(DA-Lab)
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DA-Lab
DATA
ANALYTICS-LAB(KIT-651)___

By SHWETA TIWARI

SESSION-2021-22 EVEN SEM

YEAR, SEMESTER- 3rd, VIth

Program List of Data Analytics Lab (KIT-651)

PART: ADDITIONAL-PROGRAMS

PART: PROGRAM UNDER SYLLABUS

PROGRAM NO.	ADDITIONAL-PROGRAMS
1	R Programming Language – Vector
	a). How to create an empty vector in R
	b). Create empty vector and append values
	c). Count the specific value in a given vector in R
	d). Count number of vector values in range with R
	e). Access the last value of a given vector in R
	f). Find product of vector elements in R
2	R Programming Language – List

	a). How to Create Empty List in R
	b). How to Combine Lists in R
	c). How to Append Values to List in R
	d). How to Subset Lists in R
	e). Select Random Element from List in R
3	R Programming Language – DataFrame
	a.) Create empty DataFrame with only column names in R
	b). How to create a DataFrame from given vectors in R
	c). Find columns and rows with NA in R DataFrame
	d). How to add column to dataframe in R
	e). How To Merge Two DataFrames in R
	f). How to remove empty rows from R dataframe
	g). How to select row with maximum value in each group in R Language
	h). Insert multiple rows in R DataFrame
	i). Remove rows with NA in one column of R DataFrame
	j). Sort DataFrame by column name in R
4	R Programming Language – File Handling
	a). Export List to CSV or text File in R
	b). How to Export Multiple Plots to PDF in R
	c). Read Only Header of File in R
	d). Read SPSS sav File into R
	e). Read text File with Space as Delimiter in R
	f). Save and Load RData Workspace Files in R
5	R Programming Language – Data Preprocessing Methods-Transform Methods
	a). Transform Methods-Scale
	b). Transform Methods-Center
	c). Transform Methods-Standardize

	d). Transform Methods-Normalize
	e). Transform Methods-Box-Cox Transform
	f). Transform Methods-Yeo-Johnson Transform
	g). Transform Methods-Principal Component Analysis
	h). Transform Methods-Independent Component Analysis
6	To perform dimensionality reduction operation using PCA for dataset mtcars(motor trend car road test).
7	To perform Multiple Regression with R.
8	To perform Decision Tree operation and visualize for iris data set using r.
9	Write R script to diagnose Iris using KNN classification and plot the results.
10	R Programming Language – Data Visualization
	a). Adding Colors to Charts in R Programming
	b). How to show legend in heatmap in R
	c). Display All X-Axis Labels of Barplot in R
	d). How to Create a Stacked Dot Plot in R
	e). Change Spacing of Axis Tick Marks in Base R Plot
	f). Add legends without border and with white background in R
	g). Plot Shaded Area between vertical lines in R
	h). How to add Mean and Median to Histogram in R
PROGRAM NO.	**PROGRAM UNDER SYLLABUS**
1	To get the input from user and perform numerical operations (MAX, MIN, AVG, SUM, SQRT, ROUND) using in R.
2	To perform data import/export (.CSV, .XLS, .TXT) operations using data frames in R.
3	To get the input matrix from user and perform Matrix addition, subtraction, multiplication, inverse transpose and division operations using vector concept in R.
4	To perform statistical operations (Mean, Median, Mode and

	Standard deviation) using R.
5	To perform data pre-processing operations i) Handling Missing data ii) Min-Max normalization
6	To perform dimensionality reduction operation using PCA for Houses Data Set
7	To perform Simple Linear Regression with R.
8	To perform K-Means clustering operation and visualize for iris data set.
9	Write R script to diagnose any disease using KNN classification and plot the results.
10	To perform market basket analysis using Association Rules (Apriori).