

Solve the Following given code for the asked questions according to the specific given array
White pages (stapled) Hand written, all function calls, details, steps, – In Class Friday 17th May

LetsDivide(A, Start, End)

```
if Start >= End          //Line 1
    Do Nothing           //Line 2
else
    X = LetsFind(A, Start, End) //Line 4
    LetsDivide(A, Start, X-1)   //Line 5
    LetsDivide(A, X+1, End)     //Line 6
```

LetsFind(A, Start, End)

```
M1:      Key = A[End]
M2:      SE = Start
M3:      for j = Start to (End – 1)
M4:          if A[j] <= Key
M5:              exchange A[SE] & A[j]
M6:              SE = SE +1
M7:      exchange A[SE] & A[j]
M8:      return SE
```

Solve the following for A = {18, 8, **D1**, 24, 22, **D2**, 26, 15, **D3**, 31, 23, **D4**, 17}.

Complete the above given array with your Id's last 4 digits D1D2D3D4 (L to R)

(Note: Indexing starts from 0, when control reaches a line, means line not executed but last line whole work is completed. In a loop keep in mind that how many time loop for/while run)

For every step again draw the array

- Write contents of array 'A' and all the function calls (**LetsFind** & **LetsDivide** with parameters), when 4th call for **LetsFind** is completed. [Tree form structure]
- Write the values of 'Key', and contents of 'A' when **M4** is executed for 15th time
- Write contents of array 'A' and all the function calls (**LetsFind** & **LetsDivide** with parameters), when 3rd call for **LetsDivide [Line5]** is completed. [Tree form structure]
- Write the values of 'Key', and contents of 'A' when **M5** is executed for 10th time
- Write contents of array 'A' and all the function calls (**LetsFind** & **LetsDivide** with parameters), when 3rd call for **LetsDivide [Line6]** is completed. [Tree form structure]

Example:

For ID L1F20BSCS0343 array A will be {18, 8, **0**, 24, 22, **3**, 26, 15, **4**, 31, 23, **3**, 17}

First call for the start will be **LetsDivide(A, 0, 12)**