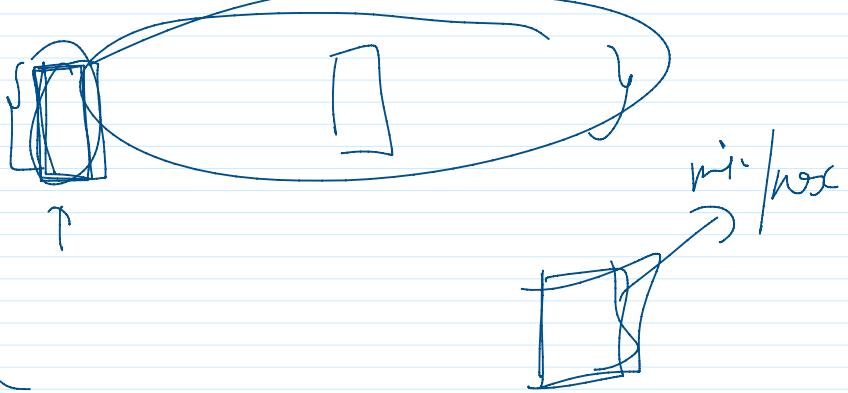
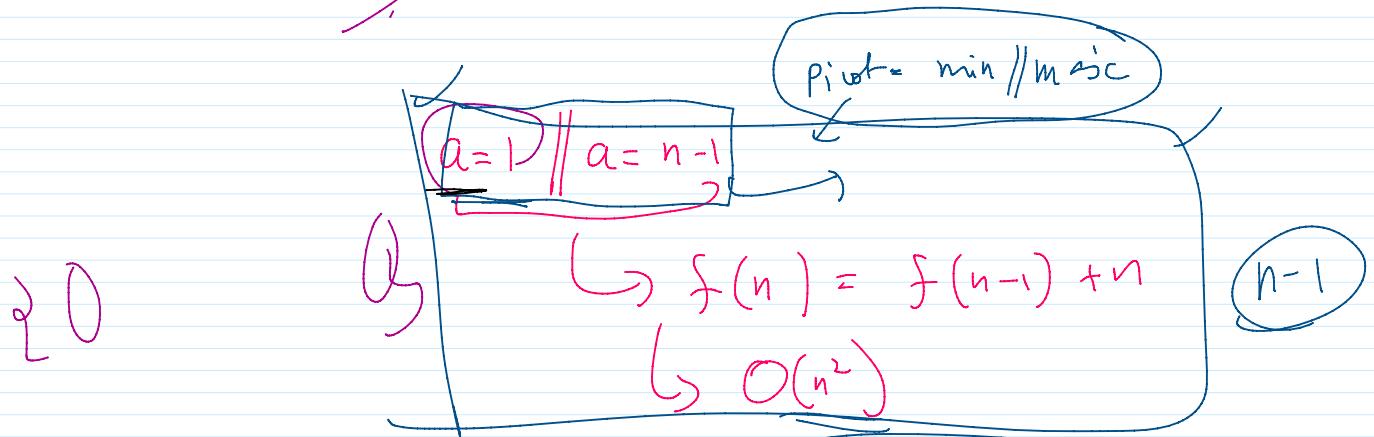


$n-1$

$$f(n) = f(n-3) + 5 \quad T(n, n=5)$$



~~$a = n/2$~~ → median

$f(n) = 2f(n/2) + n$ → mergesort

$\times n \log n$

Quick sort

$W: \mathcal{O}(n^2)$

pivot = min / max

pivot = median

+

\sim $B.C \rightarrow n \lg n$ \leftarrow pivot = max
 avg Quick \rightarrow $n \lg n$

$$f(n) = f(a) + f(n-a) + n$$

$\xrightarrow{a \rightarrow 1 \text{ or } n-1}$

(1) $a = 1 \quad | \quad a = n-1$

$$f(n) = f(n-1) + n \rightarrow O(n^2)$$

(2) $a = n/2 \rightarrow$ pivot media

$$f(n) = 2f(n/2) + n$$

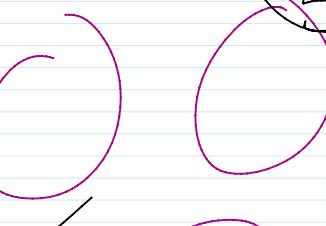
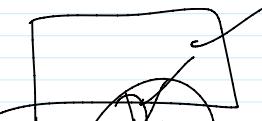
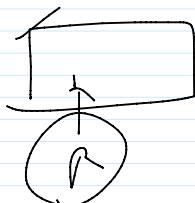
$\hookrightarrow n \lg n$

