**Experiment 5**

**Student Name: Mohit Kumar UID: 20BCS9473**

**Branch: BE-CSE Section/Group: 20BCS-DM-714/A**

**Semester: 6 Subject Code: 20CSP-376**

**Subject Name: Data Mining Lab Date of Performance: 11-04-2023**

1. **Aim/Overview of the practical:** To perform the classification by decision tree induction.
2. **Tools used:** RStudio
3. **Code:**

library(RWeka)

library(partykit)

library(caTools)

setwd("C:\\Users\\hp\\Documents\\DATA MINING CODES\\EXPERIMENT 5")

getwd()

iris\_data = iris

str(iris\_data)

summary(iris\_data)

spl = sample.split(iris\_data, SplitRatio = 0.7)

dataTrain = subset(iris\_data, spl==TRUE)

dataTest = subset(iris\_data, spl==FALSE)

m1 <- J48(Species~., dataTrain)

summary(m1)

dataTestPred <- predict(m1, newdata = dataTest)

table\_matrix <- table(dataTest$Species, dataTestPred)

print(table\_matrix)

accuracy\_Test <- sum(diag(table\_matrix)) / sum(table\_matrix)

cat("Test Accuracy is: ", accuracy\_Test)

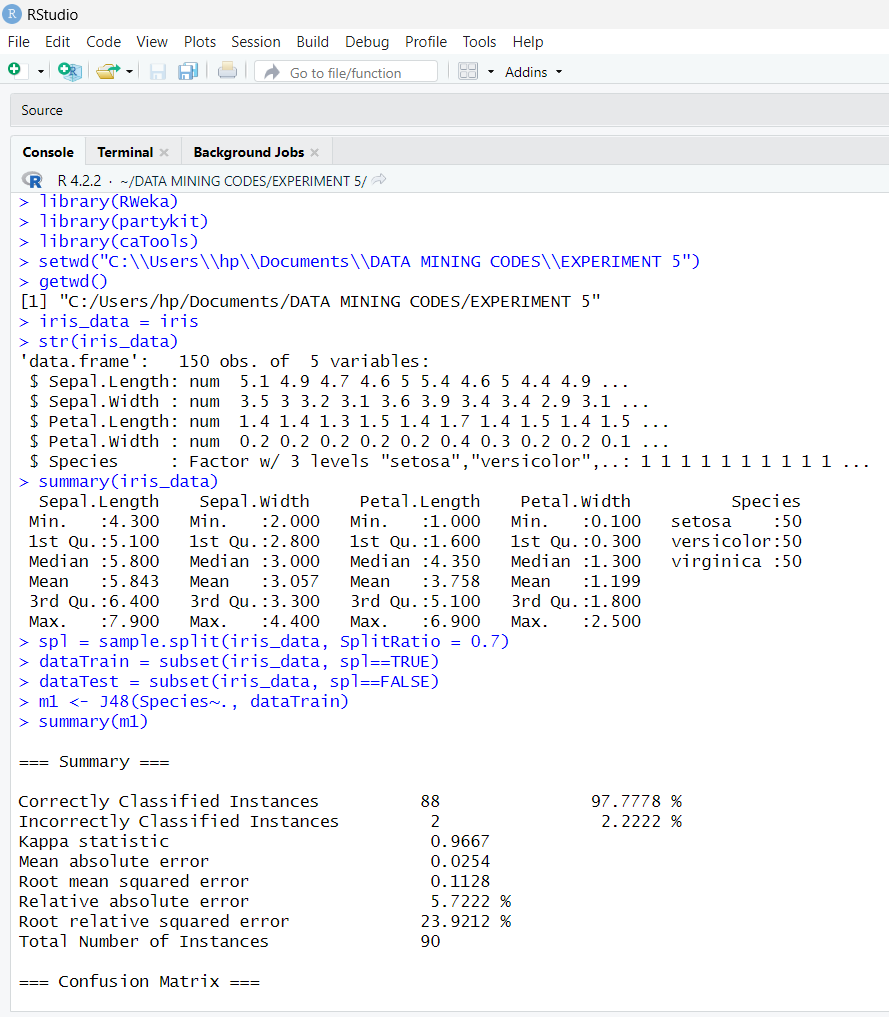
pdf("Iris\_decision\_plot.pdf", paper="a4")

