##2020/11/13(五), 109學年第一學期 資料科學應用 R作業(3)

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##ex1.25 (a)

library(readxl)

student\_score <- read\_excel("data/R-score.xlsx", sheet = "工作表1", na = "NA", skip=1)

colnames(student\_score) <- c("NO", "系級", "學號", "姓名", "Quiz1", "Quiz2", "Quiz3", "Homework", "finaltest", "RollCall")

head(student\_score, 5)

##ex1.25(b)

str(student\_score)

mean(student\_score$Quiz1)

sd(student\_score$Quiz1)

mean(student\_score$Quiz2)

sd(student\_score$Quiz2)

mean(student\_score$Quiz3)

sd(student\_score$Quiz3)

mean(student\_score$Homework)

sd(student\_score$Homework)

mean(student\_score$finaltest)

sd(student\_score$finaltest)

##ex1.25(c)

student\_score\_matrix <- data.frame(student\_score$Quiz1, student\_score$Quiz2, student\_score$Quiz3, student\_score$Homework, student\_score$finaltest)

str(student\_score\_matrix)

student\_score$Quiz1 <- (student\_score$Quiz1)\*0.1

student\_score$Quiz2 <- (student\_score$Quiz2)\*0.15

student\_score$Quiz3 <- (student\_score$Quiz3)\*0.15

student\_score$Homework <- (student\_score$Homework)\*0.2

student\_score$finaltest <-(student\_score$finaltest)\*0.4

mean <- rowMeans(student\_score\_matrix)

str(mean)

student\_score\_all <-data.frame(student\_score$學號, mean)

student\_score\_all

##ex1.29(a)

library(readxl)

student\_score <- read\_xlsx("data/R-score.xlsx")

colnames(student\_score) <- c("NO", "系級", "學號", "姓名", "Quiz1", "Quiz2", "Quiz3", "Homework", "finaltest", "RollCall")

head(Rscore,5)

tail(Rscore,5)

lapply(student\_score,class)

##ex1.29(b)

library(readxl)

weather <- read.table("data/20140714-weather.txt", header=TRUE)

head(weather,5)

tail(weather,5)

lapply(weather,class)

##ex1.29(c)

library(readxl)

weather\_delays <- read.csv("data/weather\_delays14.csv",header=TRUE,sep=",")

head(weather\_delays,5)

tail(weather\_delays,5)

lapply(weather\_delays,class)

##ex2.10

score <- sample(1:100, 50, replace = TRUE)

ifelse (score >95,"老師請同學吃飯","老師很生氣")

##ex2.21(a)

score02\_data <- read.csv("data/score02.csv", na = "NA", header = TRUE, sep=",")

head(score02\_data, 7)

##ex2.21(b)

colnames(score02\_data) <- c("id", "mid", "final")

str(score02\_data)

##ex2.21(c)

A <- score02\_data$mid

B <- score02\_data$final

ifelse(B>A, score02\_data$id, 0)

##ex2.21(d)

ifelse (A >= 60 & B >= 60, "ALL\_pass",

ifelse (A >= 60, "mid\_pass but final\_fail",

ifelse ( B>= 60, "final\_pass but mid\_fail",

"All\_fail")

##ex2.21(e)

score02\_data\_AB <- data.frame(A,B)

score02\_data\_mean <- rowMeans(score02\_data\_AB)

score02\_data\_mean

score02\_data\_new <- data.frame(score02\_data$id, score02\_data\_mean)

score02\_data\_new

library(dplyr)

score02\_data\_newarrange <- arrange(score02\_data\_new, desc(score02\_data\_mean))

score02\_data\_newarrange