Lab-12- part A

Bubble Sort algorithm

Input array:-
$\{ 6, 3, 11, 4, 9, 8, 17, 7 \}$

Bubble Sort Trace:-

Pass 1:
$\{ 3, 6, 4, 9, 8, 11, 7, 17 \}$

Pass 2:
$\{ 3, 4, 6, 8, 9, 7, 11, 17 \}$

Pass 3:
$\{ 3, 4, 6, 8, 7, 9, 11, 17 \}$

Pass 4:
$\{ 3, 4, 6, 7, 8, 9, 11, 17 \}$

Pass 5:
$\{ 3, 4, 6, 7, 8, 9, 11, 17 \}$

Array Sorted

In depth including wall swap is:

[6, 3, 11, 4, 9, 8, 12, 7]

*3 & 6
[3, 6, 11, 4, 9, 8, 12, 7]
* no 6 & 11
*11 & 4 [3, 6, 4, 11, 9, 8, 12, 7]
*11 & 9 [3, 6, 4, 9, 11, 8, 12, 7]
* 11 & 8 [3, 6, 4, 9, 8, 11, 7, 7]
*11 & 12 no swap
*12 & 7 [3, 6, 4, 9, 8, 11, 7, 12]

Again.
3 & 6 no
6 & 4 [3, 4, 6, 9, 8, 11, 7, 12]
6 & 9 no
9 & 8 : [3, 4, 6, 8, 9, 11, 7, 12]
9 & 11 no

11 & 7 : [3, 4, 6, 8, 9, 7, 11, 12]

Again,
No need o swap
until 9 & 7 : [3, 4, 6, 8, 7, 9, 11, 12]
Again,
no need swap
until 8 & 7 [3, 4, 6, 7, 8, 9, 11, 12]
finally sorted:-
[3, 4, 6, 7, 8, 9, 11, 12]