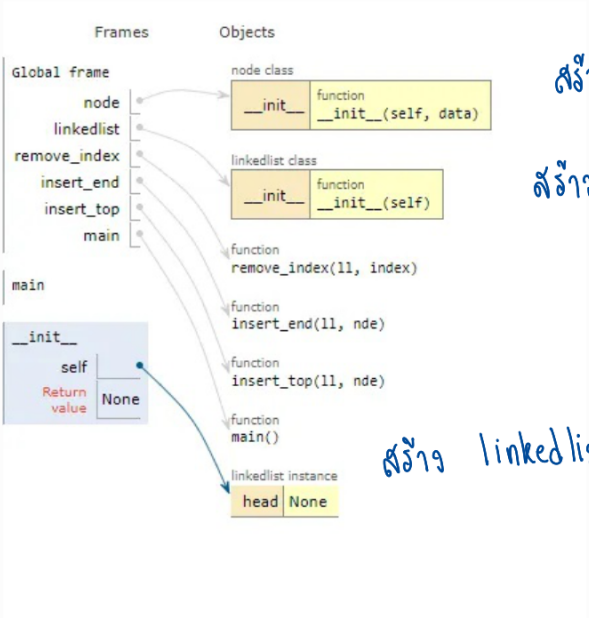
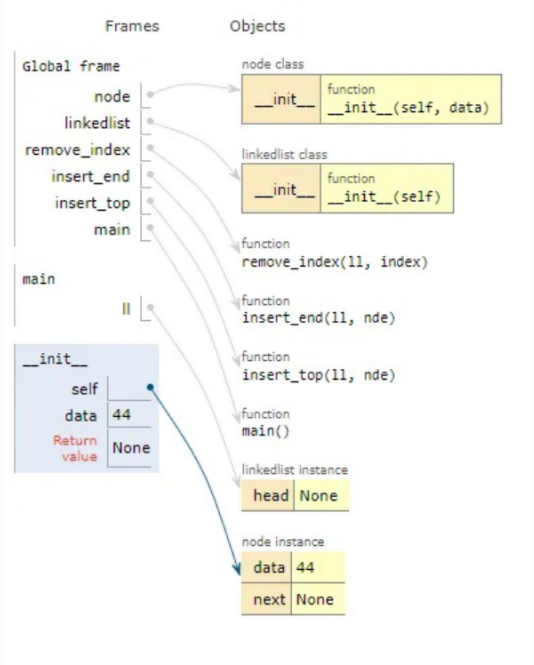


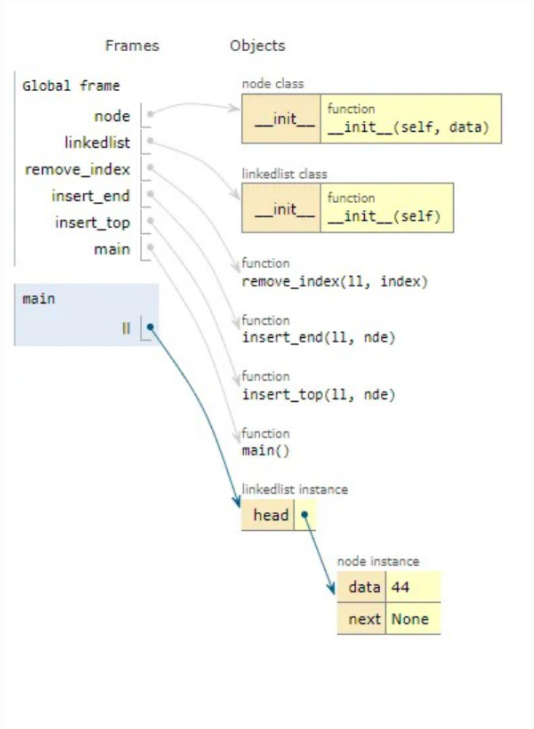
สร้าง class node

สร้าง class linkedlist

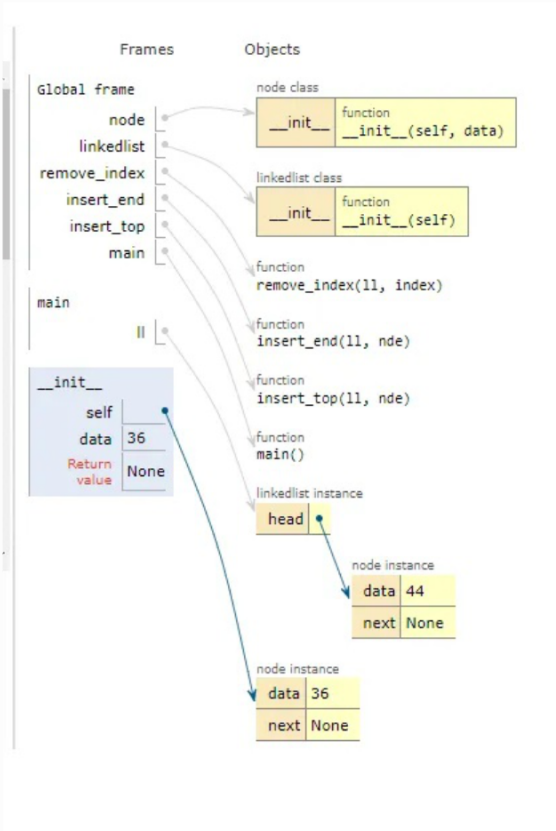
สร้าง linkedlist



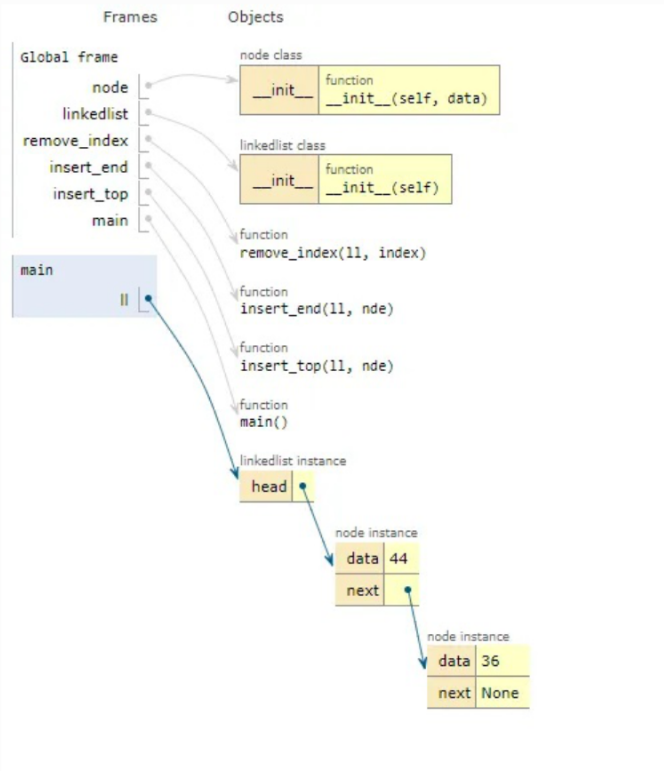
สร้าง node มี data = 44



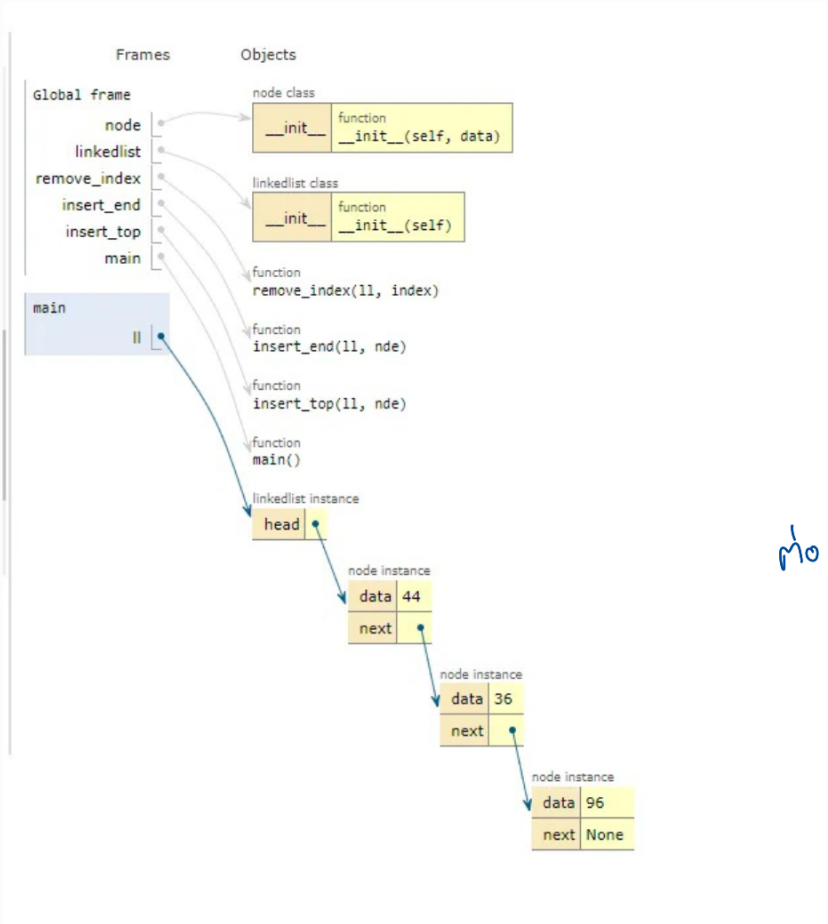
ให้ head ชี้ไปที่ node ที่สร้างขึ้น



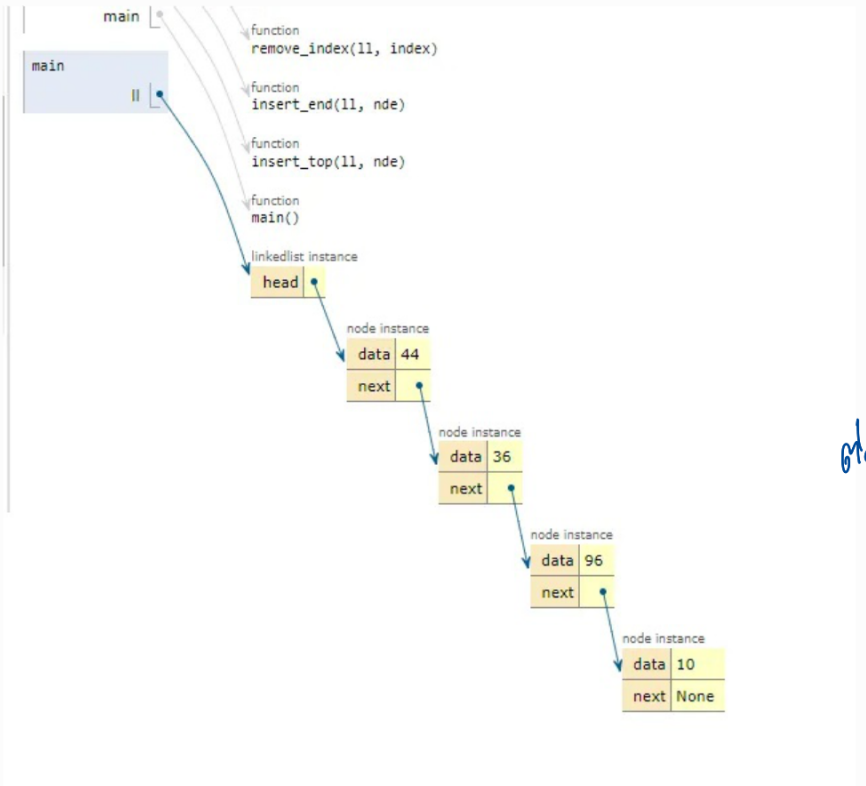
สร้าง node ที่มี data = 36



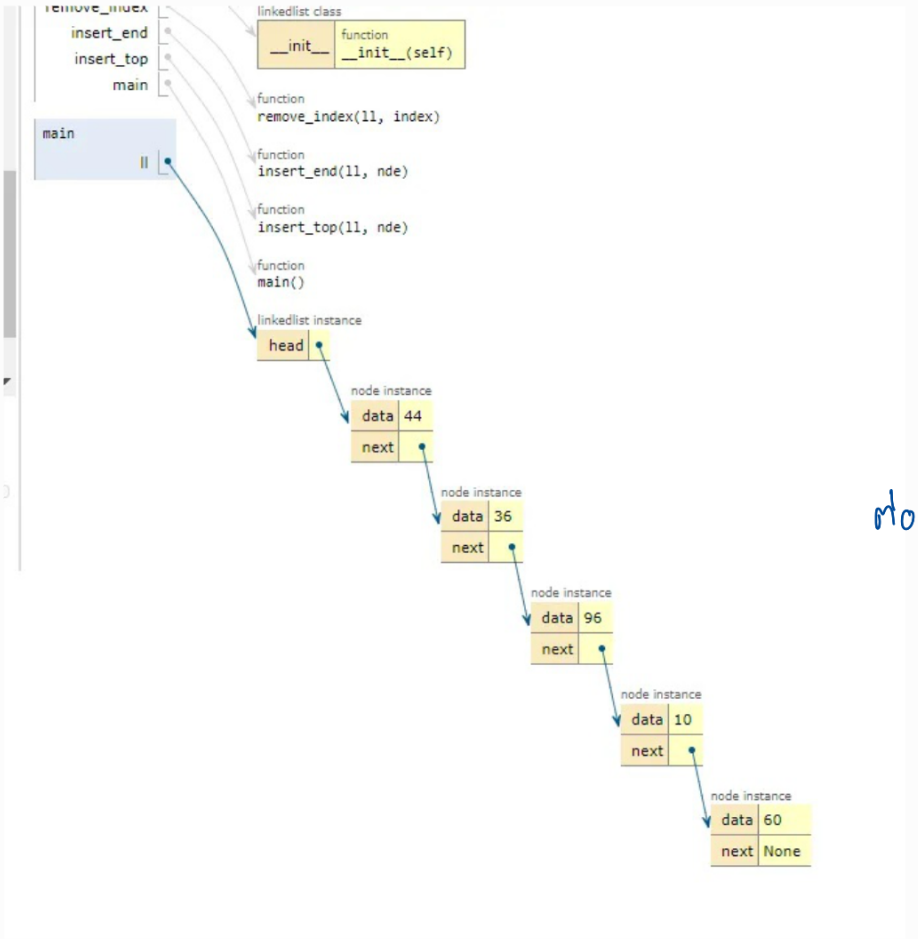
เชื่อมให้ next ของ node สุดท้าย
ชี้ไปที่ node ใหม่



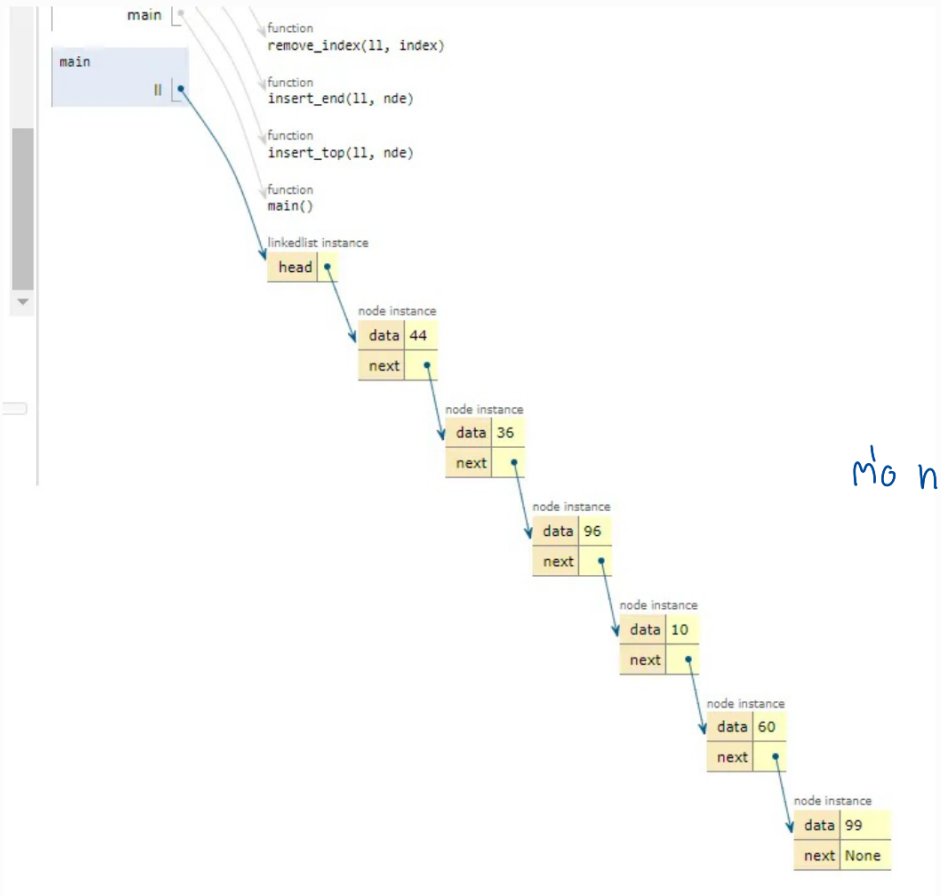
πιο node 96



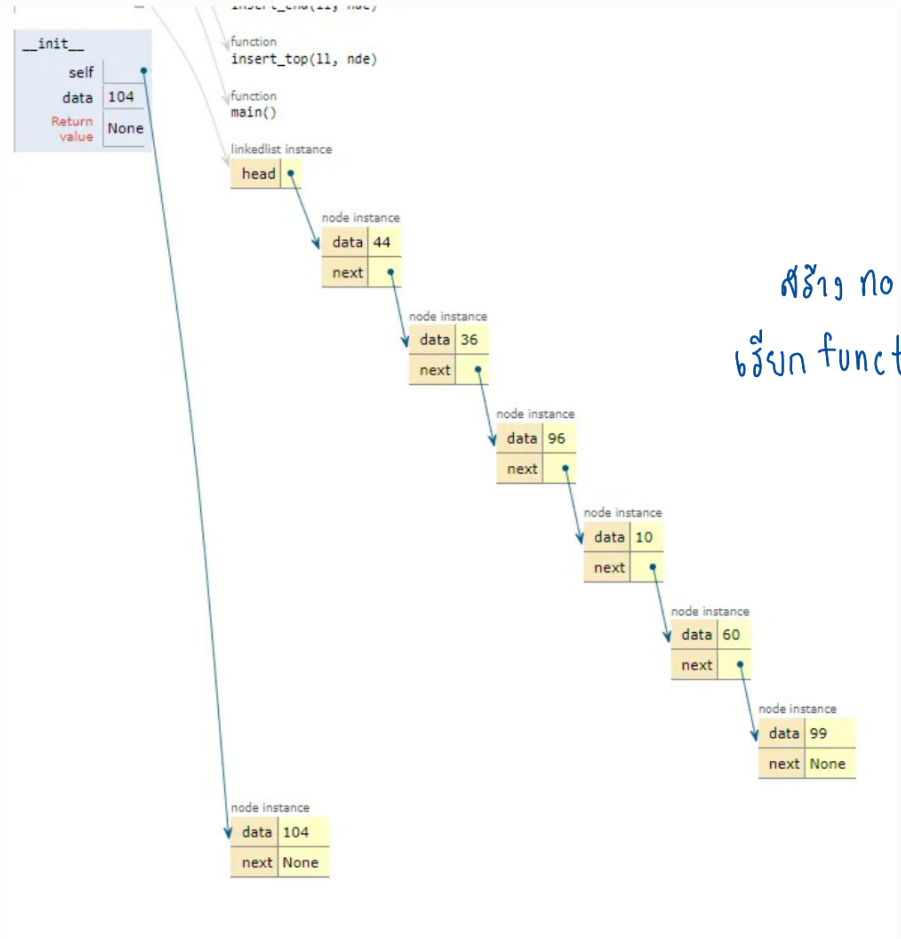
πιο node 10



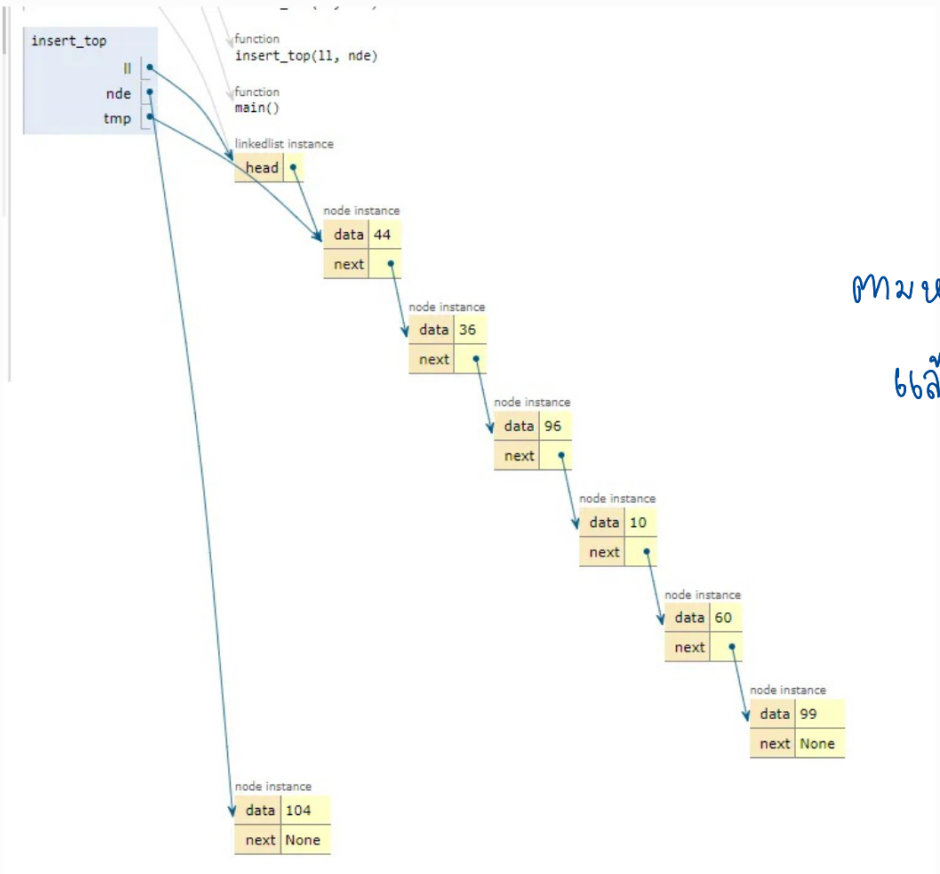
ملو node 60



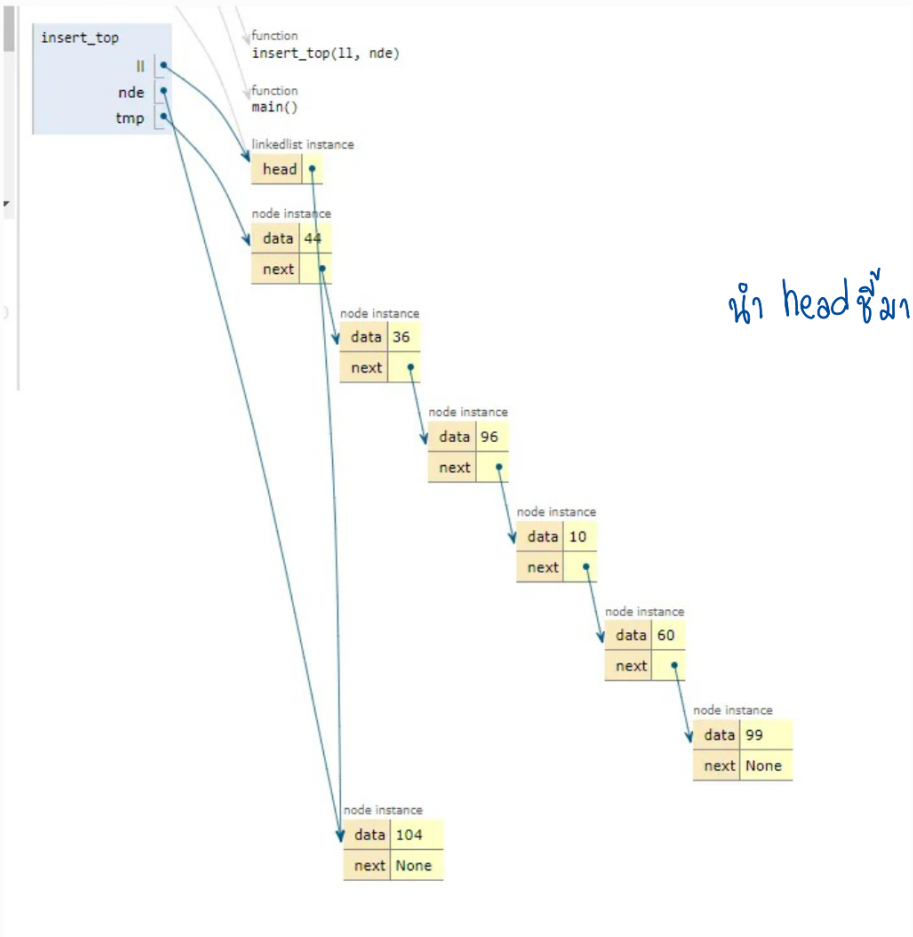
