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> # 2020/12/11(五), 109 學年第一學期 資料科學應用 R 期中考
Warning message:
In Sys.setlocale() :
  OS reports request to set locale to "" cannot be honored
> #
> #  學號:A107260024              姓名:游閔超
> #
> #  本檔案為各題之程式碼檔，無執行結果
>
>
> # ex1(a)
> study<- function(x,y){
+     # x<-c(13:17)
+     # y<-c(8:12)
+     a <-matrix(0, 25, 5)
+     for(x in 13:17){
+       for(y in 8:12){
+         U <-sqrt(x)*sqrt(y)
+         Tuition <- 400*x+600*y
+         cat(x,y, tuition, U)
+       }
+        cat("\n")
+     }
+ }
> study()
Error in cat(x, y, tuition, U) : object 'tuition' not found
> data.frame(x,y, U, Tuition)
Error in data.frame(x, y, U, Tuition) : object 'U' not found
> list(Eng.hr=x, Comp.hr=y, Tuition=Tuition, U=U)
Error: object 'Tuition' not found
>
>
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>
```

```
>
> library(readxl)
> readxl_example()
  [1] "clippy.xls"        "clippy.xlsx"       "datasets.xls"     "datasets.xlsx"
  [5] "deaths.xls"        "deaths.xlsx"       "geometry.xls"     "geometry.xlsx"
  [9] "type-me.xls"       "type-me.xlsx"
> #ex2(a)
> xlsx_file<- "Score-109.xlsx"
> excel_sheets(xlsx_file)
[1] "score"
> mydata<-read_excel(xlsx_file,sheet="score",na="NA",skip=1)
> x2<-as.data.frame(head(mydata, 5))
> y2<-as.data.frame(tail(mydata, 5))
> x2
       ID Calculus English
1 No.1            72          62
2 No.2            88          97
3 No.3            76          66
4 No.4            89          51
5 No.5            46          15
> y2
         ID Calculus English
1 No.71           69          96
2 No.72           51         100
3 No.73           37          50
4 No.74           33          92
5 No.75            4          37
>
> #ex2(b)
> mydata[is.na(mydata)] <- 0
> ssl <- which(mydata[,2] < 60 & mydata[,3] < 60)
> mydata[ssl,]
# A tibble: 23 x 3
     ID        Calculus English
     <chr>        <dbl>     <dbl>
```

```
 1 No.5            46          15
 2 No.7            32          51
 3 No.8            51           0
 4 No.11            3           0
 5 No.15           39           6
 6 No.18           40           0
 7 No.21           45          51
 8 No.26           39          29
 9 No.30           48          52
10 No.33           18           0
# ... with 13 more rows
>
> # ex2(c)
> x <- sum(mydata[,2])/75
> y <- sum(mydata[,3])/75
> my.cor <-for(i in 1:75){
+      kk <- (mydata[i,2] - x)*(mydata[i,3] - y)
+      gg <- (mydata[i,2] - x)*2*0.5
+      mm <- (mydata[i,3] - y)*2*0.5
+      pp <- kk/(gg*mm)
+      pp
+ }
>
>
> # ex2(d)
> cor(mydata[,2:3])
                    Calculus          English
Calculus    1.00000000 -0.02334661
English    -0.02334661  1.00000000
>
```