LAB EXERCISE-2

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1) To learn how to generate a bar plot, we will simulate sample data and look at how to prepare the data before plotting. Run the below code to generate the data. cat <- c(rep("A", 2), rep("B", 4), rep("C", 8)).

Data has to be in the form of Levels and their Counts . Therefore, using table() function to summarize and as.data.frame to create a data frame. df <- as.data.frame(table(cat))

**CODE:**

cat <- c(rep("A", 2), rep("B", 4), rep("C", 8))

> cat

[1] "A" "A" "B" "B" "B" "B" "C" "C" "C" "C" "C" "C" "C" "C"

> df <- as.data.frame(table(cat))

> df

cat Freq

1 A 2

2 B 4

3 C 8

**OUTPUT:**

Graphical user interface, application

Description automatically generated

a. Now, using type="bar" and the appropriate x and y arguments, create a bar graph. b. Add color to each bar using color argument, based on the categorical levels.

**CODE:**

plot(df,type="bar")

**OUTPUT:**

Chart, box and whisker chart

Description automatically generated

2) Pie chart is an alternative way of representing categorical data, but, when the levels in the data are more, bar chart is preferred. Data has to be prepared in the same way as we do it for bar chart. The arguments vary a little. Instead of x and y, we use labels and values.Generate a pie chart using the same data from the previous exercise and appropriate arguments.

**CODE:**

>x<-c(rep(2),rep(4),rep(8))

> x

[1] 2 4 8

> label<-c(rep("A"),rep("B"),rep("C"))

> label

[1] "A" "B" "C"

> pie(x,label)

>

**OUTPUT:**

A picture containing text

Description automatically generated

Graphical user interface, chart, pie chart

Description automatically generated