SNS COLLEGE OF ENGINEERING Coimbatore-107



COURSE NAME: ANALYSIS OF ALGORITHM

II YEAR/ IV SEMESTER

UNIT – II

BRUTE FORCE METHOD

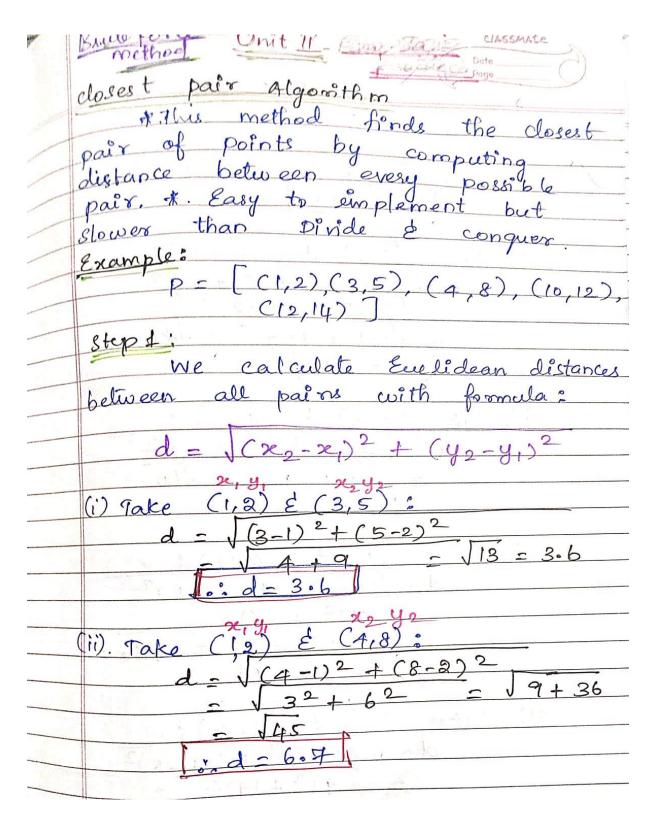
Topic

Closest Pair Algorithm



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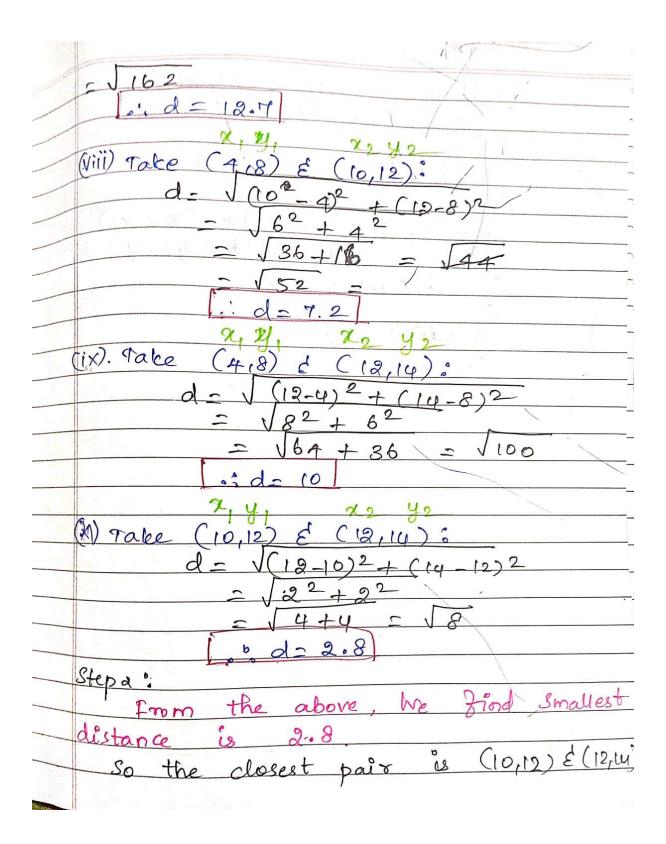






