

Bubble Sort: 冒泡排序法

```
int data[15];
int pass, i, j, t;
```

<http://www.ablmcc.edu.hk/~scy>

例子

i	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
data [i]	27	8	4	29	48	17	2	51	38	43					
pass 1															
pass 2															
pass 3															
pass 4															
pass 5															

測驗 (請把數據抄在下面陣列內，再進行排序)

i	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
data [i]															
pass 1															
pass 2															
pass 3															
pass 4															
pass 5															

<http://www.ablmcc.edu.hk/~scy/home/radian/>

程式碼

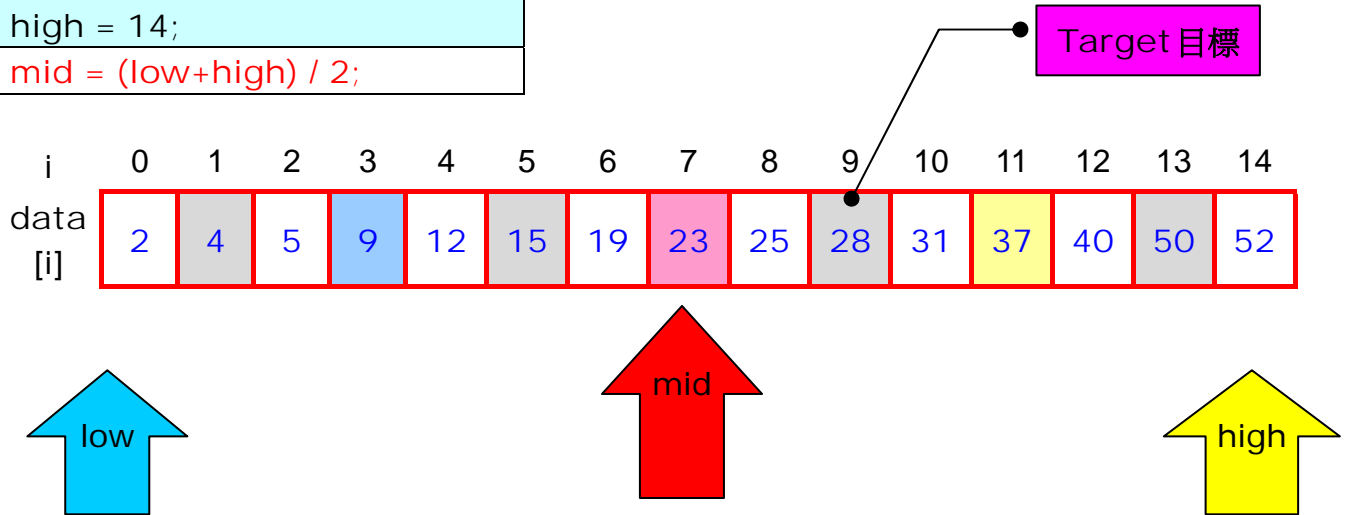
<pre>for (j=0; if (data[] > data[]){ t = data[] = ... } }</pre>	<p>隨機地產生 1000 個整數 (10-1000) 排序前列印一次 (每 10 個 1 行) 進行排序 再列印一次 (每 10 個 1 行) 並把數字儲存在文字檔 sorted.txt 內</p>
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<http://www.ablmcc.edu.hk/~scy/home/radian/xSortLab.htm>

Binary Search: 對分檢索法

```
int data[15];
int low, mid, high, target;
```

```
low = 0;
high = 14;
mid = (low+high) / 2;
```



target = 28

pass	low	mid	high	data[mid]	target	?	data[mid]
1	1	8	15	23	target		data[mid]
2					target		data[mid]
3					target		data[mid]
4							

target = 4

pass	low	high	mid	data[mid]	target	?	data[mid]
1	1	8	15	23	target		data[mid]
2					target		data[mid]
3					target		data[mid]
4							

target = 11

pass	low	high	mid	data[mid]	target	?	data[mid]
1	1	8	15	23	target		data[mid]
2					target		data[mid]
3					target		data[mid]
4					target		data[mid]

target (11) NOT found!

Binary Search: 對分檢索法

```
int data[15];
low = 0;
high = 14;
pos = -1;
while (low<=high && pos==-1) {
    mid = (low+high) / 2;
    if ( target == data[mid] ) pos = mid;
    else if ( target < data[mid] ) high = mid-1;
    else low = mid+1;
}
```

Sequential Search: 順序檢索

```
int data[15], pos = -1;
for ( n=0; n<15; n++ )
    if ( target==data[n] ) break;
if ( target==data[n] ) pos = n;    // if ( n<15 ) pos = n;
```

Bubble Sort: 冒泡排序法

char x[100][20];	
<pre>for (pass=1; pass<99; pass++) for (i=0; i<99-pass; i++) if (x[i] > x[i+1]) { t = x[i]; x[i] = x[i+1]; x[i+1] = t; }</pre>	<pre>pass = 1; do{ ok = 1; for (i=0; i<99-pass; i++) if (x[i] > x[i+1]) { t = x[i]; x[i] = x[i+1]; x[i+1] = t; ok = 0; } pass = pass+1; while (ok == 0);</pre>