Road Map

1. Couse Outlie Detail
2. Git Hub set Up
3. Project Overview
4. User stories -Use Cases
5. R-Setup using r studio

Data Structure in R

1. Vectors: A vector is simple a list of items that are same type.
2. List: In R list contain many different type of data types inside.
3. Matrices: which is a two-dimensional data set columns and row.
4. Arrays: Array can have more than two dimensions, and which contains similar elements.
5. Data Frames: Can have different types of data inside it. Ex char, number or logs and its displayed in the format as a tables.
6. Factors :

Step by step

1. Create a repositor of Customer Analysis
2. Collaborate with raghu1730
3. Create a main branch
4. Add change to main branch
5. And merge and pull request to master branch.

From R-Console

List Data Structure

> mylist1<-list("id", "name", "address")

> mylist2<-list(4521, "raghu", "montreal")

> mylistdetail<-c(mylist1, mylise2)

Error: object 'mylise2' not found

> mylistdetail<-c(mylist1, mylist2)

> print(mylistdetail)

Matrix Data Structure

> mymatrix<-matrix(c(1, 2, 3, 4, 5, 6), nrow=3, ncol=2)

> print(mymatrix)

[,1] [,2]

[1,] 1 4

[2,] 2 5

[3,] 3 6

> mymatrix<-matrix(c(1, 2, 3, 4, 5, 6), nrow=3, ncol=2)

> mymatrix<-matrix(c("apple", "bananna", "charry", "orange"), nrow=3, ncol=2)

Warning message:

In matrix(c("apple", "bananna", "charry", "orange"), nrow = 3, ncol = 2) :

data length [4] is not a sub-multiple or multiple of the number of rows [3]

> mymatrix<-matrix(c("apple", "bananna", "charry", "orange"), nrow=2, ncol=2)

> print(mymatrix)

[,1] [,2]

[1,] "apple" "charry"

[2,] "bananna" "orange"

> mymatrix[1,2]

[1] "charry"

> mymatrix[0, 0]

<0 x 0 matrix>

> mymatrix[0, 1]

character(0)

> mymatrix[1,2]

[1] "charry"

> mymatrix[2,]

[1] "bananna" "orange"

> mymatrix[2,2]

[1] "orange"

Array Data Structure

> myarray<-c(1:24)

> myarray

[1] 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

> multidim<-array(myarray, dim=c(4, 3, 2))

> multidim

, , 1

[,1] [,2] [,3]

[1,] 1 5 9

[2,] 2 6 10

[3,] 3 7 11

[4,] 4 8 12

, , 2

[,1] [,2] [,3]

[1,] 13 17 21

[2,] 14 18 22

[3,] 15 19 23

[4,] 16 20 24

> multidim[, c(1),1]

[1] 1 2 3 4

> multidim[c(1),1 , c(1),1]

Error in multidim[c(1), 1, c(1), 1] : incorrect number of dimensions

> multidim[c(1) , c(1),1]

[1] 1

> multidim[c(2) , c(1),1]

[1] 2

> multidim[c(4) , c(1),1]

[1] 4

> multidim[c(4), 2 , c(1),1]

Error in multidim[c(4), 2, c(1), 1] : incorrect number of dimensions

> multidim[c(4),c(2), c(1),1]

Error in multidim[c(4), c(2), c(1), 1] : incorrect number of dimensions

> multidim[c(4), c(1),1]

[1] 4

> multidim[c(4), c(1),2]

[1] 16

Data Frame Data Structure

> mydataframe<-data.frame(name=c("John", "David", "Rajesh"),

+ id = c(125465, 646452, 124545

+ ), marks =c(60, 75, 50))

> mydataframe

name id marks

1 John 125465 60

2 David 646452 75

3 Rajesh 124545 50

> summary(mydataframe)

name id marks

Length:3 Min. :124545 Min. :50.00

Class :character 1st Qu.:125005 1st Qu.:55.00

Mode :character Median :125465 Median :60.00

Mean :298821 Mean :61.67

3rd Qu.:385959 3rd Qu.:67.50

Max. :646452 Max. :75.00

> mydataframe[["name"]]

[1] "John" "David" "Rajesh"

> mydataframe[["id"]]

[1] 125465 646452 124545

> dim(mydataframe)

[1] 3 3

> length(mydataframe)

[1] 3

> mydataframe1<-data.frame(subject=c("Database", "r-languag", "sql")

+ )

> mydataframe1

subject

1 Database

2 r-languag

3 sql

> new\_data\_frame<-cbind(mydataframe, mydataframe1)

> new\_data\_frame

name id marks subject

1 John 125465 60 Database

2 David 646452 75 r-languag

3 Rajesh 124545 50 sql

> new\_data\_frame$per = 100\*(new\_data\_frame$marks/sum(new\_data\_frame$marks))

> new\_data\_frame