```
1. Take the Elements from the user and sort them in discending older and do the following.
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a using Birary search find the Element and the Localibn in the averay where the element is asked from user.

b. Ask the user to Enter any two locations print the sum and product of values at those locations in the sorted away.

```
→ # include zstdio·h>
      void main >
     Pnt a(30];
     Pat ij, ain;
     Printf ("Enter size")
     Scanf ( "/d", fn);
     Printf ("Enter Elements");
     tor (i=0; i2n;++i)
     Scanf ("1.1.d", Ka[j]);
     for (i=0;izn;++1).
     for (j= 141; j=n;++1)
     { (f (a (1) < a(j))
       a[i]=a[i];
      a(j) = a;
     printf(" descending order");
for (i=0;i=n;i++).
    1 printf("1.d", a(1]);
    int c, first, last, mid, s, li, L2 sum=0, P=1;
     printf("Enter Element");
    5 canf ("./.d, fs);
    finst = 0;
     last = n-1;
```

```
first =0;
 last = n-1;
   mid = (first + last)/2;
   Inthile (Finst C= last)
if (a Cmid) L search)
    Pirst = middle + 1;
  else of Eacmed) == Search)
 printf("1.d found at 1.d", s, med+1);
      bneak;
                              the inclinate realizable
     else.
                                   moon Boy
       Last = mid-1;
      mid = (first + Kast) /2;
    3 (+ CFbrst > last)
     printf ("Not found");

printf ("Enter two locations");
      scanf ("1.d. 1.d. 1. f 4, f 12)
      for (1=l1, i2l2; i++).
      {
Sum = Sum fali];
          P=P+a(P);
      printf("sum = 1.d", sum);
printf("product = 1.d",p);
                                     0111:4:
  Sout the away using Merge sout whose Elements are taken from the user and find the product of kth Elements
   from forst and last where K is taken from the user.
-> # Include cstdio.h>
    # Include < conto. h>
    Int a (20], 11, 11
    vold soort (Pht, Pht), low, high, mid; b(20);
     Word Merge (Pnt, Pnt, 9 nt);
     yord poroducts;
      void main()
```

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16 Dimbray - Kick
clasern();
printf ("tulor size");
scanf ("1.d", 4n);
printf ("Enter Elements");
for ((=0;izn;i++).
 Scanf ("1.d", &a (1));
 Low=0; high=n-1;
Sort (low, high)
Printf ("After sorting");
 for (?=0; izn; i++)
 porint ("./4d",a(17);
 percoluct();
  getch();
  void sort (int Low, int high)
  mid = ( low + high)/2;
   If (lowe high)
  Esost ( Low, mid);
   Sort (midtl, high)
  merge (Low, mid, high);
                        Act many to the first that the second
  void merge (int law, int mid, int high).
  tor (4=0,12=mid1=0; 1,5mid, 4+122= high; 1++)
  if (acy] ca(b))
    b(i]=a(4++);
     Clse
      b(1)=a(12++);
   While (42= mid)
     b(i++)=a(4++);
   while (122= high)
     b(1++) = a(12++);
  for (1=0; Kn; 1++)
    a (1] = b(i);
```

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vold, product();
             1 int p=15
                                                                                                                    the stand of the stand
                                                                                                                            10 1 10 10 10 10 10
                     int k;
                   Printf ("Enter K")
                                                                                                                        111 11 11 11 11 11 11 11 11 11
                  Scanf ("1-d", f.k);
                                                                                                        ((1) 51 " 1 x " 1 month
                for (1=0; 12=K;1++).
                                                                                                                  Charles or root
                EP=P#1;
                                                                                                                         ( defen mail ) line
               printf("%d", p);
                                                                                                             the cape" stones
3. Insertion sort - The data is socited by insertion the data into a
          Existing sorted tile, The process tollowed is elements are
           known before while location to place them is searched.
            Best case complexity is o(n).
           selection sort: The data is sorted by selecting and
           placing the consecutive elements in sorted location.
          The best case complexity is ocn2).
 4) -> # Proclude ¿stdio.h.>
                                                                                                                    Could libbing 1 100
                         Int main()
                                                                                                            the 3 in birt to ma 3 3 F Co. d.
                     IntaliooJ,n,c,d, swap;
                       prentf ("Enter &ze");
                       Scanf ( " % d 11,4n);
                        printf("Enter elements");
                        for (c=0;c=n;c++)
                        {Scanf ("/.d", & a [c]);
                       for (c=0) c < h-1; c++).
                       { for (d=0; d < n; -c+ ; d++)
                        of Ca [d] >a [d+i])
                           Swap = ald];
                                                                                                                   A A THIN
                            ald] = ald+i];
                                                                                                               1 - 1 - 1 - 13 1
                            a(d+1] = Swap;
                                                                                                                      ( transmitted to the state of t
                                                                                                                                 1111 - 1111
                                                                                                                             Scanned with CamScanner
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printf ("bubble sorted");
                                                                                                                                                  The Contract of the Williams
             forcc=0; ccn;cf+)
                                                                                                                                                      Charles and the second
               Printf (" 1.d", a ( c))
                                                                                                                                                        the first that the state of the
       (i) print f ("alternativ'slements");
                for (c=0; (c=n; c+=2).
               {printf("1.d", acc]);
                Int sum =0; p=1;
       (11) for ( C=1; C == n; c+=2)
                        { P= P*a(c);
                     for (c=0; c==1; c+=2)
                          { s = St a[c];
                                                                                                                                                        ( 11 per not dela " ) 1 miles
                    printf(" sum & product = %d 1%d", sum, p);
       (ii) Put m;
                       printf ("Enter m");
                     Scanf ( 11 % d 11, fro);
                       for (c=01,c=n;c++)
                          1 (+ (a(c)/.m==0)
                                     printf("%d",a(c));
                             3 print (" Not found");
5)
                    # Include 2 Stdiooh>
                          ints [intac], intf; intl, inte)
                            Cf (Lx=f)
                                      Pat m=(1+L)/2;
                                          1/(a (m)==e)
                                                  return m;
                                         if [acm] >c)
```

```
11 1 basins side
 sicturn BS (a, f, m-1, c);
                                 C145:05 3
return BS (a, m+1, 4c);
                               1. ( 10 ) of of
                       "I " through the Bearing the
retwon -1;
                               (c - D) (f - 2)
                                ( ( b) b)
int main(void)
                                   1-9,0-
  Pnta[] = $1,413,2,93
                            (2-12:4-2)
 int n = 6;
                                       - [-12
 int e=9;
  Pnt P=BS(Q10,1-1,e);
                              ( t -- 1 A = -)
   Pf (P == -1)
 printf ("Not found")
                                      21011
          (1 a. Final Tours Tours
 printf ("found at %d", P);
                                  ( Par plife
                                 : (as) " 1 L. 1.
                              (415-11-5)11:
                                  6 11 21
                           TITLE THE THE TOTAL
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