Quick WC $\rightarrow n^2$
 BC $\rightarrow n \lg n$ || reg
 nlg n
 nlg n

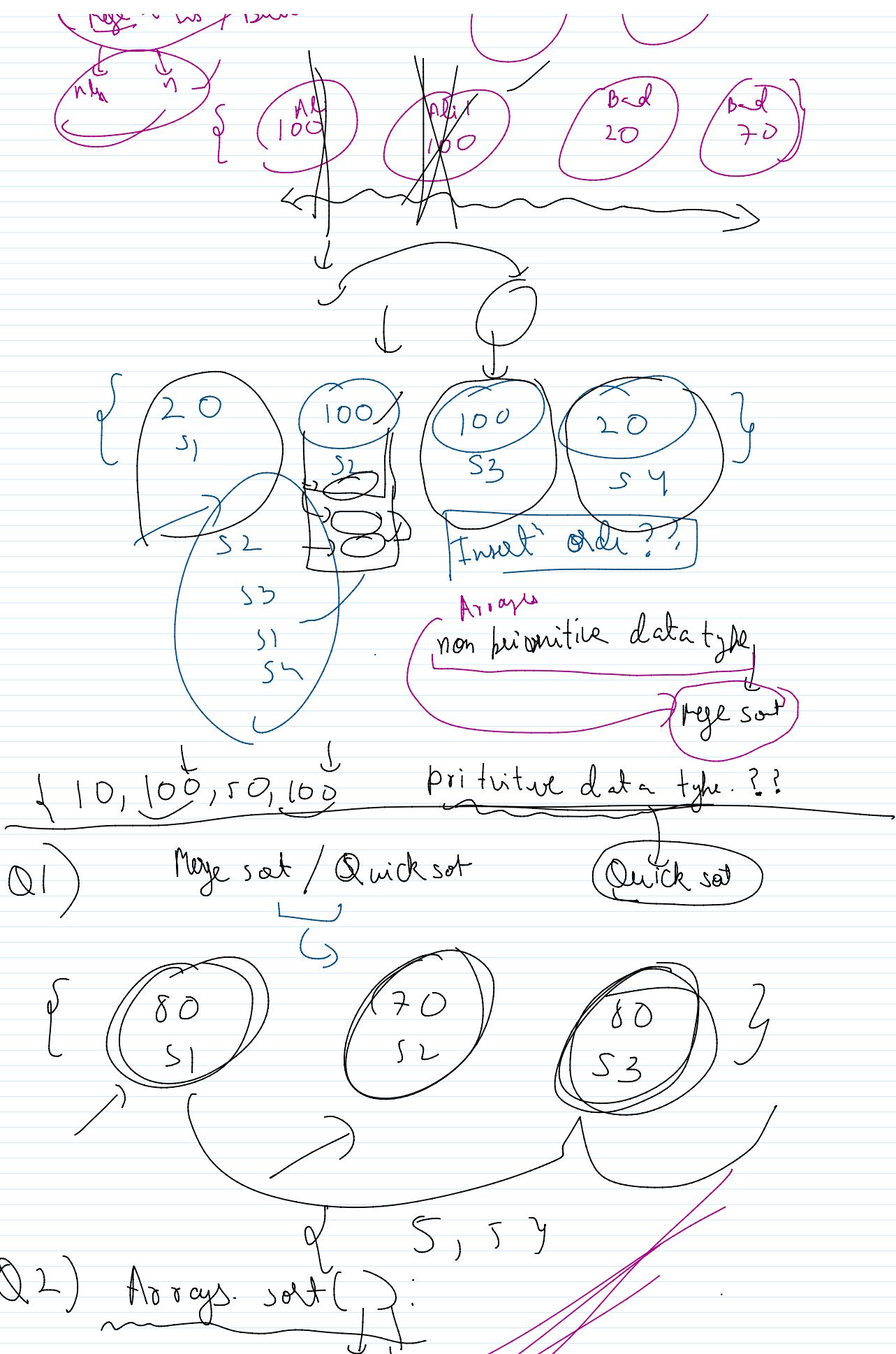
~~1~~

	Quick Here	WC	BC	Some values intact order ko destroy kal dekhne sare dual pivot sort
In	n^2	n^2	n^2	$O(1)$
Sel	n^2	n^2	n^2	$O(n)$
Bubble	n^2	n^2	n^2	n
				$O(1)$

Quick + Toss / Bubble
 Reg + Ins / Bubble



— — — — —



$\propto \sim$ 10 days. sort! }.

