```c
//Example 30

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

typedef struct n
{
    int id;
    struct n *next;
    struct n *prev;
} node;


int main(int argc, char *argv[])
{
    int id;
    node *head, *tail;
    node *current;

    head = NULL;
    tail = NULL;

    printf("pleae enter an id number, < 0 to quit:");
    scanf("%d",&id);

    while(id >= 0)
    {
        current = malloc (sizeof(node));
        current->id = id;
        current->next = NULL;
        current->prev = NULL;
        if (head != NULL)
        {
            tail->next = current;
            current->prev = tail;
            tail = current;

        }
        else
        {
            head = current;
            tail = current;
        }
        fflush(stdin);
        printf("pleae enter an id number, < 0 to quit:");
        scanf("%d",&id);
    }

     current = head;
     while(current != NULL)
     {
            printf("%d\n",current->id);
            current = current->next;
     }
     printf("\n");
     current = tail;
```

```c
    while(current != NULL)
    {
            printf("%d\n",current->id);
            current = current->prev;
    }

    system("PAUSE");
    return 0;
}
```