2020/12/25(五), 109學年第一學期 資料科學應用 R作業(7)

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（請依照規定）貼上執行程式碼及執行結果。
詳見：R程式作業繳交方式
http://www.hmwu.idv.tw/web/teaching/doc/R-how-homework.pdf

```
> #exl2.30(a)
> answer <- read.table("data/answer.txt", na = "NA", skip = 1)
> head(answer)
  V1 V2 V3 V4 V5 V6 V7 V8 V9 V10 V11
1 s1  C  D  D  A  D  A  B  C  C   B
2 s2  B  D  B  D  D  A  C  D  B   B
3 s3  B  A  A  B  D  A  C  B  C   B
4 s4  B  D  B  A  B  C  C  D  C   B
5 s5  B  D  D  D  A  C  C  D  A   B
6 s6  D  B  B  B  D  A  B  C  C   B


> #exl2.51(a)
> x <- "AAABBBCCCC"
> y <- c("A", "B", "C")
> num <- 0
> for (i in 1:length(y)) {
+   num[i] <- length(gregexpr(y[i], x)[[1]])
+ }
> cat(num[1],"A",num[2],"B",num[3],"C")
3 A 3 B 4 C

> #exl2.51(b)
> x <- "3A3B4C"
> times <- substr(rep("3A3B4C",3), c(1,3,5) ,c(1,3,5))
> cat(rep(c("A", "B", "C"),times))
A A A B B B C C C

> #exl2.52
> compress <- function(x){
+   for(i in 1:3){
+     text <- gregexpr(LETTERS[i], x)
+     cat(paste0(length(text[[1]]), LETTERS[i]))
+   }
+   cat("\n")
+ }
>
> compress("ABAABBAABCCCAC")
6A4B4C
>
> #exl5.2(a)
> set.seed(123456)
```