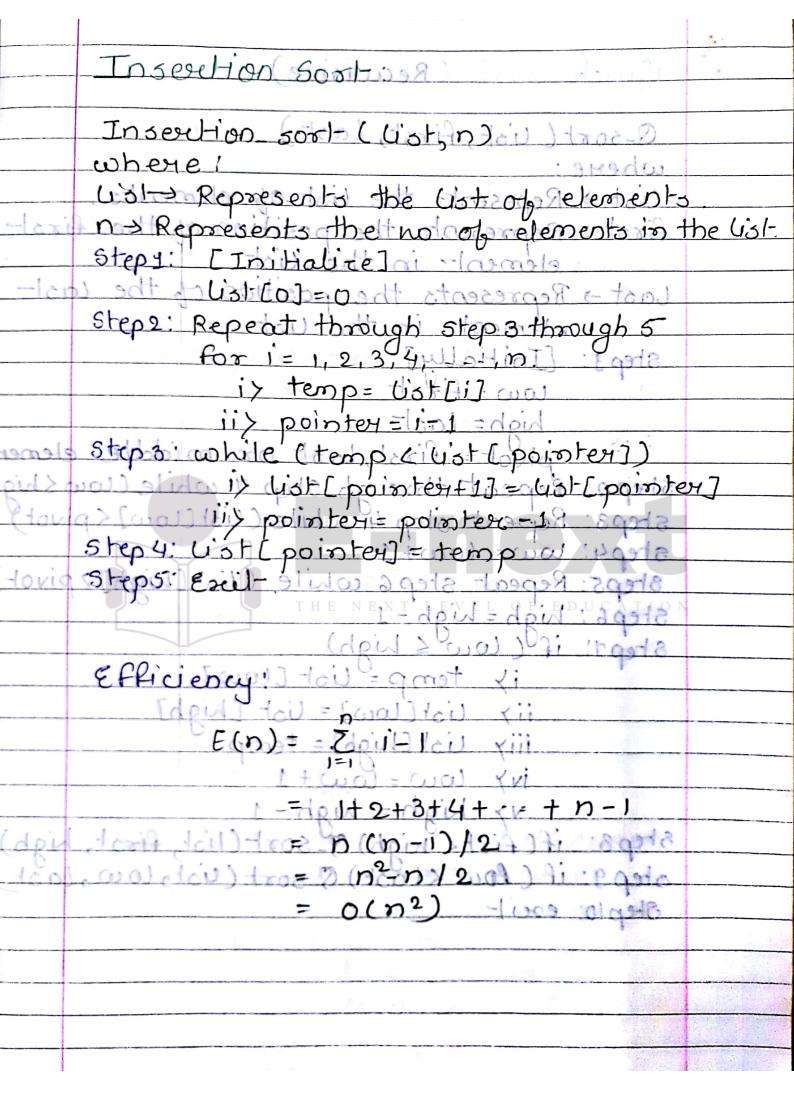
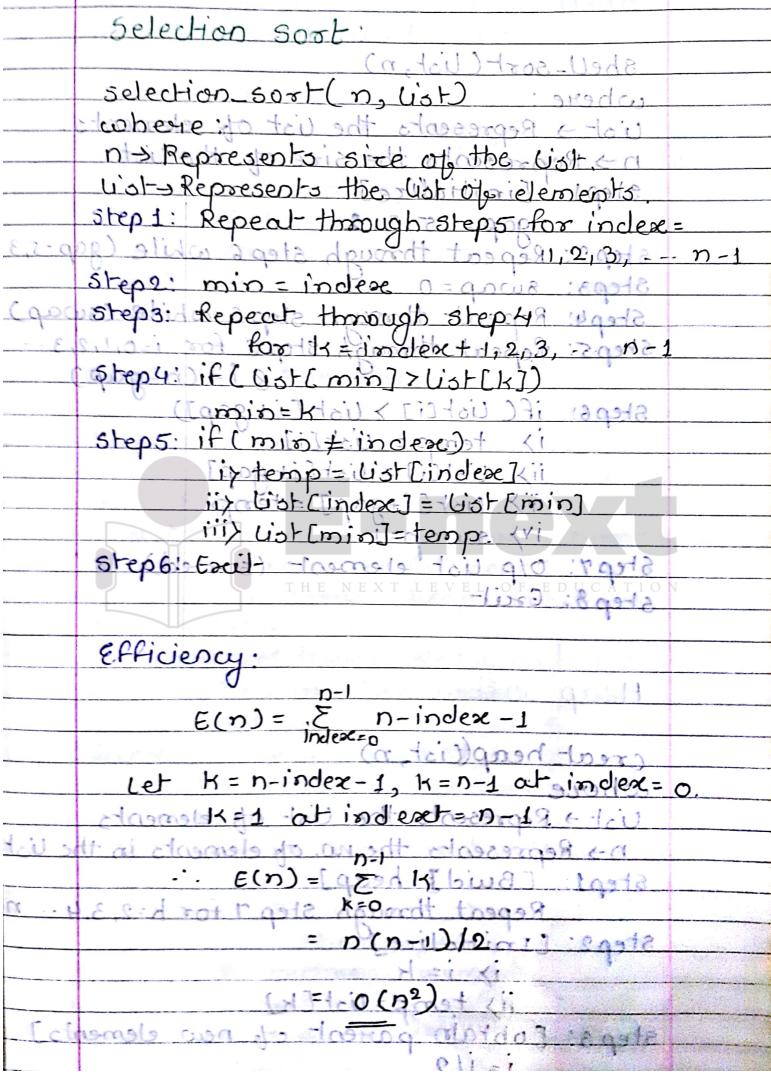
	Binary Search
	$\sigma$
	Binary_search (distrikeyan) aldur
1	where
e liste	key - To which we have to search in the list.
	n > Represents no of elements in the list.
	list > Represents list of the elements
-6	List > Represents list of the elements.  Stepslid & Initialize Touch toages eggs
	Shep3: 4=1
Ci-c	Step & Repeat through otopheidshile Cych
	Step 5 1 ( (15 ) [ 11 ] / 01 = 05 (H)
	Step 2: Repeat Hmough step 4 while (low & high)  Step 3: mid= (ww f high)/2
	5/ep 3: mid = ((ww f high)/2)
	step 4: if ( key < vist [ midz) ii
	then then then the
	high = mid-1+i=i : 179512
1	elase if (element-7 list [mid])
1	then
	Low=mid+1
	elserificatey== Ustromida)
	op "search is successful" & location
	of the element is amid
	$t \mid aq = 1$
	[+5+ returns-a)+(1-a)=
	steps: if (flag = = 0)
4	0/p seanch is unsuccessful", return
	$- (cn^2) - (cn/2)$
	Complexity:
	ie o(n2)
	lim 69n = 0
	n→∞ n
	o(log2n)
3-15	
/-	

