 2:



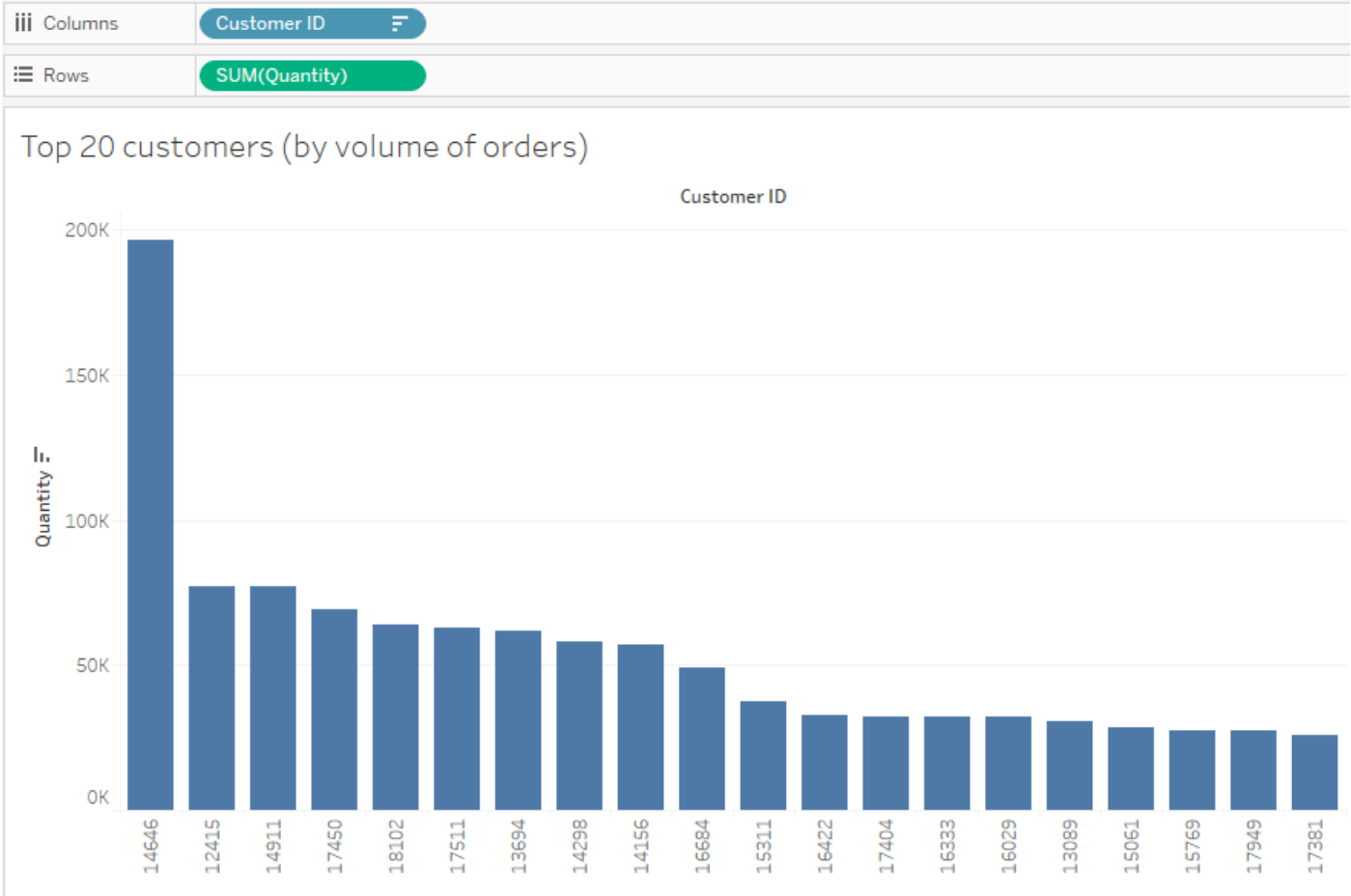
Plot 3:



Plot 4:



Plot 5:



Plot 6:

