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ADS

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1BM18CS065

I 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

temp = head, prev = NULL

while (temp != NULL)

next = prev XOR temp → ptrdiff

prev = temp

temp = next

prev → ptrdiff = prev → ptrdiff XOR new

new → ptrdiff = prev

return head

if (head == NULL)

new → ptrdiff = NULL

return new

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