Name:					Login:			HW04 Master	theorem - v1.1
Case	1: T(n) i	$s \Theta(n^{lo})$	$g_{ba}a$) if $f(n)$	ı) is 0((n^d) and	$d d < \log_b$, a.		
Algorith	m – Give the	e name as s	shown in the a	ssignment	page.			7	
Recurre	nce tree – D	raw ≥3 leve	els, including t	he root. R	loot should	be labelled T((n) = "rı	Inning time to	of size n."
a =	because								
b =	because								
f(n) is th	e time to								
(ii) io iii		_							
f(n) is	press as $O(-) O(-)$	becaus		d).					
d =	log _b a	=	Recurrence	e relation:	"T(n) = T() + fi	(n), where f(n) is _().	." Express	in terms of only n (i.e., not a	a, b, or d).
T(n) is C	Simplified, in terr	ms of only n (not a) b, or d).		anna Kama P				

Name:	Login:	HW04 Master theorem - v1.1
Case 2: $T(n)$ is $\Theta(n^{\log_b a} \log n)$ i	f $f(n)$ is $\Theta(n^d)$ and $d = 1$	og_ba (or any of the variants of Case 2).
Algorithm – Give the name as shown in the assig	gnment page.	-
Recurrence tree – Draw ≥3 levels, including the I	root. Root should be labelled T(n) =	"running time to of size n."
a = because		
b = because		
f(n) is the time to		
f(n) is because		
Express as O(), Ω(), or O() in terms of only n (not a, b, or d).		
d = log _b a = Recurrence re	"T(n) = ≣T(=) + f(n), where f(n) is =(==)," Expr	ess in terms of only n (i.e., not a, b, or d).
T(n) is Θ() Simplified, in terms of only n (not a, b, or d).		

Name:	Login:	HW04 Master theorem - v1.1
Case 3: $T(n)$ is $\Theta(f(n))$	If $f(n)$ is $\Omega(n^d)$ and $d > \log_b a$.	
Algorithm – Give the name as show	n in the assignment page.	
Recurrence tree – Draw ≥3 levels, ir	ncluding the root. Root should be labelled T(n)	= "running time to of size n."
a = because		
b = because		
f(n) is the time to		
f(n) is because	n (not a b or d)	
$d = \boxed{\log_b a} = \boxed{Re}$	currence relation:	Express in terms of only n (i.e. not a b or d)
T(n) is Θ() Simplified, in terms of only n (not a, b, or d)	r(r) = r r r r where $r(r) = r r r$.	

Name:		Login:		HW04 Master theorem - v1.1
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Credits

List any resources you used and how you used them. Include links we gave you, as well as any that you found on your own. If you used ChatGPT, give a link to the chat (if your account allows that) and describe how it helped you and/or what you learned from it. This page is an exercise in academic integrity (i.e., giving attribution), and for our own understanding.

Case 1:	(name of algorithm)
Case 2:	(name of algorithm)
Case 3:	(name of algorithm)