



ACADGILD

SESSION 3: FOUNDATIONAL R PROGRAMMING

Assignment 4

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1. Introduction

This assignment will help you understand the concepts learnt in the session.

2. Objective

This assignment will test your skills on Operations on Data Structures in R.

3. Prerequisites

Not applicable.

4. Associated Data Files

Not applicable.

5. Problem Statement

A. Implement user defined functions within apply function using the mtcars data set and produce column wise summary statistics using apply function and mtcars dataset.

ANS: `mtcars <- read.csv("C:/Users/Udayk/Desktop/Data Class/DATA CLASS FILES/Day11/mtcars.csv")`
`View(mtcars)`

	X	mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
1	Mazda RX4	21.0	6	160.0	110	3.90	2.620	16.46	0	1	4	4
2	Mazda RX4 Wag	21.0	6	160.0	110	3.90	2.875	17.02	0	1	4	4
3	Datsun 710	22.8	4	108.0	93	3.85	2.320	18.61	1	1	4	1
4	Hornet 4 Drive	21.4	6	258.0	110	3.08	3.215	19.44	1	0	3	1
5	Hornet Sportabout	18.7	8	360.0	175	3.15	3.440	17.02	0	0	3	2
6	Valiant	18.1	6	225.0	105	2.76	3.460	20.22	1	0	3	1
7	Duster 360	14.3	8	360.0	245	3.21	3.570	15.84	0	0	3	4
8	Merc 240D	24.4	4	146.7	62	3.69	3.190	20.00	1	0	4	2

`apply(mtcars, 2, summary)`

```
> apply(mtcars, 2, summary)
      X      mpg      cyl      disp      hp      drat      wt      qsec      vs
Length "32"      "32"      "32"      "32"      "32"      "32"      "32"      "32"      "32"
Class  "character" "character" "character" "character" "character" "character" "character" "character" "character"
Mode   "character" "character" "character" "character" "character" "character" "character" "character" "character"
      am      gear      carb
Length "32"      "32"      "32"
Class  "character" "character" "character"
Mode   "character" "character" "character"
```

B.write a program to extract the names of the list.

`names(mtcars)`

```
> names(mtcars)
[1] "X"      "mpg"    "cyl"    "disp"   "hp"     "drat"   "wt"     "qsec"   "vs"     "am"     "gear"   "carb"
```

