## DSA LABASSIGNMENT-3 Insertion sort algorithm in C. + include coldio. h > int main () Point natr [100], antore if lag=00 Printf C" Gnter no. of elements" ) scanf cullyan, En); for cc = 0; ckngc++) scanf Cuidi, & array [C]); for cc=019 c <= n-1 9 c++ ) & t = array [c]; for C b= C-19 b>=0 , b--)> if Qurayed >+ 1) ?

for ( b = c-19 b = 0 5 b - -)

if @ ray(d] >+ 1) ?

array(d] = array(d)

flag=19

if cflag)

array[ 6+1]= a;

Print f (" sorted list 11);
for (C=0; c<2n-1; c++)

Print f (u.1.d11; 2 array (c));

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alselection sout algorithm inc
Hinclude estato No
int maina)
 ent array (100], N, cibi Position, a.
 Printf Ca Chive no. Of elements ").
 scmf ("1.d", E(n))
 Printer C" Enter
 for (c=0; c < (n-1); (++)
   Pusitionsco
  forcd=c+10, &< no,d++)
   if (array CPOSITION) >arrayCa)
   Position = do
  if Crosition (=c)
   a z'array(c]
   array[Position].
  array[position) = a;
   for cc=0; ccn; c++)
   Printf (".1.d", array [c]);
    geturn coro
```

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3) Cprogram for Bubble sort algorithm.
 #include estatio.n>
  9 N4 main()
   Int array (100) In a cibi swap ;
    Print ( Circive no of elements);
    scanf ("1.4", & n);
    for cc =09 c < ngc++)
      Scanf ("1.d", & array [c]);
    fox cc=0; ( < n-1; (++) ...
     2
     for Cb=0;b<n-1=c;b++)
      if Carray[b] > array[b+])
       swap = array[d];
       array[d] = array[d+1];
       arranger + 12 : and bo
       forcc=og cen gett)
         Exust Cruquianon Ecosso
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1)MERGE SORT AlGorithm in C.
 Minclude estdio. ho
 Alk wde L conio. n>
  # define marsiae 5
  Void merge - Sort Cantilation
   Void merge - sort Contiintiintiintlintle
   Intary-Sort [gize] ?
   Int malnety
    6 Vt 60
   PARA & (" Enter elements for sorting : 1.d" | max
    for (:=0 9 % < man - size , 0,++)
     scanf (".1.d", & arr-801+[9])0,
      for C:=0: 1 = max=5:3e ; 9++)4
     Print f ("1+.14", arr-sort("))
      4
      merge -sort (0, max-8,3e-1);
     for (1=0; 1 < max - 512e 31++);
      Printe Ciltud" (axx -sortCO)
      4
     get ch ()
      noig weade sout Cinti's ut 8 73
      art D
      of (823)
      m=(1+1)/2
      mergerout (1,1);
       wed6-301+ CU+1 12 76
       merge - array ( finint 1, 3) )
        4
```

void merge-sort (POXX14, 2,1 P) ? int i ceo jo 904 1= ax, j= Z, K=0; While CPL= Eqqq 9 L= P) & i & Carr\_ sort Ci Jearr\_ sort Ci J +CR++ ]= 0.44\_80x+ [1++]0 6136 +[k++]= avy\_ sora []++]0. y while (9 (=4) +Ek++ Joarr-sor+ [1++ Jo wrile (ic= (P) +CK++7= or1-sort C3++7; to + Ci= x 11 = 0 9 9 ( = 1) 9 9 1 + + 1 1 + + ) our-contigl= + [1] program for heap sort algorithm. #include estaio. No void maines int people (01, 11, 1, 1, 1, 0, 100+ 1+6 mbo) brint & Cr crise voige elements ") o scan & (4.1.9/1 & N)0 for Ci=00, 1< mm 391++) scanf Cirqui, ErheapCa Do tor (6:21 0, 6 < 10, 1+4) و أو و

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100+ = CO-1) 12 9
if (neap Croot ] L heap Co J) .
temp = heap (root)",
 heap(xoot)= heap(c) o
 neap [c] = tempo
 JMK: 16 CC 1 =010
 for (1=0,12 m,1++)
   Printf ("1.d", heap ("]);
 for (1=n-1;1)=0;1-)
  temp: heap[0]
  heap (b) = heap (3)
heap (3) = temp?
   x60+ = 00
   90
   c =2 * Yoo++1
  if CCheapEcJcheapEc+1]&qc<j-1)
   C++3
   if CheapCrowt ] Kneap Co] Eq (<))
   temp= heap Croot];
    heap Croot J= herp Cojo
    meap (C) = temp;
   -toot=0
    I while CO < 1 )
   for (1=0 ; 1 cm ; 1++)
    Printf ("...ld", heap[1])
    return (0);
             *XTHANK YOU
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