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operations: a) Create a doubly linked list with following b) Insert front & rear.
  c) Delete the node both front & rear
  d) Diplay the contents of the list.
  e) Simple search
 f) Anseiting the mode before and after key mode.
 9) Deleting repeating occurances.
  #include < como h Sudaced set of mille alkaling.
  #include < stdio. h>
   #include <stdlib.h>
                                     Sanger ( hit)
  struct mode
    int mo, pribared &
                           pulmity ("1. Ascending order In
    Stanct mode * llink;
                              sand (" opod", & Option);
    steuct mode * rlink;
                                        (): : meriga)
typedey stauct node * NODE;
                                 find ( hint);
 NO DE getnode ()
                                   i (they) judget
   NODE X;
  2: LHODE) malloc (size of (struct mode));
   1/ (2== NULL)
     peint (" Memory full \n");
                                     Missulte exit(0);
     exit(b);
   section x;
                                                  O WRITIN
 void fremode (NODE x)
 free(x);
 NODE dinsert-front (int item, NODE head)
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NODE temp, um;
temp= getnode();
temp= jufo= item;
                                       Mann of the Extends from
 head -> rlunk = temp
 temp -> llink = head;
 temp-selink = cur;
                                               CANACTOR AND THE
 cue -> llink: temp;
                                               CANTIFE AND STATE
  ieturn head;
                                               NODE dinsert-rear (int item, NODE head)
                                                WAY THORIEST
 NODE temp, cue;
 temp=gethode();
tup-> info: item; cu = hlad -> llink;
                         hoed a good, most this agaller troops was
 mead -> llink = temp;
 temp -> elink > head;
                                         total level, un. press;
 temp > llink: cu;
                                     [ [ Was = xhuk = hood] fi
  cu -> slink: temp;
                                   (("a/phopun si tent " It thise
 neturn head;
                                                 three wear
NODE ddelete front ( 1000 NOTE head)
                                              hand : (my) elichen
 NODE cus, ment;
 if ( head -> xlink == head )
                                              - WHI THEN
  print ("linked list is empty)");
estrum head;
 im = head - slink;
  neat: cu -> elink;
  head - slink= next;
   next -> llink 2 head;
  printy (" The mode deleted is of. d", cur > info);
  freenode (cur);
   return head;
  NODE ddeleti-sear (NODE head)
   NODE me, plev
                                           Scanned with CamScanner
```

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of (head -> slink == head)
  Peint ("linked list is empty \n");
return head;
  cue: head -> llink;
  Pelv: cu > llink;
  head -> llink = prev;
  Prev - rlink: Wead;
  printf ("The mode deleted is % od", are -> info);
                                                      (C) baltag = quality
  plenode (cur);
  leturn head;
                                                     makilad - balika
 NODE insert-liftpes (int item, NODE head)
                                                      my July buy
  NODE temp, cm, prev;
if (head -> &link == head)
                                                   and shinks temp
   peinty(" list is empty \n"))

extrum head;
3
                                 bold 2704 bog) they talible
  cu = head -> elink;
   while (cm = head)
                                              been == driver - pient
   15 litem == cm > info) belak;
cu = an -> elink;
                                               tell bernel "Johnes
                                                     ball must
   y (cu == head)
                                                i Anile a been my
                                               JANULE - JUN - UN
  peint (" Key not found \n");
                                              then shill be will
seltun head;
prev= au -> llink;
printy (" Enter towards left of % d: ", item);
temp: getnodel);
Scourt ("%d"; & temp -> info);
Prev-> chink: temp;
```

