

LAB4

第一題截圖:

```
ben@ubuntu:~/Desktop/OSLAB/HW4$ ./HW4_1_D1053020
請輸入排序大小: 20
83 86 77 15 93 35 86 92 49 21 62 27 90 59 63 26 40 26 72 36
The array recieved is: 93
The array recieved is: 35
The array recieved is: 86
The array recieved is: 92

The sorted array: 35
The sorted array: 86
The sorted array: 92
The sorted array: 93

The array recieved is: 49
The array recieved is: 21
The array recieved is: 62
The array recieved is: 27

The sorted array: 21
The sorted array: 27
The sorted array: 49
The sorted array: 62

The array recieved is: 90
The array recieved is: 59
The array recieved is: 63
The array recieved is: 26

The sorted array: 26
The sorted array: 59
The sorted array: 63
The sorted array: 90

The array recieved is: 83
The array recieved is: 86
The array recieved is: 77
The array recieved is: 15
```

```
The sorted array: 15
The sorted array: 77
The sorted array: 83
The sorted array: 86

The array recieved is: 40
The array recieved is: 26
The array recieved is: 72
The array recieved is: 36

The sorted array: 26
The sorted array: 36
The sorted array: 40
The sorted array: 72

The merged array: 15
The merged array: 21
The merged array: 26
The merged array: 26
The merged array: 27
The merged array: 35
The merged array: 36
The merged array: 40
The merged array: 49
The merged array: 59
The merged array: 62
The merged array: 63
The merged array: 72
The merged array: 77
The merged array: 83
The merged array: 86
The merged array: 86
The merged array: 90
The merged array: 92
The merged array: 93

Time taken: 0.000997
```

第二題截圖:

```
ben@ubuntu:~/Desktop/OSLAB/HW4$ ./HW4_2_D1053020
請輸入排序大小: 20
83 86 77 15 93 35 86 92 49 21 62 27 90 59 63 26 40 26 72 36
建立第一個thread
建立第二個thread
成功對thread 1鎖定互斥鎖，進行sort
The array recieved is: 83
The array recieved is: 86
The array recieved is: 77
The array recieved is: 15

The sorted array: 15
The sorted array: 77
The sorted array: 83
The sorted array: 86
成功對thread 1解鎖互斥鎖

建立第三個thread
建立第四個thread
建立第五個thread
成功對thread 2鎖定互斥鎖，進行sort
The array recieved is: 49
The array recieved is: 21
The array recieved is: 62
The array recieved is: 27

The sorted array: 21
The sorted array: 27
The sorted array: 49
The sorted array: 62
成功對thread 2解鎖互斥鎖

成功對thread 3鎖定互斥鎖，進行sort
The array recieved is: 40
The array recieved is: 26
The array recieved is: 72
The array recieved is: 36

The sorted array: 26
The sorted array: 36
The sorted array: 40
The sorted array: 72
成功對thread 3解鎖互斥鎖
```

```
未能鎖定互斥鎖
成功對thread 4鎖定互斥鎖，進行sort
The array recieved is: 90
The array recieved is: 59
The array recieved is: 63
The array recieved is: 26

The sorted array: 26
The sorted array: 59
The sorted array: 63
The sorted array: 90
成功對thread 4解鎖互斥鎖

未能鎖定互斥鎖
成功對thread 5鎖定互斥鎖，進行sort
The array recieved is: 93
The array recieved is: 35
The array recieved is: 86
The array recieved is: 92

The sorted array: 35
The sorted array: 86
The sorted array: 92
The sorted array: 93
成功對thread 5解鎖互斥鎖
```

成功鎖定互斥鎖，進行merge

```
The merged array: 15
The merged array: 21
The merged array: 26
The merged array: 26
The merged array: 27
The merged array: 35
The merged array: 36
The merged array: 40
The merged array: 49
The merged array: 59
The merged array: 62
The merged array: 63
The merged array: 72
The merged array: 77
The merged array: 83
The merged array: 86
The merged array: 86
The merged array: 90
The merged array: 92
The merged array: 93
成功解鎖互斥鎖
```

Time taken: 0.000875

執行成功6次trylock 2次trylock失敗