r程式語法

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我們建立了一個 week 向量，裡面有一個星期中的七天名稱，請您使用for 迴圈一一輸出每一天

同樣的一個 week 向量，請您使用while 迴圈一一輸出每一天

同樣的一個 week 向量，請您在使用迴圈一一輸出每一天的時候略過週一到週五，只輸出我們最愛的週末兩天即可

R 語言有內建圓周率（ π ），只要輸入 pi 就可以使用它，請練習使用ceiling()、floor() 與 round() 函數將它轉換為 4、3 與 3.14

請在 R 語???的命令列（console）用一段文字輸出今天的系統日期

我們有一個數值向量 num_vector ，請使用描述性統計幫我們計算它的總和與中位數

請練習自訂一個函數 my_factorial()，只要輸入整數 n，就會計算出 回傳

延續我們實作的 mysum() 函數與 mylength() 函數，請練習自訂一個函數 my_mean()，平均數的公式：

```
week <- c("Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday")
for (week in week){
  print(week)
}
```

```
## [1] "Sunday"
## [1] "Monday"
## [1] "Tuesday"
## [1] "Wednesday"
## [1] "Thursday"
## [1] "Friday"
## [1] "Saturday"
```

```
week <- c("Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday")
i <- 1
while (i < 2){
  print(week)
  i <- i + 1
}
```

```
## [1] "Sunday"    "Monday"    "Tuesday"   "Wednesday" "Thursday"  "Friday"
## [7] "Saturday"
```

```
week <- c("Sunday", "Saturday", "Friday", "Monday", "Tuesday", "Wednesday", "Thursday")
for (week in week){
 if (week == "Friday"){
 break
 }else{
 print(week)
 }
}
```

```
## [1] "Sunday"
## [1] "Saturday"
```

```
pi
```

```
## [1] 3.141593
```

```
ceiling(pi)
```

```
## [1] 4
```

```
floor(pi)
```

```
## [1] 3
```

```
round(pi, digits = 2)
```

```
## [1] 3.14
```

```
today_char <- "Today is:"
sys_date <- Sys.Date()
paste("Today is:", sys_date)
```

```
## [1] "Today is: 2018-10-28"
```

```
num_vector <- c(11:14, NA)
sum(num_vector, na.rm = TRUE)
```

```
## [1] 50
```

```
median(num_vector, na.rm = TRUE)
```

```
## [1] 12.5
```

```
#自訂函數
my_factorial <- function(n){
 n <- as.integer(n)
 ans <- 1
 for (i in 1:n){
 ans <- n * 5
 }
 return(ans)
}
#呼叫函數
my_factorial(5)
```

```
## [1] 25
```

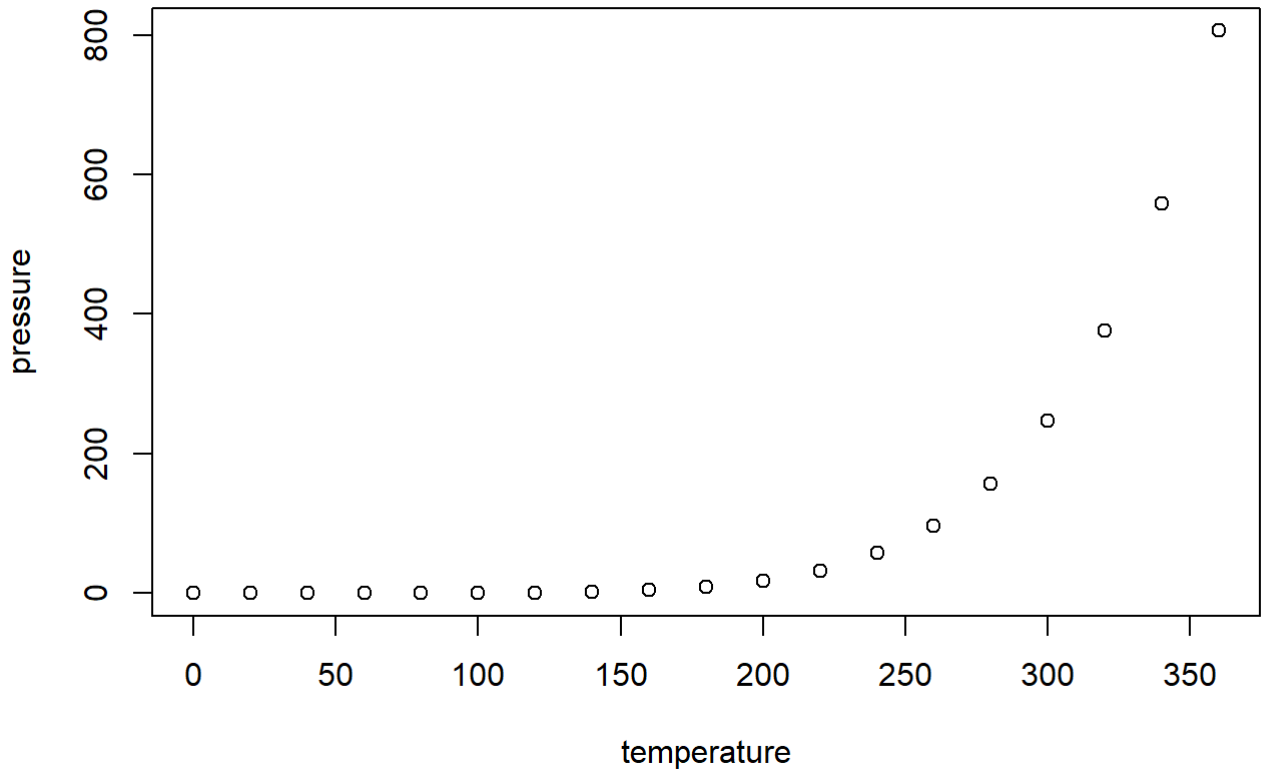
```
# 自訂函數
my_mean <- function(x){
  my_sum <- 0
  my_length <- 0
  for (i in x){
    my_sum <-my_sum+i
    my_length <- my_length+1
  }
  return(my_sum /my_length)
}

# 呼叫函數
my_mean(1:10)
```

```
## [1] 5.5
```

```
mean(1:10)
```

```
## [1] 5.5
```



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.