ملو node 99



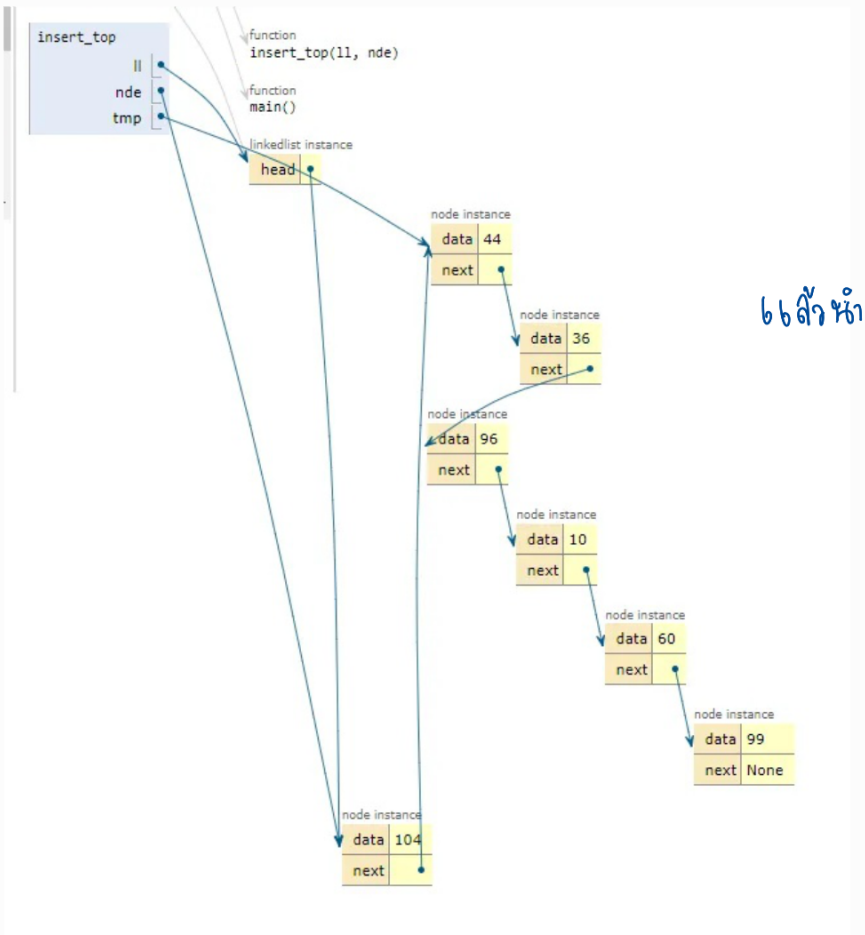
สร้าง node 104 แล้ว
เรียก function insert_top



