faint [u lute the size of the anoy (non 100) "); sant (41,44, 1512) int Binary search lint of Drint size, intrearch) & [wt a[100], size, seaul, i, hos=-1, loc1, loc2; int comparator (const void #p1,const void *p2) & return (a (int =) p2 - a(int =) p1); goot (a) size, size of (int), combaration); mintple u enter elements in amay:"); footiso; i2sizi; i++) { 2 scant (4 % d 4 , & a [i]); while { leg L = end } &

mid = { leg + end } / p.;

if (al mid) = = seaul) &

return mid; &

else if (alound) & seaul) &

sotum ad = mid-1; } int beg=0, end: 513 E-1, mid) for (1:0) ('Csize's (++))
for (1:0) ('Asize's (++)) Assignment - 6 Deareling & Souting on C. llas fleg = mid+ () (1) # Prochable 2statio.h> Jehn -1,3 int main (1) §

else print (" The 7.4 some pleasent index: "A (u", south po); from the Enter (too (1,8 too 2); sount (" 7.4 1,4 too (,8 too 2); The search element found at index 2 quite uso, index of 2 y sun is 8 mint (" Sun is all :4 (ali +1] +al (1))
print ("Latticit"), a [1002]);
seem 0; frint ("Eles Scale Clenco");

for a kinay beaul (a, size, seaul);

if (pose = 1).

Thut ("Not foud"); Elveler search clement: 2 Eules the size: 6 Sorted aroay: -1.8 4 3 2 6 Produt-= 15° (But but

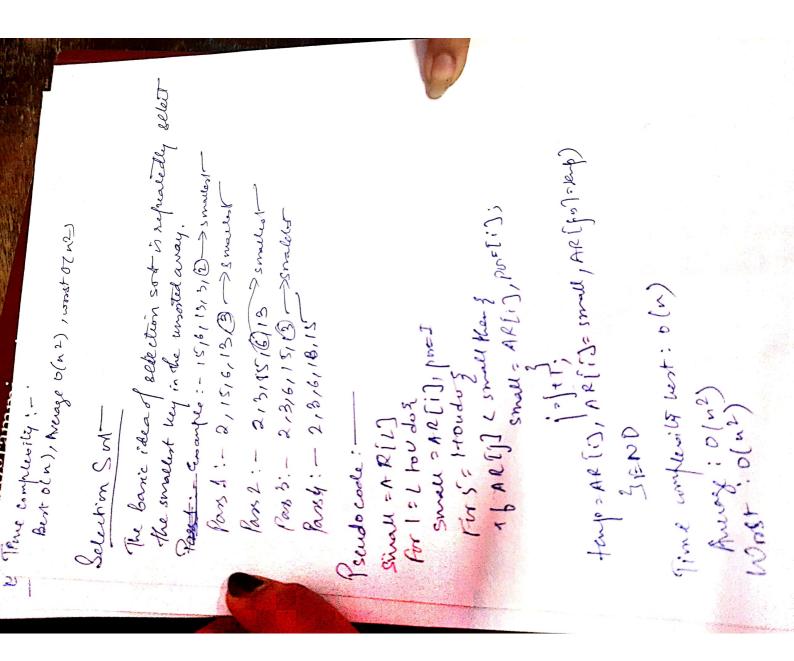
(letus) 2 (ne mid = (letus) 2 (mergesor (le, mid)) (merge or (mid + 1, us)) } } } (merget lb, mid, mid + 1) } } } while (jz= i2)&

