DS LAB TEST 2

/*Given a Doubly linked list, rotate the n number of nodes of the list.
Sample Input:
n=3
1<->2<->3<->4<->5
Sample Output:4<->5<->1<->2<->3*/

```
#include<stdio.h>
#include<stdlib.h>
struct Node {
    int data;
    struct Node* next;
};
void rot(struct Node** head, int t)
{
    if (t == 0)
        return;
    struct Node* current = *head;
    int count = 1;
    while (count < t && current != NULL) {
        current = current->next;
        count++;
    }
    if (current == NULL)
        return;
    struct Node* nNode = current;
    while (current->next != NULL)
        current = current->next;
    current->next = *head;
    *head = nNode->next;
    nNode->next = NULL;
}
void push(struct Node** nhead, int ndata)
{
    struct Node* newnode = (struct Node*)malloc(sizeof(struct Node));
    newnode->data = ndata;
    newnode->next = (*nhead);
    (*nhead) = newnode;
}
```

```
void display(struct Node* node)
{
    while (node != NULL) {
        printf("%d ", node->data);
        node = node->next;
    }
}
int main(void)
{
    struct Node* nhead = NULL;
    int d,no;
    printf("\nNumber of entries you want: ");
    scanf("%d",&no);
    for (int i = no; i > 0; i -= 1){
      printf("Enter element %d in the list: ",i);
      scanf("%d",&d);
      push(&nhead, d);
    }
    printf("\n\t***Linked List***\n");
    display(nhead);
    rot(&nhead, 3);
    printf("\n\t***After Rotating***\n");
    display(nhead);
    return (0);
}
```

```
D:\coding files\DS lab>gcc -o DS_lab_test2 Ds_lab_test2.c

D:\coding files\DS lab>DS_lab_test2

Number of entries you want: 5
Enter element 5 in the list: 5
Enter element 4 in the list: 4
Enter element 3 in the list: 3
Enter element 2 in the list: 2
Enter element 1 in the list: 1

        ***Linked List***
1 2 3 4 5
        ***After Rotating***
4 5 1 2 3
D:\coding files\DS lab>
```