Laboratory Practice I

Data Analytics

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Practical 2

Data frame using R

1. Create a Employee dataframe with 4 vectors namely Emp_ID, Emp_Name, Dept, Salary. The dataframe should have have information of 5 employees. Print the structure of this dataframe.

```
> e <- data.frame("Emp_ID"=1110:1114, "Emp_Name"=c("Shiva", "Celina", "Dinesh",
"Harsha", "Karan"), "Dept"=c("Computer", "IT", "E&TC", "Bio-Chemical", "Auto"),
"Salary"=c(22,25,21,28,31))
> str(e)
'data.frame':   5 obs. of  4 variables:
 $ Emp_ID  : int  1110 1111 1112 1113 1114
 $ Emp_Name: Factor w/ 5 levels "Celina","Dinesh",..: 5 1 2 3 4
 $ Dept    : Factor w/ 5 levels "Auto","Bio-Chemical",..: 3 5 4 2 1
 $ Salary  : num  22 25 21 28 31
```

```
> e
  Emp_ID Emp_Name         Dept Salary
1   1110    Shiva     Computer     22
2   1111   Celina           IT     25
3   1112   Dinesh         E&TC     21
4   1113   Harsha Bio-Chemical     28
5   1114    Karan         Auto     31
```

2. Print 3rd and 4th rows with 1st and 4th columns from the given data frame. Store this data into new dataframe "filtered_emp_db". Print this new data frame.

```
> filtered_emp_db <- e[c(3,4),c(1,4)]
> filtered_emp_db
  Emp_ID Salary
3   1112     21
4   1113     28
> str(filtered_emp_db)
'data.frame':   2 obs. of  2 variables:
 $ Emp_ID: int  1112 1113
 $ Salary: num  21 28
```

3. Add a new column in a given dataframe.

```
> e$Age <- c(22, 20, 21, 28, 31)
> e
  Emp_ID Emp_Name         Dept Salary Age
1   1110    Shiva     Computer     22  22
2   1111   Celina           IT     25  20
3   1112   Dinesh         E&TC     21  21
4   1113   Harsha Bio-Chemical     28  28
5   1114    Karan         Auto     31  31
```

4. Add a new row in a given dataframe.

```
> e.finaldata <- rbind(e,e.newdata)
> e.finaldata
  Emp_ID Emp_Name         Dept Salary Age
1   1110    Shiva     Computer     22  22
2   1111   Celina           IT     25  20
3   1112   Dinesh         E&TC     21  21
4   1113   Harsha Bio-Chemical     28  28
5   1114    Karan         Auto     31  31
6   1115    Kevin           IT   2400  31
7   1116    Roman         Mech   2712  21
```

5. Change a column name (dept) to department of the given data frame.

```
> colnames(e.finaldata)[colnames(e.finaldata) == "Dept"] <- "Department"
> e.finaldata
  Emp_ID Emp_Name   Department Salary Age
1   1110    Shiva     Computer     22  22
2   1111   Celina           IT     25  20
3   1112   Dinesh         E&TC     21  21
4   1113   Harsha Bio-Chemical     28  28
5   1114    Karan         Auto     31  31
6   1115    Kevin           IT   2400  31
7   1116    Roman         Mech   2712  21
```

6. Print all names of all employees and their respective salaries

```
> e.displayf2 <- e.finaldata[,c(2,4)]
> e.displayf2
  Emp_Name Salary
1    Shiva     22
2   Celina     25
3   Dinesh     21
4   Harsha     28
5    Karan     31
6    Kevin   2400
7    Roman   2712
```