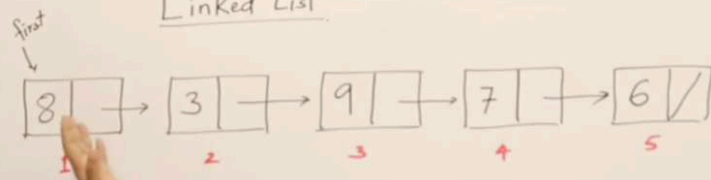
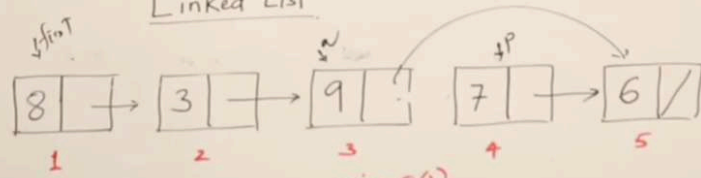


Linked List



1. Delete first Node
2. Delete a Node at given position

Linked List



Delete First

Node *p = first;

first = first->next;

x = p->data;

delete P;

Time - $O(1)$

min - $O(1)$
max - $O(n)$

Pos = 4

Node *p = first;

Node *q = NULL;

for (i = 0; i < pos - 1; i++)

{
q = p;

p = p->next;

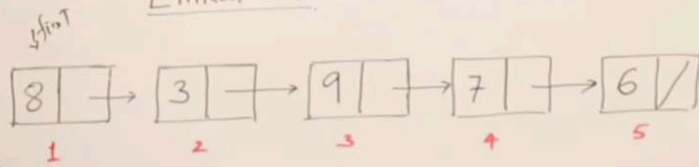
}

q->next = p->next;

x = p->data;

delete P;

Linked List



```
int Delete(int pos)
{
    Node *p, *q;
    int x = -1, i;
    if (pos == 1)
    {
        x = first->data;
        p = first;
        first = first->next;
        delete p;
    }
}
```

```
else
{
    p = first;
    q = NULL;
    for (i = 0; i < pos - 1; i++)
    {
        q = p;
        p = p->next;
    }
    if (p)
    {
        q->next = p->next;
        x = p->data;
        delete p;
    }
    return x;
}
```

Linked List

```
#include <stdio.h>
#include <stdlib.h>

struct Node
{
    int data;
    struct Node *next;
}*first=NULL;

void create(int A[],int n)
{
    int i;
    struct Node *t,*last;
    first=(struct Node *)malloc(sizeof(struct Node));
    first->data=A[0];
    first->next=NULL;
    last=first;

    for(i=1;i<n;i++)
    {
        t=(struct Node*)malloc(sizeof(struct Node));
        t->data=A[i];
        t->next=NULL;
        last->next=t;
        last=t;
    }
}

void Display(struct Node *p)
{
    while(p!=NULL)
    {
        printf("%d ",p->data);
        p=p->next;
    }
}
```

```

    }
}

void RDisplay(struct Node *p)
{
    if(p!=NULL)
    {
        RDisplay(p->next);
        printf("%d ",p->data);
    }
}

```

```

int Delete(struct Node *p,int index)
{
    struct Node *q=NULL;
    int x=-1,i;

    if(index < 1 || index > count(p))
        return -1;
    if(index==1)
    {
        q=first;
        x=first->data;
        first=first->next;
        free(q);
        return x;
    }
    else
    {
        for(i=0;i<index-1;i++)
        {
            q=p;
            p=p->next;
        }
        q->next=p->next;
        x=p->data;
        free(p);
        return x;
    }
}

```

```
}
```

```
}
```

```
int main()
```

```
{
```

```
    int A[]={10,20,30,40,50};
```

```
    create(A,5);
```

```
    printf("%d\n",Delete(first),2);
```

```
    Display(first);
```

```
    return 0;
```

```
}
```