**/\*ARRAY IMPLEMENTATION OF STACKS\*/**

import java.util.\*;

public class stack\_linked {

private Node head;

public stack\_linked() {

head = null;

}

public void pop() {

if (head == null) {

System.out.println("No element is available in stack to pop \n");

} else {

int value = head.data;

head = head.next;

System.out.println("\nTop value removed from stack is: " + value);

}

}

public void push(int value) {

Node oldHead = head;

head = new Node();

head.data = value;

head.next = oldHead;

}

public static void main(String args[]) {

stack\_linked sls = new stack\_linked();

Scanner myobj = new Scanner(System.in);

while (true) {

System.out.println("IMPLEMENTATION OF STACK ADT USING LINKED LIST");

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

System.out.println("\n1....Push \n2....Pop \n3....Display list \n4....Exit");

System.out.println("\nEnter your choice:");

int choice = Integer.parseInt(myobj.nextLine());

switch (choice) { // Correct switch statement

case 1:

System.out.println("\nEnter the value to push:");

int value = Integer.parseInt(myobj.nextLine());

sls.push(value);

break;

case 2:

sls.pop();

break;

case 3:

DisplayList(sls.head);

break;

case 4:

System.exit(0);

break;

default:

System.out.println("Invalid choice, please try again.");

}

}

}

public static void DisplayList(Node head) {

Node temp = head;

while (temp != null) {

System.out.format("\n%d", temp.data);

temp = temp.next;

}

System.out.println();

}

private class Node {

int data;

Node next;

}

}

**OUTPUT:**

IMPLEMENTATION OF STACK USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Push

2....Pop

3.....Display list

4....Exit

Enter your choice:

1

Enter the value to push:

45

IMPLEMENTATION OF STACK USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Push

2....Pop

3.....Display list

4....Exit

Enter your choice:

1

Enter the value to push:

65

IMPLEMENTATION OF STACK USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Push

2....Pop

3.....Display list

4....Exit

Enter your choice:

1

Enter the value to push:

78

IMPLEMENTATION OF STACK USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Push

2....Pop

3.....Display list

4....Exit

Enter your choice:

1

Enter the value to push:

89

IMPLEMENTATION OF STACK USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Push

2....Pop

3.....Display list

4....Exit

Enter your choice:

1

Enter the value to push:

23

IMPLEMENTATION OF STACK USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Push

2....Pop

3.....Display list

4....Exit

Enter your choice:

1

Enter the value to push:

34

IMPLEMENTATION OF STACK USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Push

2....Pop

3.....Display list

4....Exit

Enter your choice:

3

34

23

89

78

65

45

IMPLEMENTATION OF STACK USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Push

2....Pop

3.....Display list

4....Exit

Enter your choice:

2

top value removed from stack is:34

IMPLEMENTATION OF STACK USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Push

2....Pop

3.....Display list

4....Exit

Enter your choice:

2

top value removed from stack is:23

IMPLEMENTATION OF STACK USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Push

2....Pop

3.....Display list

4....Exit

Enter your choice:

3

89

78

65

45

IMPLEMENTATION OF STACK USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Push

2....Pop

3.....Display list

4....Exit

Enter your choice:

4