

Output:

- 1) Display available seats to book Movie ticket
- 2) Display status of Booked seat / cancel seats

Theory:

circular Doubly linked list (COLL)

→ A circular Doubly linked list is a data structure that consists of nodes where each node consists three part

- 1) A pointer to the previous node
- 2) A data field to store the value
- 3) A pointer to the next node

In a COLL the last node point back to the first node (making it circular). and the first node points back to last node.

This structure allows traversal in both direction

Operations:

- 1) Insertion: At the beginning . end or at a specific position
- 2) Deletion: By value or by position

2) Insert

```

Function Insert AT Begenning (list·data)
    CREATE new Node
    SET new Node · data = data
    If list · head IS Null Then
        SET new Node · next = new Node
        SET new Node · prev = new Node
        SET list · head = new Node
    else
        SET newNode = list · head · prev
        SET New Node = list · head
        SET list · head · prev · next = newNode
        SET list · head · prev = newNode
    END If
    end function

```

3) Search for a value

```

Function search (list value)
If list · head IS Null Then
    Return false // list is empty
END If
SET current = list · head
Repeat
    If current · data = value Then
        Return True // value found.
    END If

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```
SET current = current.next
until current = list.head
Return fail || value not found
END function
```

Display list

```
function Display (list)
if list.head is null Then
point+ "list is empty"
RETURN
```

```
end if
```

```
SET current = list.head
```

Repeat

```
print current.data
```

```
SET current = current.next
```

```
until current = list.head
```

```
end function
```

* Algorithm

- Step 1) Create a structure for a node that contains (data, next, prev)
- Step 2) Create a structure for the Doubly Circular linked list that include (head, tail)
- Step 3) Create a function to initialize the list
- Step 4) Inserting at the end and Beginning
- Step 5) Deleting from the end and the Beginning

step 6) create a function to traverse the list
step 7) end

* launchant
create node
start

Initialize pointers
(head = null if empty)

list empty

set head
prev . next to
point to
itself

update
pointer

end.

* conclusion

~~By this way, we can book or cancel movie ticket using doubly circular linked list.~~

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9949
A date

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