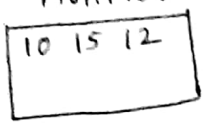
Write a program to create a doubly linkedlist in memory and to display its contents. Part-I Part-II

Part-I:

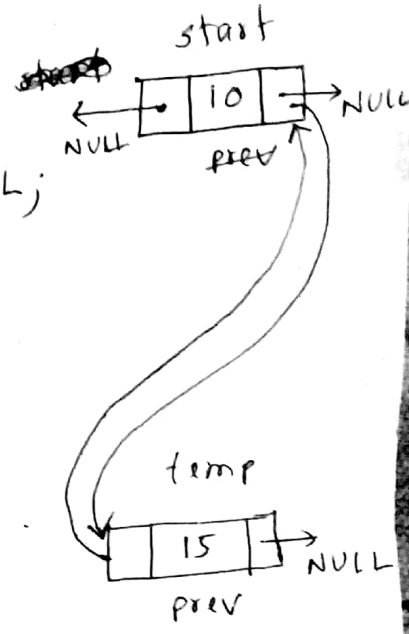
Part-II:



Ans:

```
#include<stdio.h>
#include<stdlib.h>
#include<ctype.h>
struct list{
    int data;
    struct list *next;
    struct list *back;
};
—
—
int main(){
node *start, *prev, *temp;
char ans;
start = NULL;
do{
    —
    —
    —
    if(ans=='Y'){
        if(start==NULL){
```

```
            —
            —
            —
            —
            —
start->back = NULL;
prev = start;
}
else{
    —
    —
    —
    —
    —
    temp->back = prev;
    prev = temp;
    }
}
printf("\n");
}while(ans=='Y');
display(start);
return 0;
}
```




```
void display(node *head){
    —
    —
    —
    —
    —
    —
return;
}
```

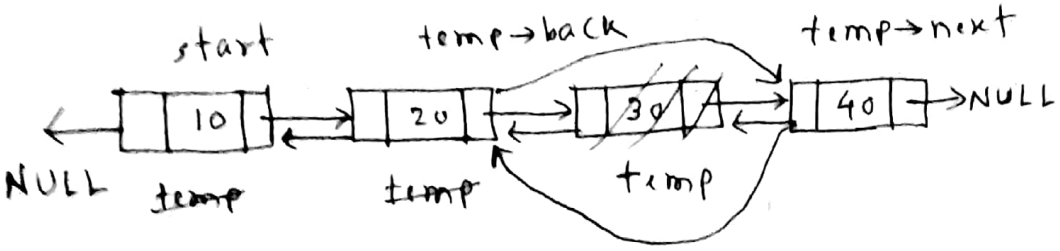
return 0;

printf

return;

Discussion on middle deletion in doubly linked list (5) (1)

Ans:

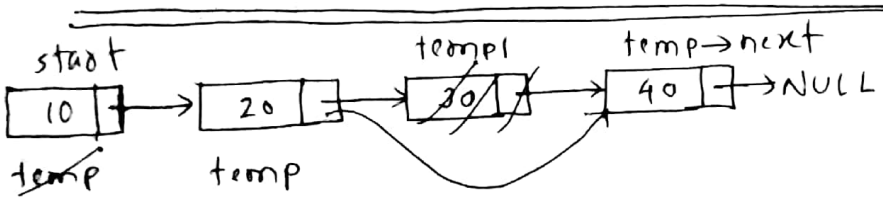


Middle deletion (item = 30)

```
temp = start;
while ((temp != NULL) && (temp->data != item))
   {  temp = temp->next;
   }
temp->next->back = temp->back;
temp->back->next = temp->next;
free(temp);
```

True && 10 != 30 = True
True && 20 != 30 = True
True && 30 != 30 = False

Middle deletion in linear linked list (item = 30)




```
temp = start;
while ((temp->next != NULL) && (temp->next->data != item))
  {  temp = temp->next;
  }
temp1 = temp->next;
temp->next = temp1->next;
free(temp1);
```

True && 20 != 30 = True
True && 30 != 30 = False