**MODULE 8 R ASSIGNMENT**

# Load required packages

install.packages("plyr")

library(data.table)

library(plyr)

# Import dataset

Data\_Student <- read.table("C:/Users/kc290/OneDrive/Desktop/Intro to R/Assignment 6 Dataset.txt", header = TRUE, sep = ",")

# Calculate mean using Sex as the category

Student\_Average <- ddply(Data\_Student, "Sex", summarise, Grade.Average = mean(Grade))

# Write output to a file

write.table(Student\_Average, "StudentAverage.txt", sep = ",", row.names = FALSE)

# Filter the original data set to include only data for which the student name contains the letter "i"

i\_students <- subset(Data\_Student, grepl("i", Data\_Student$Name, ignore.case = TRUE))

# Write names containing "i" to a CSV file

write.csv(i\_students$Name, "i\_students\_names.csv", row.names = FALSE)

# Write the filtered dataset to a CSV file using file.choose() and subset()

write.csv(i\_students, "Datasubset.csv",sep = ",")

**Adding the Necessary Packages:**  
In this stage, the necessary packages are loaded and installed. The plyr package is loaded and installed using the commands library(plyr) and install.packages("plyr"). The data.table package (data.table) has the library loaded into it.

**Bringing in the Dataset:**  
The dataset is imported using the read.table() function. Along with the file location, it is indicated that there is a header in the file and that commas are used as separators. The dataset is stored in a variable named Data\_Student.

**Finding the Mean with Sex as the Category:**  
To find the mean of the 'Grade' variable classified by the 'Sex' category, utilize the ddply() method from the plyr package. The outcome is kept in Student\_Average, a data frame.

**Composing Results to a File:**  
The Student\_Average data frame is written to a text file called "StudentAverage.txt" using the write.table() function. Row names are excluded (row.names = FALSE) and the data is separated by commas (sep = ",").

**Data Filtering to Remove 'i' from Names:**  
The subset() method is used to filter the original dataset (Data\_Student) so that only rows with the letter 'i' in the 'Name' column are included. This part is in a brand-new data frame called i\_students.

**Transferring Names with a 'i' to a CSV File:**  
The 'Name' column of the i\_students data frame is written to a CSV file called "i\_students\_names.csv" using the write.csv() function. Row names are not included in the result.

**Writing a CSV File with a Filtered Dataset Making use of file.Subset() and choose():**  
The i\_students data frame is written to a CSV file called "Datasubset.csv" using the write.csv() function. The user is prompted to select the location where the file will be saved using the file.choose() function. Commas are used to separate the data (sep = ",").