

程式碼：

```
1
2 quick_sort <- function(vec, depth = 0) {
3
4   if (length(vec) <= 1) {
5     return(vec)
6   }
7
8   pivot <- vec[1]
9   less <- vec[vec < pivot]
10  equal <- vec[vec == pivot]
11  greater <- vec[vec > pivot]
12
13  sorted_less <- quick_sort(less, depth + 1)
14  sorted_greater <- quick_sort(greater, depth + 1)
15
16  combined <- c(sorted_less, equal, sorted_greater)
17
18  # cat(paste0(strrep(" ", depth), "After depth ", depth, ": "))
19  print(combined)
20
21  return(combined)
22 }
23
24
25 sample_vec <- c(33, 67, 8, 13, 54, 119, 3, 84, 25, 41)
26 cat("Original vector:\n")
27 print(sample_vec)
28 cat("Sorted vector:\n")
29 quick_sort(sample_vec)
30
31
32
```

結果：

Original vector:

> print(sample_vec)

[1] 33 67 8 13 54 119 3 84 25 41

> cat("Sorted vector:\n")

Sorted vector:

> quick_sort(sample_vec)

[1] 13 25

[1] 3 8 13 25

[1] 41 54

[1] 84 119

[1] 41 54 67 84 119

[1] 3 8 13 25 33 41 54 67 84 119

[1] 3 8 13 25 33 41 54 67 84 119