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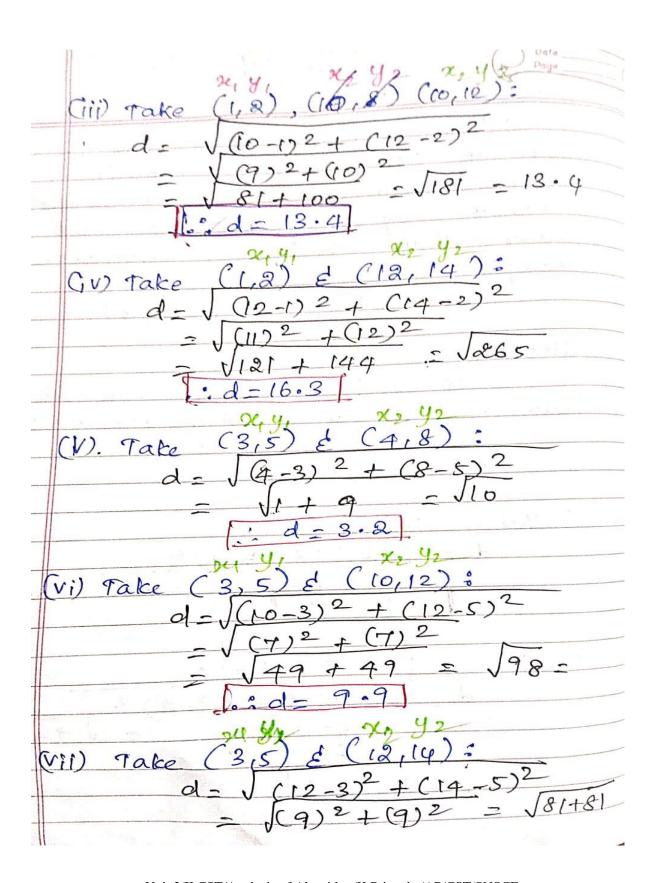




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Algorithm: Algorithm: Algorithm closest pour (points [7][], n) for (i=0; ixn; i++) for (j=0; jxn; j++) a = distance (points [i] [o], points [i][i] points [j][o], points (j][i]); ig (d < min.plst) min.plst = d; pt_x = points [i][o]; Pl y = Points [i][i];		Page	
for (i=0; i×n; i++) { for (i=0; i×n; i++) for (j=0; j×n; j++) d = distance (points [i) [o], points [i][i] points [j][o], points (j][i]); ig (d < min.plst) min.plst = d; pt_x = points [i][o];	Address to the second s	Algorithm:	
for (j=0; j <n; (points[i][o],="" <="" d="distance" ig(d="" j+t)="" min="" pist="d;" pist)="" plx="points[i][o];</td" points[i][i]="" points[i][i]);="" points[j][o],="" {=""><th></th><td>Algorithm closest pair (points []), b</td><td>)</td></n;>		Algorithm closest pair (points []), b)
for (j=0; j <n; (points[i][o],="" <="" d="distance" ig(d="" j+t)="" min="" pist="d;" pist)="" plx="points[i][o];</td" points[i][i]="" points[i][i]);="" points[j][o],="" {=""><th></th><td>for (i=o; i×n; i++)</td><td></td></n;>		for (i=o; i×n; i++)	
d = distance (points[i][o], points[i][i] points[j][o], points[j][i]); i2(d < min.plst) min.plst = d; PLx = points[i][o];			
points [j][o], points [j][i]); ig(d < min.plst) pin.plst = d; Pl-x = points [j][o];		for ()=0 i 1 < n , 1 + +)	
Points [j][o], points [j][i]); ig(d < min.plst) pin.plst = d; Pl-x = points [j][o];		d = distance (points[i][o], points[i]	Cil
min pist = d; Pt-x = points [i][o];		Points [j][o], points [j][i]);	1
Pt_x = points [i][o];		12(d x min plst)	
		min Dist = d;	
Pry = Points (;)(i);			
P2-2 = points [j][o];			
P2-y = points (i)[();		P2-y = points (i)[();	-
3 2 2		3 2 1	
Algorithm distance (x, y, x2, y2)	3	myonthm distance (x, y, x2, y2)	
(42-41) * (42-21) †		$(y_2-y_1) * (y_2-y_1) * (x_2-x_1) +$	
G (92-91),		9	
Time complexity:		O(n2) - complexity:	
O(n2) -> Since all pairs must be Space complexitys	Sp	sace complex thecked. Pairs must be	-
	4		
O(1) -) No Estra memory space		require d'among space	