/\*

GOPIKRISHNA V

52

S3 CSE A

DOUBLY LINKED LIST

\*/

import java.util.\*;

class DoublyLinkedList

{

class Node

{

int data;

Node prev;

Node next;

public Node(int data)

{

this.data = data;

}

}

Node head,tail = null;

public void insert(int data)

{

Node temp = new Node(data);

if(head == null)

{

head = tail = temp;

head.prev = null;

tail.next = null;

}

else

{

tail.next = temp;

temp.prev = tail;

tail = temp;

tail.next = null;

}

System.out.print(data+" >> INSERTED\n");

}

public void delete()

{

if(head == null)

{

System.out.print("List is empty");

}

else

{

int data = head.data;

head = head.next;

head.prev = null;

System.out.print(data+" >> DELETED\n");

}

}

public void printlist()

{

Node current = head;

if(head == null)

{

System.out.println("List is empty");

return;

}

else

{

System.out.print("List = [");

while(current != null)

{

System.out.print(current.data + ",");

current = current.next;

}

System.out.println("\b]");

}

}

}

public class pgm11

{

public static void main(String[] args)

{

DoublyLinkedList dll = new DoublyLinkedList();

int ch = 0;

while(ch != 4)

{

System.out.print("\n### MENU ###\n");

System.out.print("1.Insert at End\n");

System.out.print("2.Delete from Front\n");

System.out.print("3.Display Linked List\n");

System.out.print("4.Exit\n");

System.out.print("Enter your choice = ");

Scanner s = new Scanner(System.in);

ch = s.nextInt();

switch(ch)

{

case 1:

{

System.out.print("Enter the element = ");

int data = s.nextInt();

dll.insert(data);

break;

}

case 2:

{

dll.delete();

break;

}

case 3:

{

dll.printlist();

break;

}

case 4:

{

break;

}

default:System.out.println("Invalid choice");

}

}

}

}

**OUTPUT**

 