SAHYADRI
COLLEGE OF ENGINEERING & MANAGEMENT
MANGALURU
(An Autonomous Institution)

Department of CSE (Artificial Intelligence & Machine Learning)

DATA VISUALIZATION USING R PROGRAMMING LAB PROGRAMS

Part A

1. For a given set of training data examples stored in a .CSV file, compute the Mean, Median, Variance, Standard Deviation, Range and Quartiles of one of the attributes using R programming.
2. Write an R program to perform the following operations: Create a file, Writing into a file, Renaming a file, Reading a file, Listing all files, Copy a file.
3. Write an R program to perform the following operations on strings: Concatenate two strings, Compare two strings, Reverse the string and Check if a given string is a palindrome or not.
4. Write an R program to demonstrate the use of the following String manipulation functions in R: nchar, toupper, tolower, substr, grep, paste, strsplit, sprintf, cat and sub functions.

Part B

5. Write an R program to create the following basic plots: Scatter plot, Line graph, Bar plot and Histogram.
6. Write an R program to create a 2D and 3D Pie chart with slice percentage & legend.
7. Using the in-build Iris dataset and ggplot2 package, write an R program to create Scatter plot, Line graph and Bar plot with chart titles and axis titles.
8. Write an R program to create Histogram and Box plots using ggplot2 package in R.
9. Using the in-build mtcars dataset and lattice package, write an R program to create Bar plot, Scatter plot, Histogram and Density plot.
10. Write an R program to create 3D Wireframe Plot and Level Plot using lattice package in R.