**Practical 4**

(Use pipe operator to pipe the dataframe and functions)

Install dplyr or tidyverse(dplyr,readr,stringr,ggplot2)

library(dplyr)

data(iris)

View(iris)

**Exercise 1**

Select the first three columns of the iris dataset using their column names. *HINT: Use select().*

**Exercise 2**

Select all the columns of the iris dataset except “Petal Width”.

HINT: Use “-“.

**Exercise 3**

Select all columns of the iris dataset that start with the character string “P”.

**Exercise 4**

Find the rows of the iris dataset for Sepal.Length >= 4.6 and Petal.Width >= 0.5 and select only Sepal.Length,Petal.Width and Species for the resultant dataframe.

**Exercise 5**

Select three columns from iris and arrange rows by the ascending order Sepal.Length followed by descending order of Sepal.Width . HINT: Use arrange().

**Exercise 6**

Create a new column called proportion, which is the ratio of Sepal.Length to Sepal.Width. HINT: Use mutate().

**Exercise 7**

Compute the average number of Sepal.Length, apply the mean() function to the column Sepal.Length, and call the summary value “avg\_slength”. HINT: Use summarise().

**Exercise 8**

Split the iris data frame by the Species, then ask for the same summary statistics as above. HINT: Use group\_by() and display total no of each entry.