20-oct-15

Et Sobylah Ch 2 2.2 T(N) = O(f(N)) TO(N) = O(A(N)) a. T,(N) +T2(N) = O(A(N)) T,(N) + T2(N) = 8 (A(N)) + +(N)) false 6. TI(N) -T2(N) = O(A(N)) true (, T₁(N) = 01 T₁(N) d. T,(N) = O(T2(N)) torne 2.3 which grows fisher? NITE/NIOSN, E 70 NIOSN why faster sonce it is exponential I and N log N is not ally cluser to I mean.

2.7 a. (1) Sum = 0 tor(1=0; 12N; i+) 211+1 HSam N Total 3N+3 O(N) Sum =0 for (1=0; izN; it) for (J=0)JZN JJH) H-Sum 58432N2+N+1 total 8(1) (3) sum=0 for (=0; =0; =+) 2N+1,4N2+81+5 for (J=0) 5 ZN *N) JH) 211+3 H Sum N total 4N°+7N+5 O(N2) (4) sam =0 for (5=0; (<N; (H))

for (5=0; J L (* 1; J H)) 2N+1 2113 for (K=OjK=JjKH) INH O(N3) Ν N3IN (5) Sam=0 Arci=0; i=n; i+) 2111 for (1=0;520*1; JH) for (1=0; k=5; kH) 2N+3 2111 1/3 45 mm total C(N3)

(6) Sam=0

for (i=0; i \(\) i \(\) +1

for C \(\) =1; \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(

2000 4000 N=10 1000 6. 000,000 100,000 (I) 0.15 0.15 0.15 0.15 0.15 0.15 0.45 N=200 N=300 0.15 2.45 0.15 0.25 (7.15 0.35 0113

C. The fondonss above do match the run-times I calculated by hand m parta.

2.14 $f(x) = 4x^4 + 8x^3 + x + 2$

 $f(x) = 4x^4 + 8x^3 + x + 2$ x = 3

for c m (loeff)

acc = acc * x + C

return acc

1: acc= 0 \$3+4 acc= 4

2: ACC = 4 + 3 + 8

3: ACC = 20 # 3+1

4: $n\alpha = 61 + 3 + 2$ $n\alpha = 185$

7		1
		5
agustinational footographic topaya	a specific dalne will return a cons	
	a crector dalse sell solon of come	1 4-
	or streethe with reput to cons	fruit
Phonon Angle Control and Control and Control		
	det horner (EOEAS, x)	dr.
	C) det horner (EOEAs, x):	
	for a on reversed (coeffs):	217-1
	for a m reversed (coeffs): ncc = acc *x+c	3
DE-SUP-SERBERHALL-HARDE HIRETON ET STANKEL HARV-VI	pront acc	2145
homa dago rekomprehoraciaciahosh nose	The second secon	27
	$\mathcal{E}(\mathcal{M})$	*
		,)
de die regenie au C., Hearthy van die degel betweet de gege		
Madespress review of the Albania, Decimal and Albania		
There is a market of white		
DK.TELT TO MEMORPHOLOGY SERVICE AND ADMINISTRATION OF THE PROPERTY OF THE PROP		
Projection and Company of the Company		
Mark Town St. Townson Co. St.		
rgred ellertermeter		
STATE STATE OF STATE	23 TO STORY OF PROPERTY OF THE	To a reflect freeze consension of the con-
STATE OF THE STATE OF	COLUMN AND AND AND AND AND AND AND AND AND AN	
	AND THE RESIDENCE OF THE ST. MADE AND ADDRESS OF THE SECOND ST. AND ADDRESS OF THE SECOND SEC	
	The second secon	8 4 8 8 8 8
	on a sure case a comparable was to some case as a case and case a case of case of case of case of case of case of	
		4
		A LATE OF
	and the control of th	
	e a se carriaga de la companya de la	

```
2.15
     Tuhes array at sorted mts and a search element i
      ont low = 0
      m+ hish= a. Stresty W-1
      while (low = hish)
          put moddle = (low + hish) /2
          of (a[moddle] < i)
         elof (a [modale] >i)
              hosh = modelets
         else pront module
       Bront " not found"
run-tome nulys 55
Boonts by Inc:
          Mc run-time analysis
カントントン
         would be OCN3)
```