// Linked list program

**class** Linkedlist

{

Node head; // head

/\* Linked list node \*/

**private** **static** **class** Node {

**private** **int** data;

**private** Node next;

Node(**int** value) {

**this**.data = value;

next = **null**;

}

}

/\* Function to print middle of linked list \*/

**void** printMiddle()

{

Node slow\_ptr = head;

Node fast\_ptr = head;

**if** (head != **null**)

{

**while** (fast\_ptr != **null** && fast\_ptr.next != **null**)

{

fast\_ptr = fast\_ptr.next.next;

slow\_ptr = slow\_ptr.next;

}

System.***out***.println("The middle element is " + slow\_ptr.data + " \n");

}

}

/\* Inserts a new Node at end of the list. \*/

**public** **void** push(Node node) {

**if** (head == **null**) {

head = node;

} **else** {

Node temp = head;

**while** (temp.next != **null**)

temp = temp.next;

temp.next = node;

}

}

/\* This function prints contents of linked list\*/

**public** **void** printList()

{

Node tnode = head;

**while** (tnode != **null**)

{

System.***out***.print(tnode.data+" ");

tnode = tnode.next;

}

System.***out***.println();

}

**public** **static** **void** main(String[] args)

{

Linkedlist llist = **new** Linkedlist();

**int**[] arr = {5,1,7,2,9,3};

**for** (**int** i=0; i<arr.length; i++)

{

llist.push(**new** Node(arr[i]));

}

System.***out***.print("The Linked List is : ");

llist.printList();

llist.printMiddle();

}

}