

Singly Linked List

IBMC5045
IBM19C5045
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void insert()

```
{ int ch, pos, i=1;
  struct node *temp, *newnode;
  int item;
  newnode = (struct node *) malloc(sizeof(struct node));
  printf("Enter the data:");
  scanf("%d", &item);    newnode->data = item;
  printf("Insert at \n1. Front \n2. Back \n3. Desired Position\n Enter choice :");
  scanf("%d", &ch);
  switch (ch) {
    case 1 : newnode->next = head;
              head = newnode;
              printf("Node created \n");
              break;
    case 2 : temp = head;
              while (temp->next != NULL)
              { temp = temp->next; }
              temp->next = newnode;
              newnode->next = NULL;
              printf("Node created \n");
              break;
    case 3 : printf("Enter the position: ");
              scanf("%d", &pos);
              if (pos < 2)
              { newnode->next = head;
                head = newnode; }
              else
              { temp = head;
                while (i != pos-1 || temp->next != NULL)
                { temp = temp->next; }
                newnode->next = temp->next;
                temp->next = newnode; }
              printf("Node created \n"); } }
```

Derek

```

void delfun(int ele)
{
    struct node *temp, *del = NULL;
    if (head == NULL)
    {
        printf("Empty List. Can't delete\n"); return;
    }
    temp = head;
    if (head->data == ele)
    {
        head = head->next;
        return;
    }
    while (temp->next != NULL)
    {
        if (temp->next->data == ele)
        {
            del = temp->next;
            if (del = temp->next
            if (del->next == NULL)
            {
                temp->next = NULL;
            }
            else
            {
                temp->next = del->next;
            }
        }
        else
        {
            temp = temp->next;
        }
    }
    if (del == NULL)
    {
        printf("Element not found in the list\n"); return;
    }
}

```

```

void display()
{
    struct node *ptr = NULL;
    ptr = head;
    if (ptr == NULL)
    {
        printf("Nothing to print\n");
    }
    else
    {
        while (ptr != NULL)
        {
            printf("%d", ptr->data);
            ptr = ptr->next;
        }
    }
}

```