dal & PAGENO: Usha Gold 2016184 Heap sort #Include < stdio. h) BONION to Hinclude Stdleb. A Social And Hindunde Ste'me his tooks I was repi'd sneap (int * a., int * b) South ("A so make a legy of many int temp = * ac; vist suspens * a = * b)

*b = temp; pourt [11/4 Exter more chair !!) resid heapity, (int acout), int minti) 9 int lage = 2; (NO) Notion & int left = 2 + 1; 1 300 int zight = 2 + 2 + 2; if (left < n && affect)> a [large S) lang=left;

vif (night<n le a [night] > a (lange])

lange = night;

if (lange] = i)? snoap (lose], & allage]), heafity (a,n, longe), brainsty Messet of assource roid heapsort (int at], int n) for lint = 1/2-1 12=0;i--) heapify (a, N,1°); for (int i=n-1;1°>=0;1°--) { sneap (Lagaroz, &a [1]); heapity (a, i, b);

int main()á int a [15000], n.j.j., ch, temp; clock t, start, end, While (1) Here & Maria James & Composition of the c point ("15 on manual ontry of Nvalue and array elements"); printfelling. To display time token points ("In3: To exit") puint (" / d", d choice: ")" snoitch (CM) to the time the paint 1" Enter the no of elements my Scant (" / d', & n)",
print (" Enter agray elements:") for (1=0; 1cn; 1++) = Scont (+ % of , sate] start = - clock (); splitt peap Sout Ca, n). end = clook (3) braisty (" sorted array is: 11) fon(i= 0; i<n; i++)} penntf (19d1+", a[i]) printf ("Time taken to sont % numbers is 16 of secs in", n, ((double) (end stal) CLOCKS PER SEC) balanti, and Manage reapply (a, i) b);

DATE / / PAGE NO. | Usha Gold Case 2 11 to wake a literary so Ex 31 n = 500; mehile (n = 1,1500)? foer (i = 0)! (n) + 1)? $2 \qquad a \qquad (i = 1,1500)$ Start = Lock () heapsont (a, n);

for (j=0, j<50000000;)+

a temp=38/600; a

end=clock(); printf ("Time taken to sort %d

numbers is % of sets in", n,

(capible) (end-storet)) /clocks PERSTI

n +=1000; 3. Te exit bacak;

case 3:

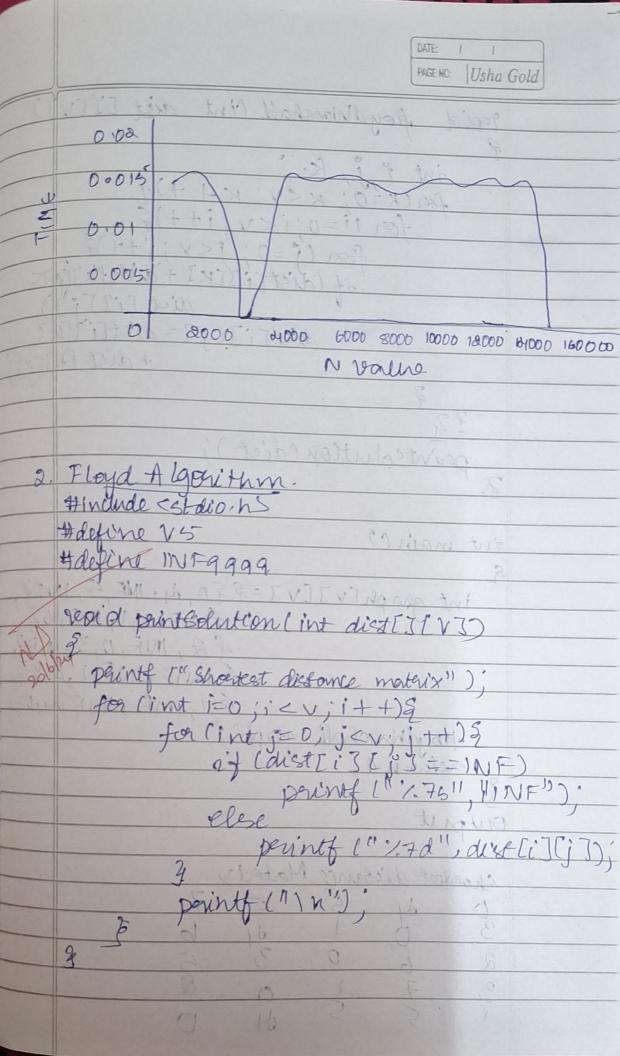
erit 10),

default:

perent ("In Invalid choice 1Pt

try again In "D; Time taken to spot 10500 Time taken to cost 11 c DA 0 Time token tocket

For manufal entry of N value and array 2. To display time taken for sociting number of elements N; Enter your choice: Enter the no of elements; 5 Enter array elements: 2 7 33 12 Scented array: 5:1 & 7 12 33 Time taken to sort 5 no is 0 secs 1. For manual entery of N realise and agray elements
2.70 desplay time taken for sorting no of elements N. 3. To exit Enter your choice: 3. Time taken to sont 500 no is 0 sels Time taken to sort 1500 no is 0.016 x18 Time taken to Gort 2500 no is D. D16 sels I'me taken to sort 3500 no is 0.01588 Time taken to sort 4500 no is 0.01688 Time taken to sort 6500 no is 0.015868 Time taken to sort 7500 NO is 0.016 819 Time taken to sort 8500 ho is 0.01680 Time taken to sort 950 be no is 0800 Time taken to sort 10500 no i's 0.01684 Time taken to sort 11 500 no iso 16 sels Time taken to sent 13500 he is 00/685 Time taken to sort 14500 ho 150.01646



repid floydwardall (int dist ETEVD)

int i, j, k.

for (K=0; K<V; K++) 2000 for 11=0; 1< v; 1++)\$ for 1 = 0; SCV; J+1)?

of (distristik) + disk this Tork diet [i][] + dict [x][i] outor n perintsolution (dist); Hindrac Cataco NS int main () HATELY INFRAGA int gaaph[v][v]=\$ \ Qo, dy, INF, 5, INF) TO THE WEST OF WEST & &, INF, 0,3, INF (1x store smoth to 4 INIF, 1NF, 1,0,29 21+1-1 VS &1, INF, INF, INF, MEDINE Hord Washall (graph) shortest distance Materix