$$\mathcal{O}(n + \text{Int})$$
$$n \log n + t_g$$

Inm vs bubble

$\mathcal{O}(n)$
 t_g



$\{ 10, 20, 30, 40, 50, 60, 70, 80, \dots \}$

Bubble $\rightarrow 2^n$

$n \rightarrow n^2$

$D \rightarrow n^2$
 $n \rightarrow n^2$

$\{ 10, 20, 30, 40, 50, 60, 70, 80, \dots \}$

$K + n$

-360 to 360 count

50 bits
sorty

$\mathcal{O}(n)$

$\mathcal{O} \boxed{\text{Stable counting sort}}$

OOPS,

O C \rightarrow C++

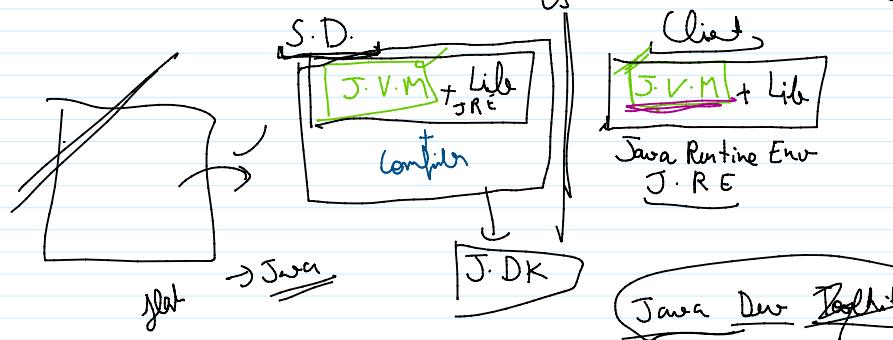
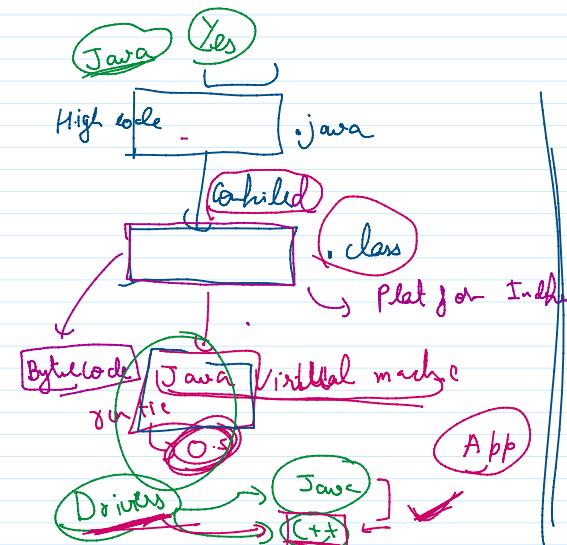
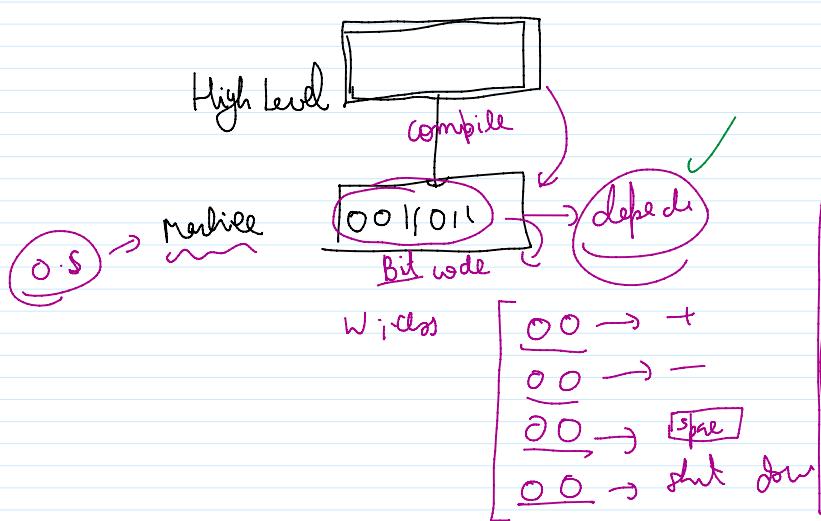
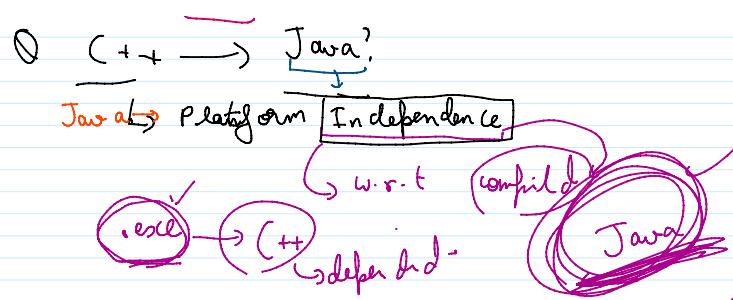
↳ OOPs

O C++ \rightarrow Java?

+ - no longer to do it

qof
-
... }

||



D_s

J/ψ

↳ Plot for dependent /
Independent

→ Plot for Replot