		=
	Bubble Sort	
	Dicoble Jose	
	Bubble (sort (polist) bene percis	_
	where:	-
-leil o		
tei	stepis to Initialize In manage of a	Aires
	Ust > Represents Ust of the = clements	r
	Step 2: Repeat through istep 7 while (i <n) 3:="" j="1&lt;/th" step=""><th>_</th></n)>	_
	Step3: j=1	
	Step 4: Repeat through step 6 while (j <n-i) Step 5: if ( list [j+1] &lt; list [ji])</n-i) 	
	Steps: if ( List [j+1] < Vist Eji)	
4 piul > wo	11) 31 MW 12 17 1 temp = 105 1 4 19 93 1 1976	
	17) (Ustil = Ustit 1) (1)	en
	iijy lûst[j+i]= temp ) 1:12 gate	lei
	Step 6! 1= 1+1	6
	step 7: 1=1+1-10100 = ani	<u> </u>
	(step 8. Eseit na mala ) Al sapla un	
	and the second s	
	1 + bim = Cool	
	Complexity of OR Efficiency	
altico		
	56(n) = Easnots and to	
	1 = 9011	
	$= (n-1)+(n-2)+\cdots+2+1$	
	5 reps if (flog = = C)	10
arude	1 1 2 2 2 10 m 10 2 2 10	-
	$-0(n^2)-0(n/2)$	
	· Wises games	
	ie. 0(n²)	
	$\frac{\sigma}{\sigma} = \frac{\sigma \rho \omega_{\perp}}{\sigma} = \frac{\sigma \omega_{\perp}}{\sigma}$	
1	3 F / 2 F / 3	



## Quidy Sort (Recussive) Q-sort ( list, first, Last) no beach where: first-> Represents the list of elements. first-> Represents the position of the firstelement- in the list the Vist Last -> Represents the position of the cast developed in the list of the cast step 1: [IniHally] Low = first Capo high = last or middle elementstep 2: Repeat through step 7: while (low shigh steps: Repeat step 4 while (4) st (Low) < pivot) step4! ww=abw+101000 11cu steps: Repeat step 6 while (list(high] > pivot) step 6: high = high - 1 step 7: if ( ww & high) ix temp= list [ww7. 19] iiy list [low] = list [high] iny wow = tow+1 step 9: if (for Klast) & sort (list, first, high) step 9: if (for Klast) & sort (list, low, last) Step10: exil- (500)



