

2020/12/04(五), 109 學年第一學期 資料科學應用 R 作業(5)

學號: A107260010      姓名: 陳舒汶

# (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>

```
> #2020/12/04 作業(5)
```

```
>
```

```
> #ex2.4(a)
```

```
> for(i in 1:5){
```

```
+   for(j in 1:i){
```

```
+     cat(j)
```

```
+   }
```

```
+   cat('\n')
```

```
+ }
```

```
1
```

```
12
```

```
123
```

```
1234
```

```
12345
```

```
>
```

```
> # ex2.4(b)
```

```
> j = 1
```

```
> for(i in 4:0){
```

```
+   for(j in j){
```

```
+     cat(rep(" ",each = i))
```

```
+     cat(rep((j), (each = j)))
```

```
+     j = j + 2
```

```
+   }
```

```
+   cat("\n")
```

```
+ }
```

```
1
```

```
3 3 3
```

```
5 5 5 5 5
```

```
7 7 7 7 7 7 7
```

```
9 9 9 9 9 9 9 9
```

```

>
> #ex2.50
>
> p <- c("a", "b", "c", "d", "e", "f", "g")
> S <- ifelse(p == "a", 25,
+           ifelse(p == "b", 49,
+           ifelse(p == "c", 95,
+           ifelse(p == "d", 178,
+           ifelse(p == "e", 264,
+           ifelse(p == "f", 327,
+           ifelse(p == "g", 373,
NA))))))
>
> a <- matrix(0, nrow = 7, ncol = 7)
> for(i in 1:7){
+   for(j in 1:7){
+     m <- S[i] - S[j]
+     N <- ifelse(m < 0, (-m), m)
+     X <- (N - 50) + 100
+     o <- ifelse(50 >= N, 100,
+           ifelse(300 >= N & N > 50, X,
+           ifelse(N > 300, 400, NA)))
+     a[i,j] <- o
+   }
+ }
>
>
>
> rownames(a) <- c("A", "B", "C", "D", "E", "F", "G")
> colnames(a) <- c("A", "B", "C", "D", "E", "F", "G")
> a
  A  B  C  D  E  F  G
A 100 100 120 203 289 400 400
B 100 100 100 179 265 328 400
C 120 100 100 133 219 282 328
D 203 179 133 100 136 199 245
E 289 265 219 136 100 113 159
F 400 328 282 199 113 100 100

```

G 400 400 328 245 159 100 100

>