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Saathi

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Std: ECS-02 (B)

Roll no.: 33

Subject: - DSA Assessment

```
→ a) class DoublyLinkedList {
    class Node {
        int data;
        Node prev, next;

        Node (int d) {
            data = d;
            prev = null;
            next = null;
        }
    }

    Node head = null;
    Node tail = null;

    public void addFirst (int data) {
        Node newNode = new Node (data);
        if (head == null) {
            head = tail = newNode;
        } else {
            newNode.next = head;
            head.prev = newNode;
            head = newNode;
        }
    }
}
```

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```
public void addlast (int data){  
    Node newNode = newNode(data);  
    if (tail == null) {  
        head = tail = newNode;  
    } else {  
        tail.next = newNode;  
        newNode.prev = tail;  
        tail = newNode;  
    }  
    System.out.println (data + " added to last");  
}  
  
public void deletefirst(){  
    if (head == null) {  
        System.out.println ("Empty list");  
    } else {  
        System.out.println (head.data + " deleted  
from first");  
        tail = tail.next;  
        if (tail == null) tail.next = null;  
        else head = null;  
    }  
}  
  
public void display () {  
    Node temp = head;  
    System.out.println ("List :");  
    while (temp != null) {  
        System.out.print (temp.data + " ");  
        temp = temp.next;  
    }  
    System.out.println();  
}
```

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```
public static void main (String args []){
    DoublyLinkedList dl = new
        DoublyLinkedList();
    dl.addFirst(0);
    dl.addLast(2);
    dl.addFirst(5);
    dl.display();
    dl.deleteFirst();
    dl.display();
    dl.deleteLast();
    dl.display();
}
```

b) class circularLinkedList {  
 class Node {  
 int data;  
 Node next;  
 Node (int d) {data = d;}  
 void addFirst (int d) {  
 if (head == null)  
 head = tail = n;  
 else {n.next = head;  
 head = n; tail.next = head;}  
 if (tail != null) tail.next = head;  
 }  
 }