	SheU 507-
	shell-sort (list, n)
	where: (tail or ) troe opitions
	List > Represents the list of elements.
	n > Renzesento the size of the list
	stepino Binitialize Il = lases ans & -lau
	step 1: Repeat the ush 281= apport index
1-11	step 2: Repeat through step 6 while (gap = 5,3)
	Step3: 8wap=0 sexpai = aim egote
	Step 4! Repeat through step 6 - cohile (swap)
	Sheps: Repeat through steps for i=0,1,2,3-
	(Ix) tail ( and ) tal isi(n) gap)
	Step 6: if ( list Ci] > list [i+ gap])
	ix temp = risk [in] in and
	iix distrilt= listriit gap?
	[airist cist [i+gap]] = tempi
	iv> swap=laim laid iii
	Step 7: 0/p list element (sorted) 310
	5 tep 8: Goedthe NEXT LEVEL OF EDUCATION
	the Efficiency.
	Heap Sort
	$E(n) = \frac{1}{5} = \frac{1}{5}$
	= coherie 1: 1 - nobai-a = H 1 - 1
	Uist-> Represents of the Uist- of Elements
	n> Represents the no. of elements in the list
	Step1: [Buid] heap]-(a)3
	Repeat through step 7 for k=2,3,4n
	Step2: [Initialize ]
	1) 1= 15 11
	ii) temp= Dist[k]
	step3: [obtain parent of new elements]
	sten 4: Repeat through stend istilation
	step 4: Repeat through step 6 while (iz1) & (temp > List [j])
K.	Ctemp > U or W)

CistCi] = CistCj]
Step 6: [obtain nevel parent]
Repeat through siegila ashile (JEK-1)
gmid + [ir] val) Siiy i = i/2
13 moife Live 12 athler of 12 11 Marta
stemp71 [copy new element ivalue into its
proper place 7 ain (do ) is gate
Cist [i] = temp i
Step8: Return ike z ji
Third 15tep9: 16001to bestai a voldo J. egold
TP ZHXK
if (1131-[+1]>U31(+1) then
Heap sort Algorithm
else if (jrn) thes
Heap-sort (list-n)
steplo: [copy element into its grades place]
List -> Represents the list of elements
n -> Represents the no of elements in the list
step1: [ (reate initial heap]
call create heap (liston)
5 tep 2? [Stout + 50xt] I LEVEL OF EDINGATION
tipil dos Repeat through step lo for k= n,n-1,,2
Step 3: [Exchange elements]
do Step41 viza temp= pustell lange
ii> i= Italy boxlail adt
year act of this if 2 lease at a lotdo
step 5: [find index of largest child of new element]
If (j+1KK) Theo 122129
o mos of alle Coustiff to took (j.)
thes j=g+1 war
" [ Fotenchange element]
Linung, 101 mast Cin= Mastely 10101
[1] Loblain left child]
1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
11> = 221

		[1] 1au = [1] 1au = [1]
	step6:	[Reconstruct the onew heap]
		Repeat through stepilo while (jsk-1) - [It step shows a selection of the control
		& CUSTETT >tenos
	stepy:	(1) Olchangle el antesti
Č	lidais	stemp71 [ [ [ For the was election to be well a lead to be well as the well a lead to be well as the well a lead to be well as the well as
	step8!	Lobrain left apilati
		i> l= janet= [i] tail
		i) j= 2 x i and 2 .8 got?  [ obtain index of next largest child]
	stepg:	[ obtain index of next largest child]
		IP j+1 <k< th=""></k<>
		if Charrian > (intCi1) then
		Heap Sort Algoriters:
		else if (j >n) then
		rieap-sort (histor) t=i
	steplo:	[copy element into its proper place]
	ments	with the representation of the light of the
toil	Stepli	elistifiji tempotassagan e-lau  elistifiji tempotassagan e-lau  elistifiji tempotassagan e-lau
		Stept Floredte initial heapt
	a fac	call create heap Clipt
	Kacuse	Sortifie Nethor veryde i segodo N
C1 -	an = >	Repeat through step 6 for each digit in the key pockets.
		in theokey spandones? Egore
		Initialize the pockets.
		Repeat through step 5 until end of
		the Unixed Ust.
2		Obtain the next digit of the key.  Insert the element in appropriate  pocket.
Linemal	o ona of s	Insent the element in appropriate
	2 1	podret and (xxxx)
	- (5)	combine the pockets to form a
		new Unkeda list
	31-1-1	Accords spredonning .
	Note:	pockets ave queue cos, queue (1) }
	- / /	pockets we givene cos, quencist
,		ixear
		The state of the s

-	
	preorder (Root, Left, Right)
	preorder (node)
	step 1: [Do through step 3] If (Node = null)
	Step 2 Output Info/ Node7
	Step 2! Call preorder (Left child [Node])
	Steps: Call preorder (Left child [Node]) steps: Call preorder (Right child [Node]) steps: Excit-
	21623. (2567-
	Inorder (Lefb, Root, Right)
	LVR
	Inorder (node)
	Step1: [Do through Step4] If (Node = NULL)
	Step 2: Call Inorder (Left-child [Node])
	steps: output Info[Node]
	steps: output Info[Node] step4: Call Inorder [Right child [Node])
	Step 5: Excit.
	0-1-100 / 100 / 100 / 100
	Postorder (Left Right Root)
	Postorder (Node)
	Step 1: [Do through step 4]  If (Node = NULL)
	If (Node # NULL)
	steps: Call Postoxoler (Right Child [Nocles)
	step4: Output Info[Node]
	step2: Call Postorder (Left child [Node]) step3: Call Postorder (Right child [Node]) step4: Output Info[Node] step5: Exelt.