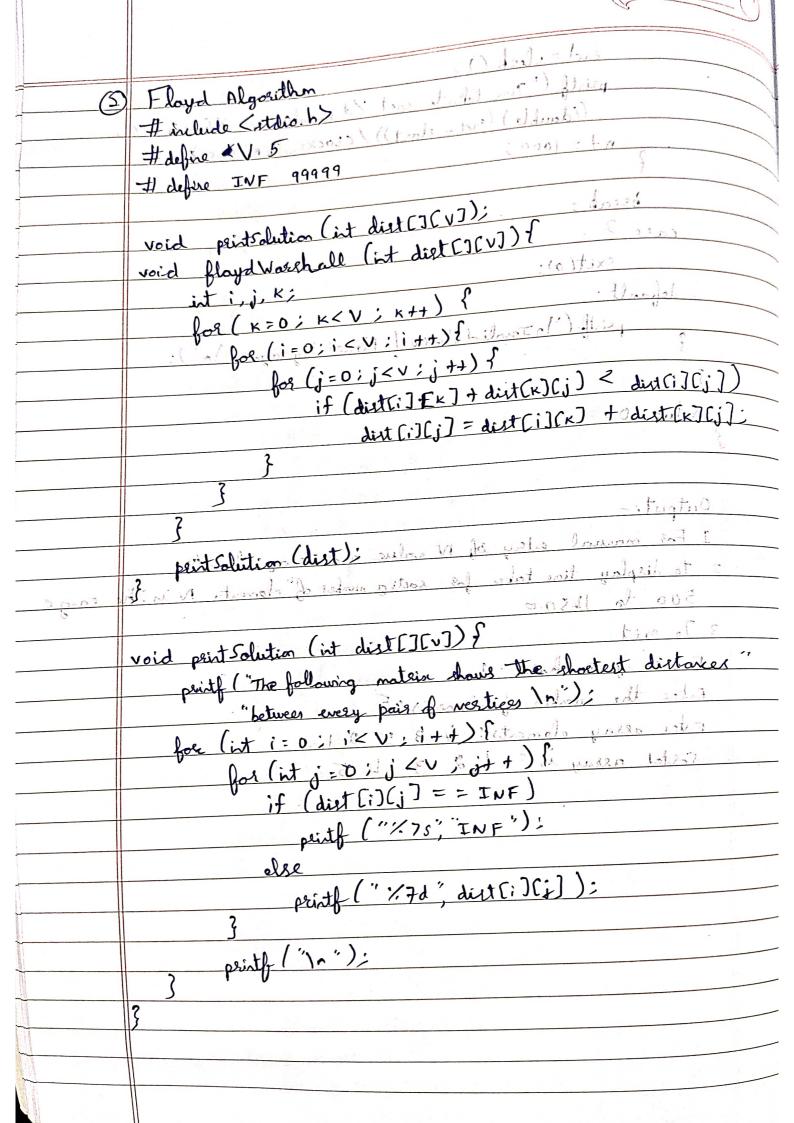
	Page 1
20/6/24	Lab-8
Ŋ	Heap Sout 10 mon to
,	ignati de 1 1 1 10 1000 210, tij
	#include < etdio. h) be both I do.
in.	#include < stdlib. h> (1) o) ifin
1 110	# include of time h) of judge lower 107 11 ) flilly
I well to	void oswap (int *a, int *b) if may it ot sai ) streng
	int time = 1 that to 002 agrees with it is
	* a = * b; ("time of (En!") ] [ [ ]
	* b = town: (" wind sund sate of ") It is
	3 : (do & 5 ) Jane
	void heapify (int are (7, int N, int i) E(A) ditions
	it largest = i;
	intileft = 002 t it + 1 it to to 7") I trieg
	int right = 2 + i + 2 / 1 2 5 5 5 1 from
	if (left < N && ar (left ] > are [largest ])
	lægest = lefter (a > i : 0 = i ) ?- f
	if (eight < N (2) & arr (eight) > arr (largest 7)
	largest = right: ( ) de tente
	if (largest != i) { (a.s) troZynon
	surp (& aer (i), & aer (laegest );
	heapify (ass, Nolasgert); they
	1 (++12A>izori) Poj
	((Cilo : +/6x:) +thing
M	When the is restrain to be took into be the sound into I office,
	void = heapsorts (it are ( Trout N) it I don't )
	for (it i= N/2-1; i>=0; i) spani
	heapify (are, N, i):
	heapify (age, N, i): : & second for (int i= N-1; i>=0; i) force a
	swap (& aer (o) (& acerti))
	heapify (ase, ii, o) > i (o = ii) sol
	3 :1-11=(:120
	3 : () Asol = texte
	hoopsoil (a, n):
0;5%	Day ( j = 0, j < 50000000 ; j + ) i bery = 38/610

Classauta Date Page

int main () { int a [13000], n, i, i, ch, temp; elock-t stort, and while (1) f printf ("1: For mornal orby & N value and acray about "). prints (" Ina: To display time taken for sorting number of denut N in the range 500 to 14500; ); printf ("In 3: To exit"); printif ("In Enter your choice: "); sconf (" /d ", &ch); ewitch (ch) fit in the 1) 120 case 1: printf (" Fiter the no of elements") scanf ("./d", &n): + ; \* 0 = ( printif (" Friter array clonents: "); log(i=0; i<n; i++) (They are score ("12/de") & a Ci) ); the ) to start = clock (): 1 das hear Sort (a,n); ?(:=! end= clock (); & (i) xxxx ) que printf 1 'Sorted array is in Rog (1:0; i<n; i++) printf (" "d It" a [i]); printf ("Time taken to goet "d numbers is "f jey In", n ((double) (end-start)) /CLOCKS PERSE(); break; (--1:0=< i:1-c/4 =: 1:120) core 2: (i.v. oro) office. N=500 (-- 1:0= <1 : 1-11 : 1 (1) while (n'Z=145.00) (07 200 A) gours for (1=6; i < no; i++) start = clock (); heapSort (a, n); for (j=0; j < 50000000; j++ ) { temp = 38/600; }

outhough bud 7 (2) peintf (" Time taken to got "d numbers in "fixers", n, (Idouble) (end - stort)) / CLOCKS\_PER SEC) : n+=1000; propp not originally break; (CV)[] trib (i) mitability Liev + ([v)[) toib to) Madrowthyalf how case 3: exit(0);

1 (++x: V>x = 0=x) 80 f default: pentf ("In Imalidaheria / Please try again In"); 30 CODE > (10 CODES + EXTENSIBLE) Fi DRetiento & ENDETTUBE = [1][1] With Output:-1. For marual entry of N value and array elements: 2. To display time taken for sorting number of elements N is the sange 3 To git ? ([v][] I sib toi) mitula toing him Fites your choite: Ind. nistan grown but sit I thinky Enter the number of selaments and we can acquited" Exter array elements? (4+3:57 & 1:0:1 km) Sorted array is (+ 1, 2 v3 + 14 5; ti) ind (74 = = [;)(i) trib) 7: ( FUT SEEN ) Aties :([:)(:)();) JE389





- 2	
	int main () f
	int graph(v)(v) = {fo,4, INF, 5, INF},
	(INF, 0, 1, INF, 6 },
	§2, INF,0,3, INF3,
	f INF, INF, 1, 0, 2 }
	\$1, INF, 4,033;
	floyd Warshall (graph);
	ectuen 0;
	}
	Output:
	The following nateix shows the shortest distances between
	every pair of vertices
	0 4 5 5 7
	3 0 1 4 6
	26035
	37102
	15540
	16/24