SESSION-2023-24 EVEN SEM

YEAR, SEMESTER- 3rd, VIth

Program List of Data Analytics Lab (KIT-651)

Program No.	Program	Date
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	To get the input from user and perform numerical operations (MAX, MIN, AVG, SUM, SQRT, ROUND) using in R.	
4	To get the input matrix from user and perform Matrix addition, subtraction, multiplication, inverse transpose and division operations using vector concept in R.	
5	To perform statistical operations (Mean, Median, Mode and Standard deviation) using R.	
6	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	
7	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	
8	To perform data import/export (.CSV, .XLS, .TXT) operations using data frames in R.	
9	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	
10	To perform data pre-processing operations i) Handling Missing data ii) Min-Max normalization	
11	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	
12	To perform dimensionality reduction operation using PCA for Houses Data Set	
13	To perform dimensionality reduction operation using PCA for dataset mtcars(motor trend car road test).	
14	To perform Simple Linear Regression with R.	
15	To perform Multiple Regression with R.	
16	To perform K-Means clustering operation and visualize for iris data set.	
17	To perform Decision Tree operation and visualize for iris data set using r.	
18	Write R script to diagnose any disease using KNN classification and plot the results.	
19	Write R script to diagnose Iris using KNN classification and plot the results.	
20	To perform market basket analysis using Association Rules (Apriori).	