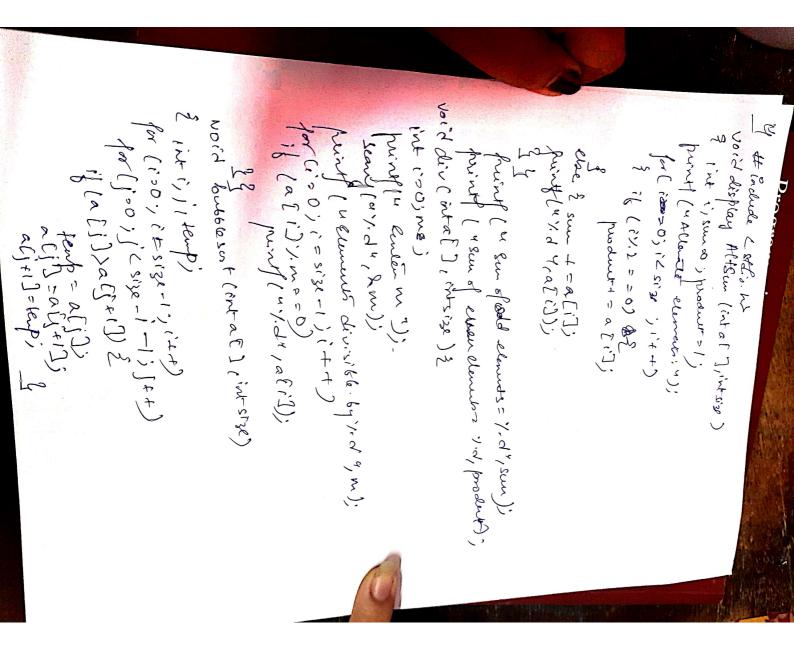
} temp[v]=a[j];j++, u++; ishire (iz=id)? temp [v] = ex[i]) itt, ket; for (121) h20; 12 42; 17+, 4+1) # define 512 F 1800
(Ind a [Sie 2];
void mage [ind i, i, intiz, ind acover)?
Inti, j, intemp [512 E]; the fterp [v] = alij]; j+t; k+t; void megesont (int lb, interb) }

if (lb < ub)? 16 (a(i)2a(j)) 13 tap[K]=a(i),i+t, & t) white (1, 2 = \$1)88 (jer (2)) aliz=tenplas A the ineluste cotto o. h>

I'm main () 2 inti, n, product = 1, les print (" ener the size of away: "); Scanf (47.24, lu); for (ie=O)ccn; i++){ print (40(1.0](+=4,1); Scary ("Yd", &a (i))) mergesort (0, n -1); printflu ander a "); Scan (47. d 4, & u); for (120) (Ck) (++) 2 product = a[i]; print [" the product FU the elevation " of y product" retuno; Output Center size: 4 a [0] = 1 a[1]=0 a[2]=3 a[8]=20 Enlei h: 2 The product = 3.

Suppose an array A with a llements A[1], A[2]....A[N] is in memory. The insertain sort algorithm scare A from A[1] to A[N]; inschmæd each elevent EA[4] into A[3]. -- A[u-1], Example: -Array initial:39, 22,55,68,21 Pars 1: - 22/39,55,68,21 pass 2: - 21,39,55,68,22 pan 3: - 21,22,55,68,39 pars \$:- 21,22,39,68/55 pars 5:- 21,22,39,65,68 Surlèd. l'sendo code! A [10] = aun inleger value Repeat steps 3 through & Josho 1, 2, 3, N-1 temp=A[u] phr= K-Repeal sleps 6 to 2 while temp (1 (pm) 2 A[phr+1]=A[pti] prt= ph-1 3 A Chrtil = teup;





Check 2 by Altsun Pro (assize);

div (a, size);

div (a, size);

fruit a [100], sizi;

fruit [" Ener sizi bformy ti])

fruit [" Ener sizi bformy ti])

fruit [" Ener sizi bformy ti]);

fruit [" Ener sizi bformy ti]); Shub 66 5 od-(a, 836-1);

Est include (Stio. L) int linary seach (intal) right beg, intend, intseach) ? for mid; if (deg coent) q rid = (heggend)/2; if (a[mid] => seauch) return nied. if (a (mid > search) Relum binary search (a, beg, mid-1, search); Selin Bray seach (a, mid + 1, End , seach); rehu-1 Fint main() ¿ intaí wo], size, seach, i, pos; print (" Ener the size of away: "); scan((47.d4, 8513e); friend ("Sosled elements:"); (or (i =0) i <= size) i++) scanf (4y.d 4 placi); print (" Ente slack cloud"); searf lu y. du & seach); for = finangeant (a@, 0, size -1, search);
if [por = = -1) & purif (4 Norfound 4); else prints (useach element found at index V.d 1, pos); Sehn 0; 2

Output:
Center size: 5

Center sorted elements: -12345

Center sorted element = 2

Search element found at index 1.