**DATA SET-1**

> library(rpart)

> mydata<-read.table(file = "training\_set.csv", header = TRUE, sep = ",")

> str(mydata)

> fi<-factor(mydata$Class, levels = 0:1, labels=c("Yes","No"))

> tree\_train<-rpart(fi~XB+XC+XD+XE+XF+XG+XH+XI+XJ+XK+XL+XM+XN+XO+XP+XQ+XR+XS+XT+XU, data = mydata, method = 'class',parms = list(split='information'))

> print(tree\_train)

> printcp(tree\_train)

> tree\_train\_pruned<-prune(tree\_train,0.010000)

> par(mfrow=c(1,2),mar=rep(0.1,4))

> plot(tree\_train, margin = 0.05, main="Actual Tree"); text(tree\_train, use.n = TRUE, cex=0.8)

> plot(tree\_train\_pruned, margin = 0.05, main="Pruned Tree"); text(tree\_train\_pruned, use.n = TRUE, cex=0.8)

> test\_data<-read.table(file = "test\_set.csv", header = TRUE, sep = ",")

> predict(tree\_train\_pruned,test\_data,type = c("vector"))

**DATA SET-2**

> mydata\_2<-read.table(file = "training\_set(2).csv", header = TRUE, sep = ",")

> str(mydata\_2)

> fi\_2<-factor(mydata\_2$Class, levels = 0:1, labels=c("Yes","No"))

> tree\_train\_2<-rpart(fi\_2~XB+XC+XD+XE+XF+XG+XH+XI+XJ+XK+XL+XM+XN+XO+XP+XQ+XR+XS+XT+XU, data = mydata\_2, method = 'class',parms = list(split='information'))

> print(tree\_train\_2)

> printcp(tree\_train\_2)

> tree\_train\_pruned\_2<-prune(tree\_train\_2,0.010000)

> par(mfrow=c(1,2),mar=rep(0.1,4))

> plot(tree\_train\_2, margin = 0.05, main="Actual Tree"); text(tree\_train\_2, use.n = TRUE, cex=0.8)

> plot(tree\_train\_pruned\_2, margin = 0.05, main="Pruned Tree"); text(tree\_train\_pruned\_2, use.n = TRUE, cex=0.8)

> test\_data\_2<-read.table(file = "test\_set(2).csv", header = TRUE, sep = ",")

> predict(tree\_train\_pruned\_2,test\_data\_2,type = c("vector"))