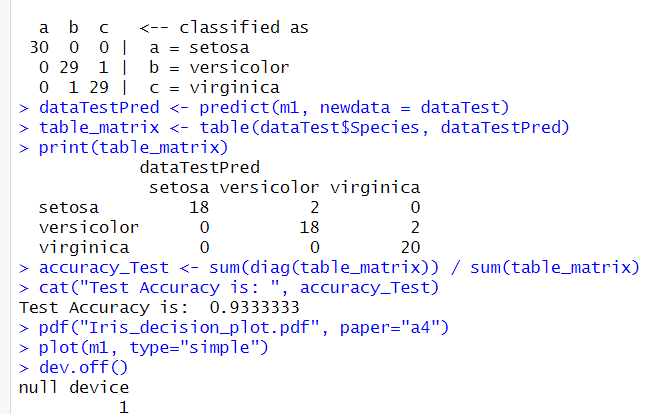
plot(m1, type="simple")

dev.off()

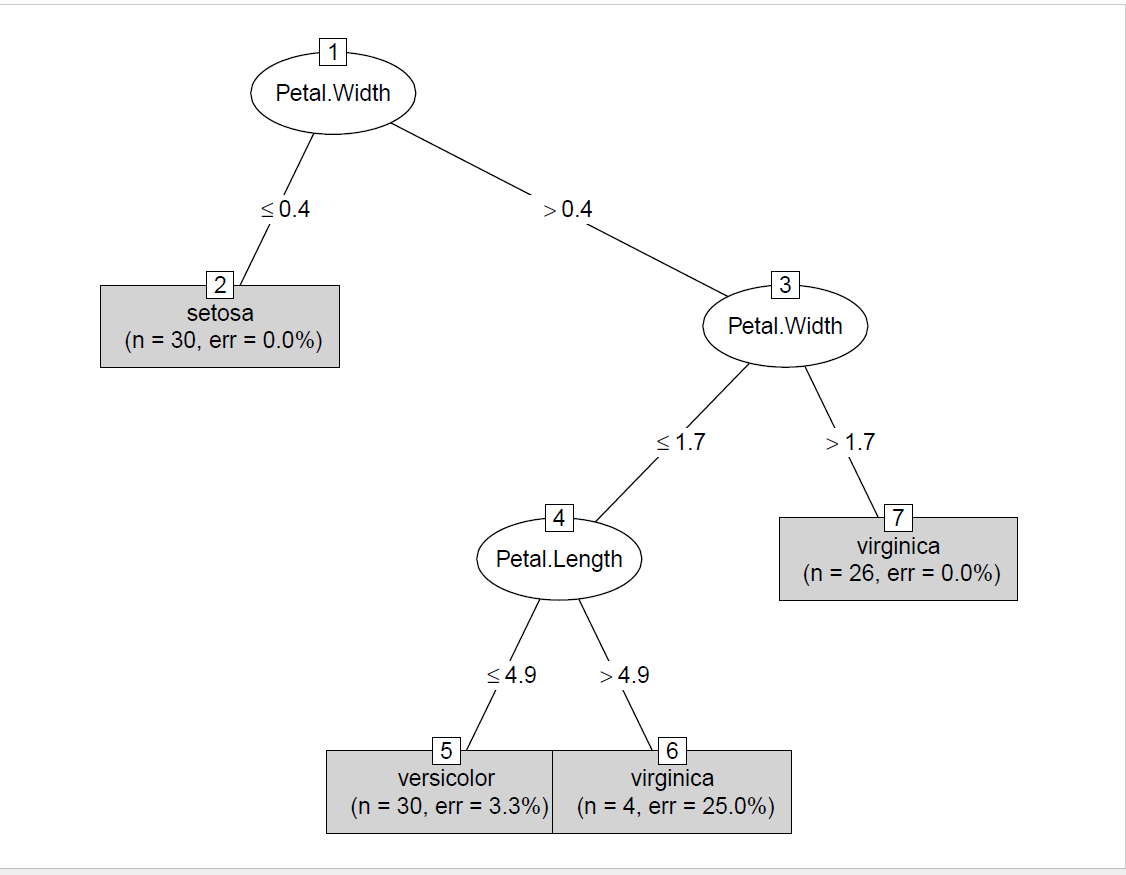
1. **Output:**

RStudio:





Iris\_decision\_plot file:



1. **Observation:**

* Learnt how to use R and create a file in Rstudio.
* Learnt how to load dataset iris in Rstudio.
* Learned How to Implement Decision Tree in R Studio.