

```
1 package p1;
2
3 public class LinkedList {
4
5     Node head;
6
7     class Node{
8         int data;
9         Node next;
10
11
12         Node(int data){
13
14             this.data = data;
15             next = null;
16         }
17     }
18
19     void printMiddleElement() {
20
21         Node fst_ptr = head;
22         Node slw_ptr = head;
23
24         while(fst_ptr!=null && fst_ptr.next!= null) {
25
26             fst_ptr = fst_ptr.next.next; // 2 steps
27             slw_ptr = slw_ptr.next;
28         }
29
30         System.out.println("Middle Element value is:"+ slw_ptr.data);
31     }
32
33     void insertAtHead(int data) { //for inserting the elements at the head of the linked
list
34         Node new_node = new Node(data); // creating a node and assigning the value to the
node
35
36         new_node.next = head; // assign next point to the previous linked list
37         head = new_node; // head next should point to the new_node
38         // head will now point to the new_node
39
40     }
41
42     void printElements() { //for print the elements of the linked list
43         Node tptr = head;
44
45         while(tptr!= null) {
46             System.out.print(tptr.data + " -> ");
47             tptr = tptr.next;
48         }
49
50         System.out.println("NULL"); // for new line only
51     }
52
53
54     public static void main(String[] args) {
55
```

```
56     LinkedList llist = new LinkedList();
57
58     for(int i = 5; i>0 ; --i) {
59
60         llist.insertAtHead(i);
61         llist.printElements();
62         llist.printMiddleElement();
63     }
64
65 }
66
67 }
68
```