# Problem Statement

1. Import the Titanic Dataset from the link Titanic Data Set.

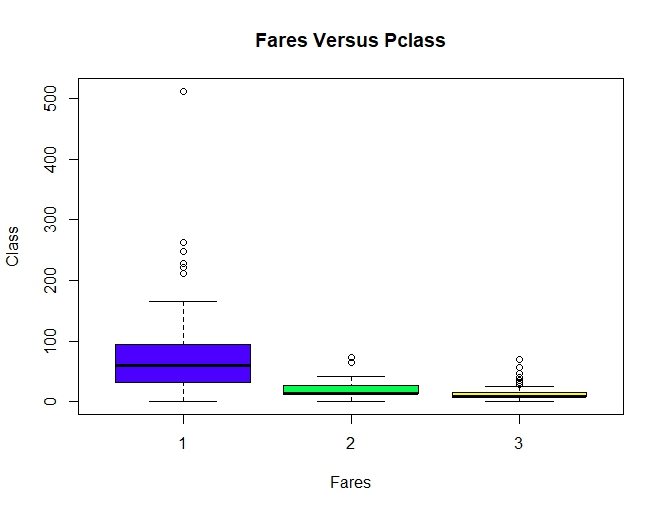
library(titanic)

Perform the following:

1. Is there any difference in fares by different class of tickets? Note - Show a boxplot displaying the distribution of fares by class

#use titanic\_train dataset

|  |
| --- |
| > library(titanic)  > boxplot(Fare~Pclass,data= titanic\_train,  + main="Fares Versus Pclass",xlab="Fares",ylab="Class",col=topo.colors(3)) |
|  |
| |  | | --- | | > | |

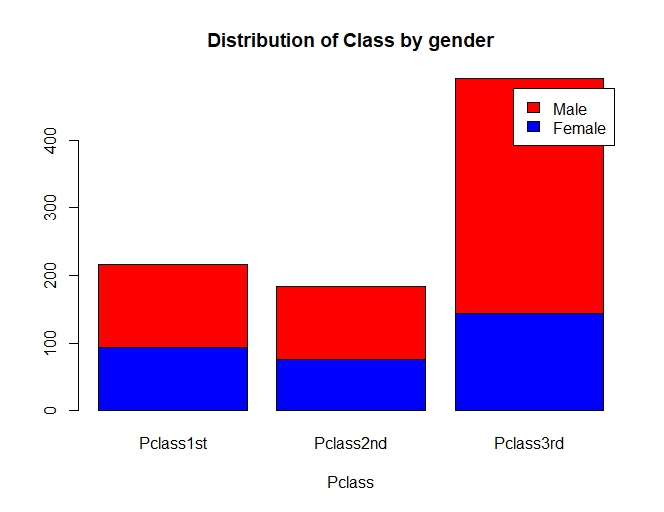


b. Is there any association with Passenger class and gender?

Note – Show a stacked bar chart

> counts<-table(titanic\_train$Sex,titanic\_train$Pclass)

> barplot(counts, main = "Distribution of Class by gender", xlab="Pclass", col=c("blue", "red"), legend = c("Female","Male"), names.arg = c("Pclass1st", "Pclass2nd","Pclass3rd"))



#or like this too

> a1 <- titanic\_train$Sex

> a1

[1] "male" "female" "female" "female" "male" "male" "male" "male"

[9] "female" "female" "female" "female" "male" "male" "female" "female"

[17] "male" "male" "female" "female" "male" "male" "female" "male"

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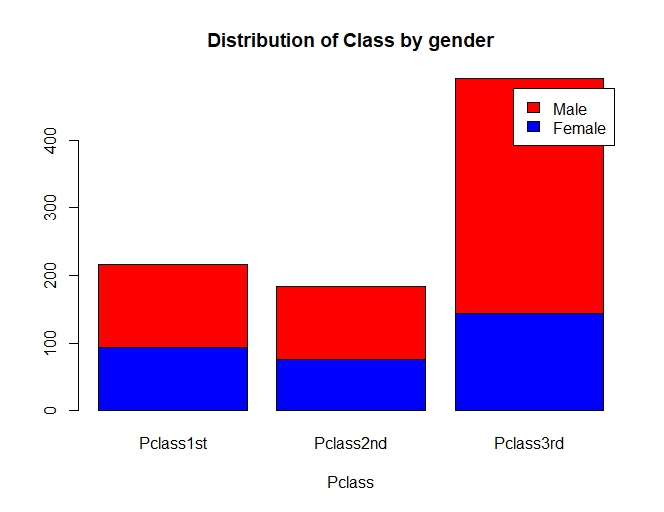
[873] "male" "male" "female" "female" "male" "male" "male" "female"

[881] "female" "male" "female" "male" "male" "female" "male" "female"

[889] "female" "male" "male"

> counts<-table(a1,titanic\_train$Pclass)

> barplot(counts, main = "Distribution of Class by gender", xlab="Pclass", col=c("blue", "red"), legend = c("Female","Male"), names.arg = c("Pclass1st", "Pclass2nd","Pclass3rd"))



#we can do chisq test also for checking association

chisq.test(titanic\_train$Pclass ,titanic\_train$Sex)

> chisq.test(titanic\_train$Pclass ,titanic\_train$Sex)

Pearson's Chi-squared test

data: titanic\_train$Pclass and titanic\_train$Sex

X-squared = 16.971, df = 2, p-value = 0.0002064

#ho:there is no association

#since p value is 0.0002064<0.05

#we reject the null hypothesis and thus say there is association