ArrayList-1
InitList
0
pSeqList

ListDestroy
pSeqList

1
2
3

~~1~~
~~2~~
~~3~~

pSeqList
NULL

ListEmpty
pSeqList

1
2
3

FALSE

ClearList
pSeqList

1	1
2	2
3	3

length = 3 -> 0

ListLength
pSeqList

1	1
2	2
3	3

length = 3

GetElem
i = 1 e = 9
pSeqList

1
2
3

1
9
2
3

LocateElem
e = 2

pSeqList

1
2
3

1	pSeqList
2	
3	

1	
2	pSeqList
3	

ListInsert
i = 1 e = 9

pSeqList

1
2
3

1
9
2
3

ListDelete

pSeqList

1
2
3

e = 1

pSeqList

2
3

ListTraverse

pSeqList

1
2
3

length = 3

Output:
pSeqList->data[1]: 1
pSeqList->data[2]: 2
pSeqList->data[3]: 3

ArrayList-2

InitList_Sq

L

DestroyList_Sq

L

1
2
3

L

ClearList_Sq

1
2
3

L->length = 3 -> 0

ListEmpty_Sq

L

L->length = 0

TRUE

ListLength_Sq

L

1
2
3

L->length = 3

GetElem_Sq

pos = 1

1
2
3

1
2
3

e = 1

---

compare

1
2
3

e = 1

TRUE

LocateElem_Sq

1
2
3

1
2
3

i = 1

PriorElem_Sq
i = 1

ERROR because there is no prior to index 1

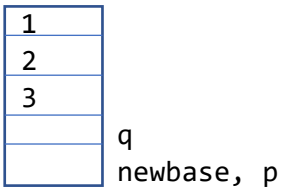
NextElem_Sq
i = 1

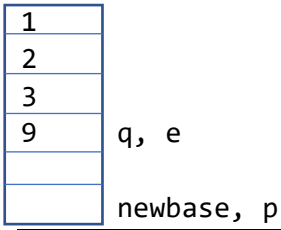
call GetElem_Sq
returns pos = 1 and e = 1

ListInsert_Sq
L

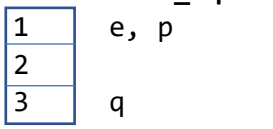
1
2
3

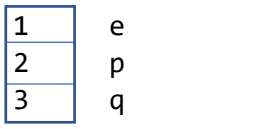
e = 9

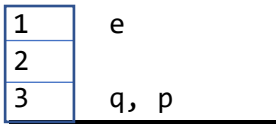




ListDelete_Sq







visit
e = 1

ListTraverse_Sq

1
2
3

Output:
123

---

union_Sq
La

1	1
2	2
3	3

Lb

4	1
5	2
6	3

La_len = 3
Lb_len = 3

1
2
3
4

1
2
3
4
5

1
2
3
4
5
6

MergeList

Lc

La

1	1
2	2
3	3

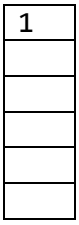
Lb

4	1
5	2
6	3

La_len = 3
Lb_len = 3
Lc_len = 3 + 3 = 6

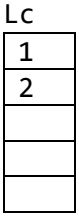
La		Lb	
1	ai	4	bj
2		5	
3		6	

Lc



La		Lb	
1		4	bj
2	ai	5	
3		6	

Lc



La

1
2
3

ai

Lb

4
5
6

bj

Lc

1
2
3

Lb

4
5
6

bj

Lc

1
2
3
4

Lb

4
5
6

bj

Lc

1
2
3
4
5

Lb

4
5
6

bj

Lc

1
2
3
4
5
6

MergeList_Sq

Lc

La

1	1
2	2
3	3

Lb

4	1
5	2
6	3

La_len = 3
Lb_len = 3
Lc_len = 3 + 3 = 6

La

1	pa
2	
3	

Lb

4	pb
5	
6	

Lc

1

La

1
2
3

pa

Lb

4
5
6

pb

Lc

1
2

La

1
2
3

pa

Lb

4
5
6

pb

Lc

1
2
3

Lb

4
5
6

pb

Lc

1
2
3
4

Lb

4
5
6

pb

Lc

1
2

3
4
5

Lb

4
5
6

pb

Lc

1
2
3
4
5
6

---

changeElem

pos = 2 newElem = 9

L

1
2
3

L

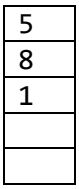
1
9
2
3

CreateList

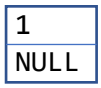
LISTINCREMENT = 5

5

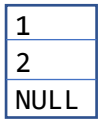
5
8



ArrayList-3
create_SL
num = user input



data, num
cur

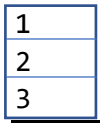


data, num
curr

data, num
curr

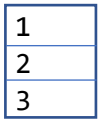
until /n or ran out of space (10)

LocateElem_SL
e = 1

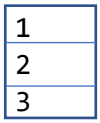
s


i

Delete_SL_Key
key = 2



i, prev



i, prev

---

printLL
i = 0

Output:
Head->1->
s
Head->1->2->
s
Head->1->2->3->NULL
s