Practical 5

Roll No: TTA01   **Class: TY BSc IT**

Subject: Business Intelligence   **Semester: 6**

Date: **Sign:**

Aim: Practical Implementation of Decision Tree using R Tool

The package "party" has the function ctree() which is used to create and analyze decision tree.

➤ install.packages("party")

• Syntax

The basic syntax for creating a decision tree in R is −

ctree(formula, data)

• **Input Data**

We will use the R in-built data set named readingSkills to create a decision tree.

```
> library(party)
Loading required package: grid
Loading required package: mvtnorm
Loading required package: modeltools
Loading required package: stats4
Loading required package: strucchange
Loading required package: zoo

Attaching package: 'zoo'

The following objects are masked from 'package:base':

    as.Date, as.Date.numeric

Loading required package: sandwich
> print(head(readingSkills))
  nativeSpeaker age shoeSize    score
1           yes   5 24.83189 32.29385
2           yes   6 25.95238 36.63105
3            no  11 30.42170 49.60593
4           yes   7 28.66450 40.28456
5           yes  11 31.88207 55.46085
6           yes  10 30.07843 52.83124
```

We will use the ctree() function to create the decision tree and see its graph.

```
>
> input.dat <- readingSkills[c(1:105),]
> png(file = "decision_tree.png")
> output.tree <- ctree(
+ nativeSpeaker ~ age + shoeSize + score,
+ data = input.dat)
> plot(output.tree)
> dev.off()
null device
          1
```

Output: