

(DA-Lab)
MS. SHWETA TIWARI
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DA-Lab

DATA

ANALYTICS-LAB(KIT-651)

By SHWETA TIWARI

SESSION-2023-24 EVEN SEM

YEAR, SEMESTER- 3rd, 6th

Program List of Data Analytics Lab (KIT-651)

PART: ADDITIONAL-PROGRAMS

PART: PROGRAM UNDER SYLLABUS

SESSION-2023-24 EVEN SEM

YEAR, SEMESTER- 3rd, VIth

Program List of Data Analytics Lab (KIT-651)

Program No.	Program	Program
1	R Programming Language – Vector	Additional Program-1
	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	Additional Program-2
	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	To get the input from user and perform numerical operations (MAX, MIN, AVG, SUM, SQRT, ROUND) using in R.	Under Program-1
4	To get the input matrix from user and perform Matrix addition, subtraction, multiplication, inverse transpose and division operations using vector concept in R.	Under Program-3
5	To perform statistical operations (Mean, Median, Mode and Standard deviation) using R.	Under Program-4
6	R Programming Language – DataFrame	Additional Program-3

	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	
7	R Programming Language – File Handling	Additional Program-4
	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	
8	To perform data import/export (.CSV, .XLS, .TXT) operations using data frames in R.	Under Program-2
9	R Programming Language – Data Preprocessing Methods-Transform Methods	Additional Program-5
	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	
10	To perform data pre-processing operations i) Handling Missing data ii) Min-Max normalization	Under Program-5
11	R Programming Language – Data Visualization	Additional Program-10
	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	
12	To perform dimensionality reduction operation using PCA for Houses Data Set	Under Program-6
13	To perform dimensionality reduction operation using PCA for dataset mtcars(motor trend car road test).	Additional Program-6
14	To perform Simple Linear Regression with R.	Under Program-7
15	To perform Multiple Regression with R.	Additional Program-7
16	To perform K-Means clustering operation and visualize for iris data set.	Under Program-8
17	To perform Decision Tree operation and visualize for iris data set using r.	Additional Program-8
18	Write R script to diagnose any disease using KNN classification and plot the results.	Under Program-9
19	Write R script to diagnose Iris using KNN classification and plot the results.	Additional Program-9
20	To perform market basket analysis using Association Rules (Apriori).	Under Program-10