DATA ANALYTICS – 4027

LAB-3

Name: Hari Krishna P

Reg No: 19BCE7675

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Contents:

- **Data Frame**
- **Factors**

Submitted to:

Prof . Hari Seetha

1.Create the following dataframe df:

```
Playerdata
   names ages
1   Adam   23
2  Antony  22
3  Brian   24
4   Carl   25
5   Doug   26
```

```
> Name <- c("Adam","Antony","Brain","Carl","Doug")
> ages <- c(23,22,24,25,26)
> Playerdata <- data.frame(Name,ages)
> Playerdata
    Name ages
1   Adam   23
2 Antony   22
3  Brain   24
4   Carl   25
5   Doug   26
```

2. Write a R program to get the structure of a given data frame

```
> str(Playerdata)
'data.frame':   5 obs. of  2 variables:
 $ Name: chr  "Adam" "Antony" "Brain" "Carl" ...
 $ ages: num  23 22 24 25 26
>
```

3. Write a R program to get the statistical summary and nature of the data of a given data frame

```
> summary(Playerdata)
     Name                ages
 Length:5           Min.   :22
 Class :character   1st Qu.:23
 Mode  :character   Median :24
                    Mean   :24
                    3rd Qu.:25
                    Max.   :26
> str(Playerdata)
'data.frame':   5 obs. of  2 variables:
 $ Name: chr  "Adam" "Antony" "Brain" "Carl" ...
 $ ages: num  23 22 24 25 26
>
```

4. Write a R program to extract specific column from a data frame using column name

```
> Playerdata$Name
[1] "Adam"   "Antony" "Brain"  "Carl"   "Doug"
> |
```

5. Write a R program to extract first two rows from a given data frame.

```
> Playerdata[1:2,]
    Name ages
1   Adam   23
2 Antony   22
> |
```

6. Write a R program to extract 3rd and 5th rows with 1st and 3rd columns from a given data frame

```
> result =  Playerdata[c(2,4),c(0,2)]
> result
[1] 22 25
> |
```

7. Write a R program to add a new column Player_ID in a given data frame

```
> Player_ID <- cbind(Playerdata,R_NO=c(1001,1002,1003,1004,1005))
> Player_ID
    Name ages R_NO
1   Adam   23 1001
2 Antony   22 1002
3  Brain   24 1003
4   Carl   25 1004
5   Doug   26 1005
> |
```

8. Write a R program to add new row(s) to an existing data frame .

```
> Player_ID <- rbind(Playerdata,c("Hari",20))
> Player_ID
    Name ages
1   Adam   23
2 Antony   22
3  Brain   24
4   Carl   25
5   Doug   26
6   Hari   20
> |
```

9. Write a R program to drop column(s) by name from a given data frame

```
> Data_Frame_New <- Playerdata[-c(2)]
> Data_Frame_New
    Name
1   Adam
2 Antony
3  Brain
4   Carl
5   Doug
>
```

10. Write a R program to drop row(s) by number from a given data frame

```
> Data_Frame_New <- Playerdata[-c(5),]
> Data_Frame_New
    Name ages
1   Adam   23
2 Antony   22
3  Brain   24
4   Carl   25
>
```

FACTORS.

1. Write a R program to sort a given data frame by multiple column(s).

```
Enter_data = data.frame(
   Entertainment <- c("Legends","Rock","Chain Smokers","One dir","Vampire","Suits"),
   Tv <- c("Netflix","Spotify","Spotify","Prime music","Prime","Netflix")
   )
Enter_data
Entertainment....c..Legends....Rock....Chain.Smokers....One.dir...
1                                                         Legends
2                                                            Rock
3                                                     Chain Smokers
4                                                         One dir
5                                                         Vampire
6                                                           Suits
Tv....c..Netflix....Spotify....Spotify....Prime.music....Prime...
1                                                        Netflix
2                                                        Spotify
3                                                        Spotify
4                                                     Prime music
5                                                           Prime
6                                                        Netflix
> Enter_data = Enter_data[with(Enter_data, order(Entertainment, Tv)), ]
> Enter_data
Entertainment....c..Legends....Rock....Chain.Smokers....One.dir...
3                                                     Chain Smokers
1                                                         Legends
4                                                         One dir
2                                                            Rock
6                                                           Suits
5                                                         Vampire
Tv....c..Netflix....Spotify....Spotify....Prime.music....Prime...
3                                                        Spotify
1                                                        Netflix
4                                                     Prime music
2                                                        Spotify
6                                                        Netflix
5                                                           Prime
```

2. Write a R program to change the first level of a factor with another level of a given factor.

```
> Entertainment
[1] "Legends"       "Rock"          "Chain Smokers" "One dir"       "Vampire"       "Suits"
> levels(Entertainment)[1] = "Stranger Things"
> Entertainment
[1] "Legends"       "Rock"          "Chain Smokers" "One dir"       "Vampire"       "Suits"
attr(,"levels")
[1] "Stranger Things"
>
```