```
#include <stdio.h>
#include <stdlib.h>
struct ListNode {
int val;
struct ListNode* next;
};
struct ListNode* insertNode(struct ListNode* head, int p, int n) {
struct ListNode* newNode = (struct ListNode*)malloc(sizeof(struct ListNode));
newNode->val = n;
if (p == 0) {
newNode->next = head;
return newNode;
}
int i;
struct ListNode* current = head;
for ( i = 0; i < p - 1 && current != NULL; ++i) {
current = current->next;
}
if (current != NULL) {
newNode->next = current->next;
current->next = newNode;
}
return head;
}
void printLinkedList(struct ListNode* head) {
while (head != NULL) {
printf("%d", head->val);
if (head->next != NULL) {
printf("->");
}
head = head->next;
```

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}
printf("\n");
}
int main() {
struct ListNode* head1 = (struct ListNode*)malloc(sizeof(struct ListNode));
head1->val = 1;
head1->next = (struct ListNode*)malloc(sizeof(struct ListNode));
head1->next->val = 3;
head1->next->next = (struct ListNode*)malloc(sizeof(struct ListNode));
head1->next->next->val = 2;
head1->next->next->next = (struct ListNode*)malloc(sizeof(struct ListNode));
head1->next->next->next->val = 3;
head1->next->next->next->next = (struct ListNode*)malloc(sizeof(struct ListNode));
head1->next->next->next->next->val = 4;
head1->next->next->next->next->next = (struct ListNode*)malloc(sizeof(struct ListNode));
head1->next->next->next->next->next->val = 5;
head1->next->next->next->next->next->next = NULL;
int p1 = 3, n1 = 2;
head1 = insertNode(head1, p1, n1);
printf("Output 1: ");
printLinkedList(head1);
struct ListNode* current1 = head1;
struct ListNode* next1;
while (current1 != NULL) {
next1 = current1->next;
free(current1);
current1 = next1;
}
struct ListNode* head2 = (struct ListNode*)malloc(sizeof(struct ListNode));
head2->val = 1;
head2->next = NULL;
```

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int p2 = 0, n2 = 0;
head2 = insertNode(head2, p2, n2);
printf("Output 2: ");
printLinkedList(head2);
free(head2);
struct ListNode* head3 = (struct ListNode*)malloc(sizeof(struct ListNode));
head3->val = 1;
head3->next = (struct ListNode*)malloc(sizeof(struct ListNode));
head3->next->val = 2;
head3->next->next = NULL;
int p3 = 3, n3 = 3;
head3 = insertNode(head3, p3, n3);
printf("Output 3: ");
printLinkedList(head3);
struct ListNode* current3 = head3;
struct ListNode* next3;
while (current3 != NULL) {
next3 = current3->next;
free(current3);
current3 = next3;
}
return 0;
}
```

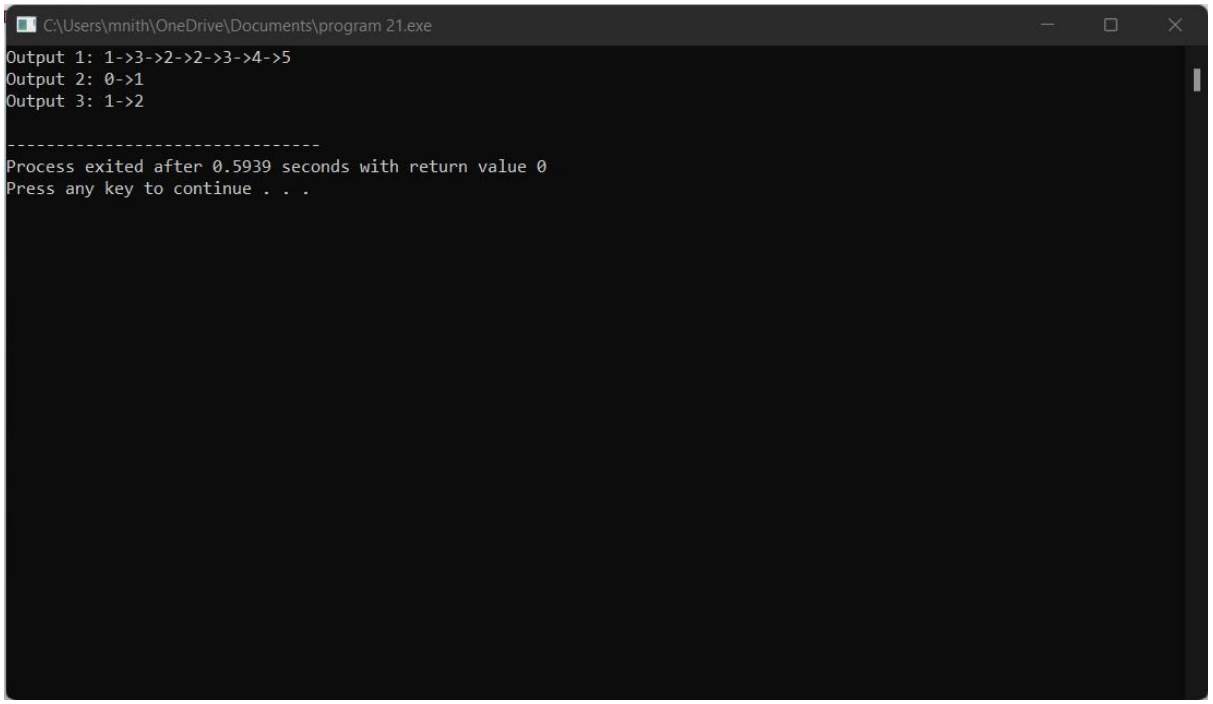
C:\Users\mnith\OneDrive\Documents\program 21.exe
Output 1: 1->3->2->2->3->4->5
Output 2: 0->1
Output 3: 1->2

Process exited after 0.5939 seconds with return value 0
Press any key to continue . . .