

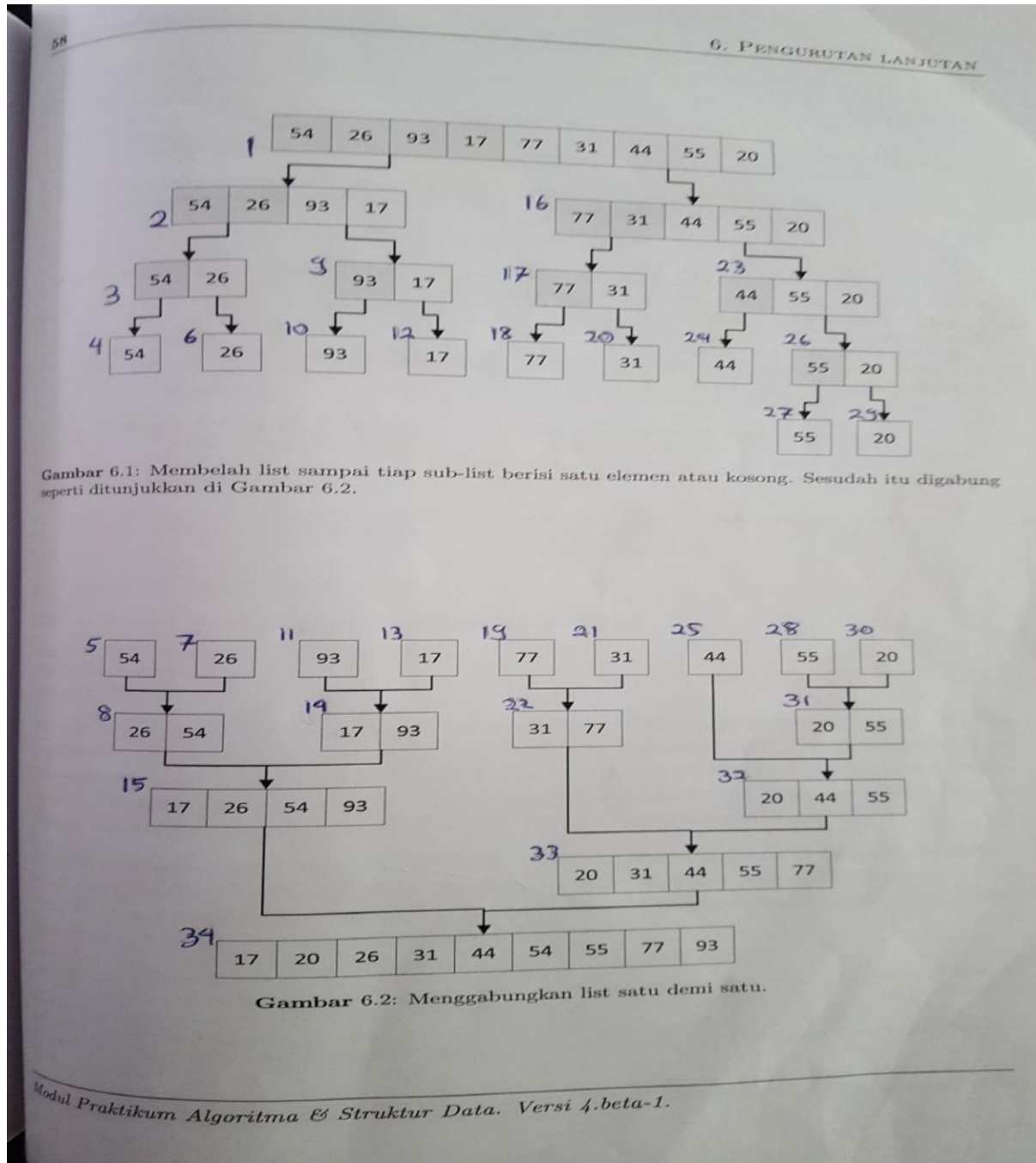
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Kelas : B

Modul : 6

2. Memakai bolpen merah atau biru , tandai dan beri nomor urut eksekusi proses pada Gambar 6.1 dan 6.2, dengan mengacu pada output halaman 59.



4. Diberikan list $L = [80, 7, 24, 16, 43, 91, 35, 2, 19, 72]$, gambarlah trace pengurutan10 untuk algoritma

- a) Merge sort
- b) Quick sort

Merge Sort

$L = [80, 7, 24, 16, 43, 91, 35, 2, 19, 72]$

Diagram illustrating the Merge Sort process:

