

#2020/11/20(五), 109 學年第一學期 資料科學應用 R 小考(1)

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#ex.1(a)

```
x <- read.csv("Calculus-score-A.csv",skip=2)
```

```
names(x) <- c("座號", "學號", "姓名", "性別", "quiz(1)", "quiz(2)", "quiz(3)",  
"quiz(4)", "TA", "MidtermExam", "FinalExam", "Attendance")
```

```
head(x, 5)
```

```
tail(x, 5)
```

```
library(readxl)
```

```
y <- read_excel("Calculus-score-B.xls", skip=2)
```

```
names(y) <- c("座號", "學號", "姓名", "性別", "quiz(1)", "quiz(2)", "quiz(3)",  
"quiz(4)", "TA", "MidtermExam", "FinalExam", "Attendance")
```

```
head(y, 5)
```

```
tail(y, 5)
```

#ex.1(b)

```
options("max.print" = 10000)
```

```
x$class <- "A"
```

```
y$class <- "B"
```

```
score <- rbind(x, y)
```

```
score[38:43,]
```

#ex.1(c)

```
score[is.na(score)] <- 0
```

```
score$"學期成績" <- (score$"quiz(1)"*0.07 + score$"quiz(2)"*0.07 +
```

```
score$"quiz(3)"*0.08 + score$"quiz(4)"*0.08 + score$"TA"*0.15 +
```

```
score$"MidtermExam"*0.25 + score$"FinalExam"*0.30) + score$"Attendance"
```

```
score$"學期成績" <- ifelse(score$"學期成績" >= 100, 100, score$"學期成績" )
```

```
score$"學期成績"
```

#ex.1(d)

```
subset(score, score$"學期成績" >= 55 & score$"學期成績"<60)
```

#ex.1(e)

```
mean(score$"學期成績"[1:40])
```

```
mean(score$"學期成績"[41:95])
```

```
bscore <- which(score[,4] == "男")
```

```
mean(bscore)
```

```
gscore <- which(score[,4] == "女")
```

```
mean(gscore)
#ex.1(f)
q <- subset(score, 60 > score$"學期成績" & score[,13] == "A")
length(q)/40
W <- subset(score, 60 > score$"學期成績" & score[,13] == "B")
length(W)/55
```

```
#ex.2(a)
set.seed(123456)
Letters.code <- sample(LETTERS[1:5], 20, replace=T)
Numbers.code <- ifelse(Letters.code %in% c("A", "E"), 1, ifelse(Letters.code == "C", 2, 3))
Numbers.code
#ex.2(b)
data <- data.frame(Letters.code, Numbers.code)
data
```