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ADS

REVANTH.R

IBM18CS082

Memory efficient doubly  
linked list

Insert-front ( head, data)

node new = new node()

new → data = data

new → ptrdiff = head

if ( head != NULL )

head → ptrdiff = head → ptrdiff  
XOR new

head = new

return head ;

Insert-rear ( head, data)

node new = new node()

new → data = data

if ( head == NULL )

new → ptrdiff = NULL

return new

temp = head

prev = NULL

while ( temp != NULL )

next = prev XOR temp → ptadiff

prev = temp

temp = next

prev → ptadiff = prev → ptadiff XOR new

new → ptadiff = prev

return head