

Sanjivani Rural Education Society's
SANJIVANI COLLEGE OF ENGINEERING, KOPARGAON
 An Autonomous Institute Affiliated to SPPU, Pune
 DEPARTMENT OF INFORMATION TECHNOLOGY

Topic

Solved Example

Unit No.


III

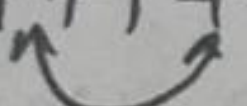
* 3.1 Bubble Sort

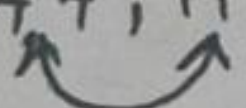
Sort the following number using bubble sort

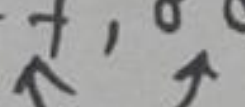
77, 33, 44, 11, 88, 22, 66, 55

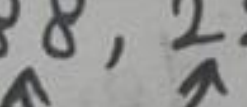
PASS-I

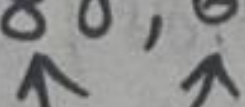
77, 33, 44, 11, 88, 22, 66, 55 | swap $77 > 33$
 swap

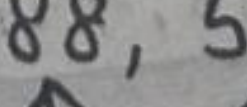
33, 77, 44, 11, 88, 22, 66, 55 | swap $77 > 44$
 swap

33, 44, 77, 11, 88, 22, 66, 55 | $77 > 11 \therefore$ swap
 swap

33, 44, 11, 77, 88, 22, 66, 55 | $77 < 88 \therefore$ no swap
 no swap

33, 44, 11, 77, 88, 22, 66, 55 | $88 > 22 \therefore$ swap
 swap


33, 44, 11, 77, 22, 88, 66, 55 | $88 > 66 \therefore$ swap
 swap

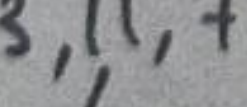
33, 44, 11, 77, 22, 66, 88, 55 | $88 > 55 \therefore$ swap
 swap

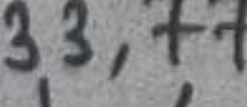
33, 44, 11, 77, 22, 66, 88, 88 | 1st Largest last position


PASS-I
Output

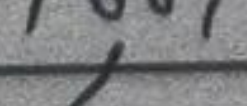
PASS-II

33, 44, 11, 77, 22, 66, 55, 88 | swap
 swap

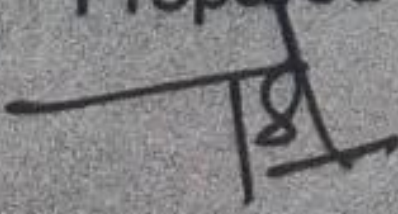
44, 33, 11, 77, 22, 66, 55, 88 | swap
 swap

44, 11, 33, 77, 22, 66, 55, 88 | \therefore no swap
 no swap

44, 11, 33, 77, 22, 66, 55, 88 | swap
 swap

44, 11, 33, 22, 77, 66, 55, 88 | swap
 swap

Prepared by :



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44, 33, 11, 22, 66, 77, 55, 88

swap

44, 33, 11, 22, 66, 55, 77, 88

~~swap~~ ∴ no swap output of pass. II

PASS. III

44, 33, 11, 22, 66, 55, 77, 88 | swap

33, 44, 11, 22, 66, 55, 77, 88 | swap

33, 11, 44, 22, 66, 55, 77, 88 | swap

33, 11, 22, 44, 66, 55, 77, 88 | swap? → no swap

33, 11, 22, 44, 66, 55, 77, 88 | swap

33, 11, 22, 44, 55, 66, 77, 88

PASS. IV

33, 11, 22, 44, 55, 66, 77, 88 | swap

11, 33, 22, 44, 55, 66, 77, 88 | swap

11, 22, 33, 44, 55, 66, 77, 88 | no swap

PASS. V

11, 22, 33, 44, 55, 66, 77, 88 no swap

no swap

no swap

PASS. VI

11, 22, 33, 44, 55, 66, 77, 88 | no swap

PASS. VII

11, 22, 33, 44, 55, 66, 77, 88 | no swap

∴ After pass. 7 sorted list is 11, 22, 33, 44, 55, 66, 77, 88

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Apply Bubble Sort on

34, 8, 64, 51, 32, 21

PASS-I 34 8 64 51 32 21

8 34 64

8 34 64 51 32 21

8 34 51 64 32 21

8 34 51 32 64 21

8 34 51 32 21 64

PASS-II 8 34 32 21 51 64

PASS-III 8 32 21 34 51 64

PASS-IV 8 21 32 34 51 64

PASS-V 8 21 32 34 51 64