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temp > llink = prev;
                                                    The Mark payables
Jemp - slink = chi;
while head;
NODE insert eightpos (int item, NODE head)
NODE temp, cur, next;
if (head -> flink == head)
 printly ("list is empty \n");
return head;
 in: head -> rlink;
volvile (ue! = head)
   { (item = = cur - ) info ) break;
  un = cu -> Mink;
                                    motification of the state of the
  if (cue == head)
                                           CIXEN PURPLANT STUDIES
  prints ("Key not found)");
return helad;
                                        Charles with - ball 11
  frext = cu -> rlink;
  print ("Enter towards right of %d:", item);
  'temp: getnode();
  Scant (" % od", &temp-info);
cue-> elink =temp;
temp-> llink = cue;
  next -> llink = temp;
                                           18 (Humis Mussimpe)
  temp -> rlink = next;
                                                yers you - whork j
  return head;
                                               ittima s un
                                                MANY CANA THE
 NODE search (NODE head, int item)
                                              than : Amilie-way
 NODE temp, cui;
                                             rough think a keep
  mt flag = 0;
                                              if ( held -> xlink == head)
  peint (" linked dist empty In");
```

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return head;
un = head -> slink; while (nu! = head)
( litem = = cu -> info)
   flag=1;
beeak;
                                       (MIN) = Think = 169
au= au -> elink;
 1 (cm == head)
  Peint (" Seach unsuccess pul) n");
                                            Change Land James
  f (flag==1)
  peithfl("search successful\n");
                                       - This (- MI) = Smith
NODE allete-all-key (int item, NODE head)
  NODE prev, cue, mext;
  int count; (head > rlink == head >
                                 Will Hay wer found in );
                                           Likelle Action
 reint (" List is empty \n");
Leturn head;
                                          July Chi
                                 still Enter Hisrards si
                                          finite defunds ()
                               effects (both prints)
 count: 0;
 un: head - slink;
 while ( cue ! = held )
                                         NO - SENERY
                                       ELES Wilke HEAVY
1 ( litem! = m -> into)
                                        and a sline of the
 ciu: cui-> Mink;
                                              Lead . John
 else ? count ++;
 peers cu => dlink;
                            Land Mood agon Land
 next: cu -> elink;
  prev-slink = next;
                                             CAN ROWER
 ment -> llink - pur;
  Jeenode (cur);
  Vous=next; 33
  if (counts=0) punt ("flement is not found in");
lake & punts ("tound at o/o d positions and are del
```

neturnhead; 33 word display (NODE head) NODE temp; ( wead > shink = = head) buth (" Linked list is empty In"); painty (" contents of doubly linked list: W); temp: g head -> elink; while Henry !: head) printf("%) d ", temp-) info); temp= temp -> elink; void main () NODE head, last; int item, choice"; head = getnode (); head - wlink : head; ( (will I be to be to be head - Slink : head; low dilute all text them, he Jos (;;) print/ ("nonsut front In J. Insert Rear In 3 Delete front In 4 Delete reas in 5. Insect to the left of the Key elementin 6. Insect to the right of the key element n 7 Search In 8. Delite duplicate terms In 9. Display In 10, Exit In & Enler your choice:"); sony (40/0 du, suroice); Switch (unoice) case 1: prints (" enter the item at front end in"); scanflugad", &item); last: divisent\_front (item, head) bleak; cares: peint (" enter the item at sear end \n"); Scary (" o/odj & item);

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last, dinsert rear (Hern, head);
loceak;
Cauz: last: ddelete - front (head);
bunk;
durch : bet: ddelete ear (head);
becax;
case 5: peint (" enter the key element \n");
      last: insert leftpos (Hem, head);
       beeak;
case 6: Paint ("Enter the key element \n");
       scarf ("0/od", Ritem);
       last: insect eightpos (item, head);
       beeak;
Case 7: paintf("Enter the search element: \n");
       scarly ("0/0d", & item);
       Search [ had, item);
       bleak;
case 8: permy ("godo Enterter element to be deleted In");
       scanf (" o/od", &item);
       last: delete-all-key (item, head);
       bleak;
case 9: display (head);
défault: exit(0);
                Chilly In 10:12 It has be that a dear all this.
             The party to only the title of from ord him.
                         Charle made I house full them, blad
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