```
12/01/2029
                  1 WOCK- 5 1
                                                                         if (starte= NULL)
 1) WAR to implement singly Linked list with
                                                                                new_node -> reut = NULL;
    following operations.
                                                                                start = new_node;
    a) Create a linked list
    b) Insertion of a node at first position, at any
                                                                          else
       position and at and of list.
                                                                               · ptrestart;
                                                                                   while (ptr-snot! = NULL)
    c) Display the contents of linked list.
                                                                                  olan ptreptresnet;
                                                                                  ptr-neutz newsmode;
          struct node
 3/61
                                                                              new node > next = NULL;
                 int data;
                                                                             printf ("In Ender the data: ");
                  struct node "next;
                                                                             scant (" god", Gnum);
           struct made + start: NULL;
                                                                           roturn start;
           Struct node Acreate-U (struct node *);
           struct rode * display (struct node *);
                                                                struct node *display (struct node +start)
           struct node * insert be g (struct node *);
                                                                           strut node & ptri.
            struct node * insert_end(struct node*);
                                                                            ptrostarti
            struct rade * insert_before ( pos (struct rade *);
                                                                             while (ptr:=NULL)
           struct node *create_U (struct node *start)
                                                                                 printer ("1+ %d", ptr >data);
                struct node * new node, *ptr;
                                                                                 ptroptr -> next;
                int num;
                printf (" (m Enter -1 to end");
                                                                              return start;
                printf ("In Gutier the data: ");
                scart ( + %d"; gnum);
                                                                    struct node *insert_beg(struct node *start)
                while (num; =-1).
                                                                            struct made & new made;
                    new_node c (struct node*) malloc
                                                                            int num;
                                                                            print (" in Enter the diata: ");
                                   (size of (struct node));
                                                                            scart ( " %d", &nam);
                    rew_node mande data = num;
                                                                            new_node a (struct node) mallo a (size of (struct))
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```
new node o stata coum;
                                                          scanf (" %d", gnum);
 new node - snad = start;
                                                          print ("In outer the value before which data
 start: vau node;
                                                                    has to be inserted: ");
 idum start:
                                                          scort (" ord", gval);
                                                           rew_node = (struct node +) mall oc(size of (struct node);
                                                           rew_node >datac num;
struct node *insert_end (struct node *start)
                                                           ptr cstart;
      struct node *new node, *ptr;
                                                            while (ptr > data! c val)
                                                                prepty cpty;
      printer ("in Enter the data: ");
      scant ( 1 % d , gnum);
                                                             c ptreptr-sueut;
      new_node = (struct node #) malloc (size of (struct note))
                                                             preptr > next = cew node;
      new_node sdatac nun;
                                                             istas tron & about wan
      new_node & next = NULL;
                                                             roburn start;
       etrestart;
       ef (startic NULL) .
                                                    28+ Doletion of first denent specified denent a last
             startz new node;
                                                          clement in the list of Display the contents.
        ععك
                                                                 strud note *display (strud note *);
                                                     TIPE
                                                                 struct node * delete beg (struct node *);
          while (ptr month, = Nou)
                    ptreptr-sneut;
                                                                 struct node * date end (struct node *);
           ptv-neutinewinide:
                                                                 struct node * dolete when pos (struct node *);
           roturn start;
                                                                 struct node *display (struct now *start)
                                                                      struct node *ptr;
   struct node * insert_before detruct node * start)
                                                                      ptrestart;
                                                                      while (ptr!=NULL)
          struct node * new_node, * ptr, * propti;
                                                                      ( printf (" It god", ptv >data);
          ; lov, mun, tri
                                                                            ptropti sned;
          prints (" n enter be data: ");
```

while (preptr -> data (=val) return start: 1 propty opty; struct node * delete-beg (struct node *start) 4 ptriptr snout, struct rate to ptr ; proper -> next = per > next, Arestart; free (ptv); start start-smed; return start; free (ptr); y return start; 1. create a linked list 2. display 3. insort-beginning struct node *delete_end (struct node *start) 4. insert_end 5. insert_vardon struct node optr, preptr; - enter the choice: 1 pti estait; enter -1 to end while (ptres rend 1 = NULL) enter the data: 1 propty eptr; enter the data: ptreptr-neut; enter the data: 3 enter the data: -1 proper's went NOLL; tinked list created free (ptr); enter the choice:3 y roturn start; enter data: 4 ender the choice: 2 struct rade * delate_after_por (struct node *start). enter date: 4 1 2 3 exter the choice: 14 stradi node sptir, * prepty; enter the data: 5 int val enter the unoice: 2 conti ("In Enter the value after which the note has to be deleted: "); 4 1235 ar authorida, Exal); enter the droice: 5 enter before which element new 6, 3 enter data: 6

enter choice: 2 4 1 2 6 3 5 1. execte a list 2. display 3.del-beg 4. del_end 5. delete_node enter choices! enter - to end enter dates 1 enter data, ¿ enter data: 1 enter data: - 1 linked list created enter choice: 2 1210 enter choice 13 ender choices 2 enter choice: 4 enter choice 12