Initial Array: $[80, 7, 24, 16, 43, 91, 35, 2, 19, 72]$

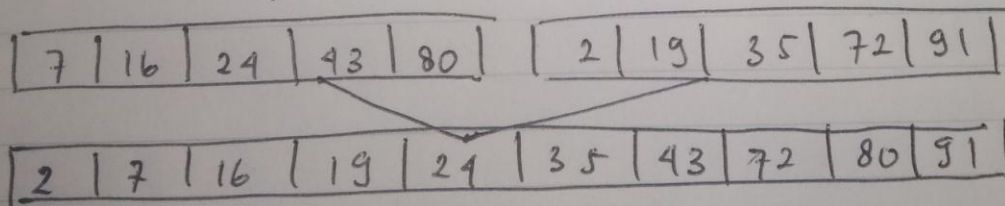
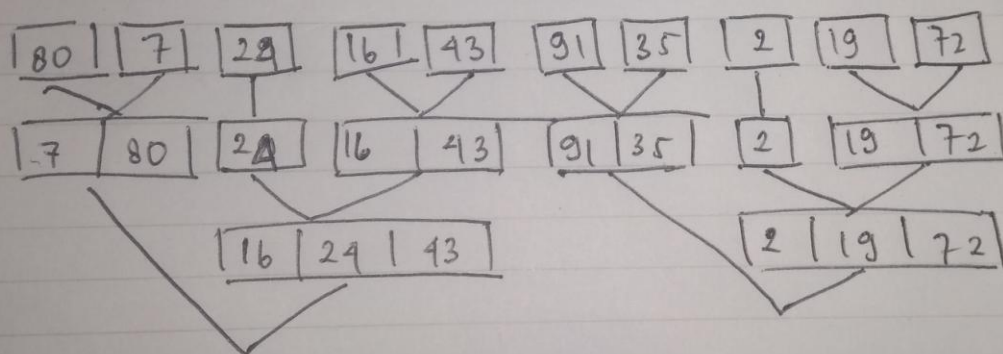
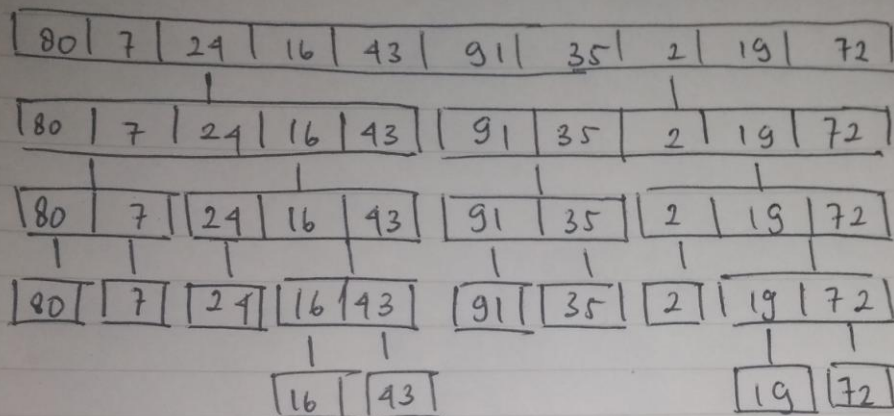
Splitting Phase (Divide):

- $[80, 7, 24, 16, 43, 91, 35, 2, 19, 72]$ splits into $[80, 7, 24, 16, 43]$ and $[91, 35, 2, 19, 72]$
- $[80, 7, 24, 16, 43]$ splits into $[80, 7]$ and $[24, 16, 43]$
- $[91, 35, 2, 19, 72]$ splits into $[91, 35]$ and $[2, 19, 72]$
- $[80, 7]$ splits into $[80]$ and $[7]$
- $[24, 16, 43]$ splits into $[24]$ and $[16, 43]$
- $[91, 35]$ splits into $[91]$ and $[35]$
- $[2, 19, 72]$ splits into $[2]$ and $[19, 72]$
- $[16, 43]$ splits into $[16]$ and $[43]$
- $[19, 72]$ splits into $[19]$ and $[72]$

Merging Phase (Conquer):

- $[80]$ and $[7]$ merge into $[7, 80]$
- $[24]$ and $[16, 43]$ merge into $[16, 24, 43]$
- $[91]$ and $[35]$ merge into $[91, 35]$
- $[2]$ and $[19, 72]$ merge into $[2, 19, 72]$
- $[7, 80]$ and $[16, 24, 43]$ merge into $[7, 16, 24, 43, 80]$
- $[91, 35]$ and $[2, 19, 72]$ merge into $[2, 19, 72, 91, 35]$
- $[7, 16, 24, 43, 80]$ and $[2, 19, 72, 91, 35]$ merge into the final sorted array: $[2, 7, 16, 19, 24, 35, 43, 72, 80, 91]$

Marge Sörb

$$L = [80, 7, 24, 16, 43, 91, 35, 2, 19, 72]$$


b. Quick sort

Quick Sort

$$L = [80, 7, 24, 16, 43, 91, 35, 2, 19, 72]$$

80	7	24	16	43	91	35	2	19	72
^				v			v	^	

$\hat{\quad} \quad \check{\quad} \quad \check{\quad}$

T	19		7		24	/	/	2		91	/	/	43		80		72
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$\times \quad \times \quad \wedge \quad \wedge \quad \downarrow$

2	7	16	24	19	35	91	43	80	72
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2	7	16	19	24	35	43	91	80	72
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2	7	16	19	24	35	43	72	80	91
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