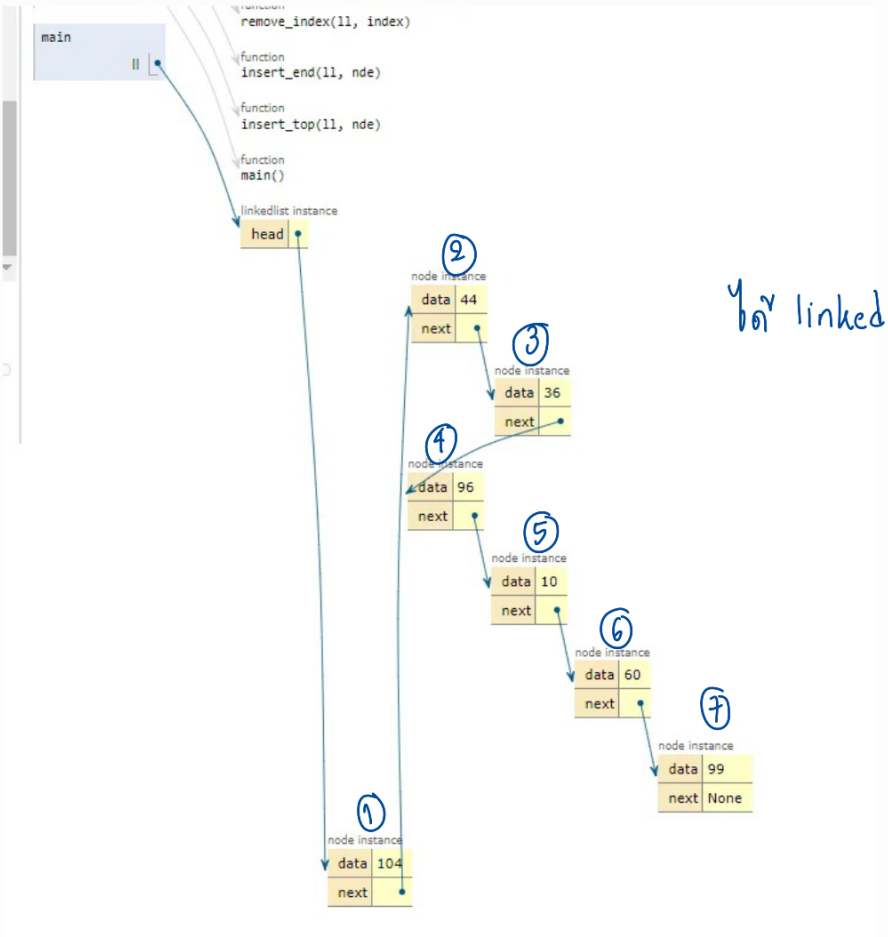
ตามหา head
แล้ว mark จุด



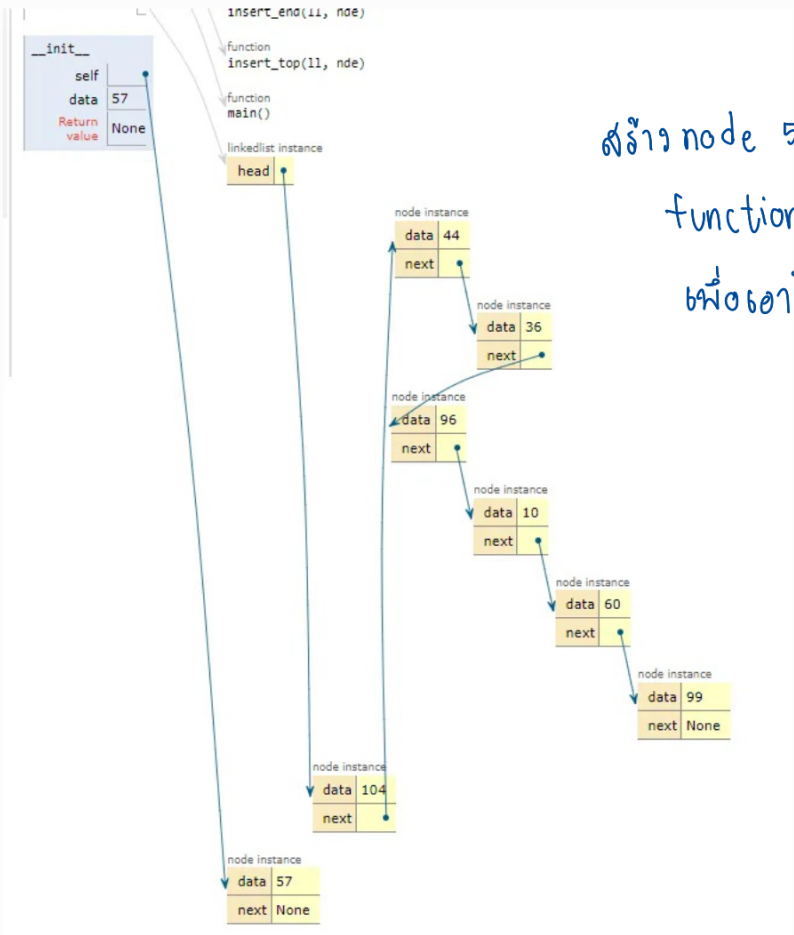
นำ head ชี้มา ที่ node 104



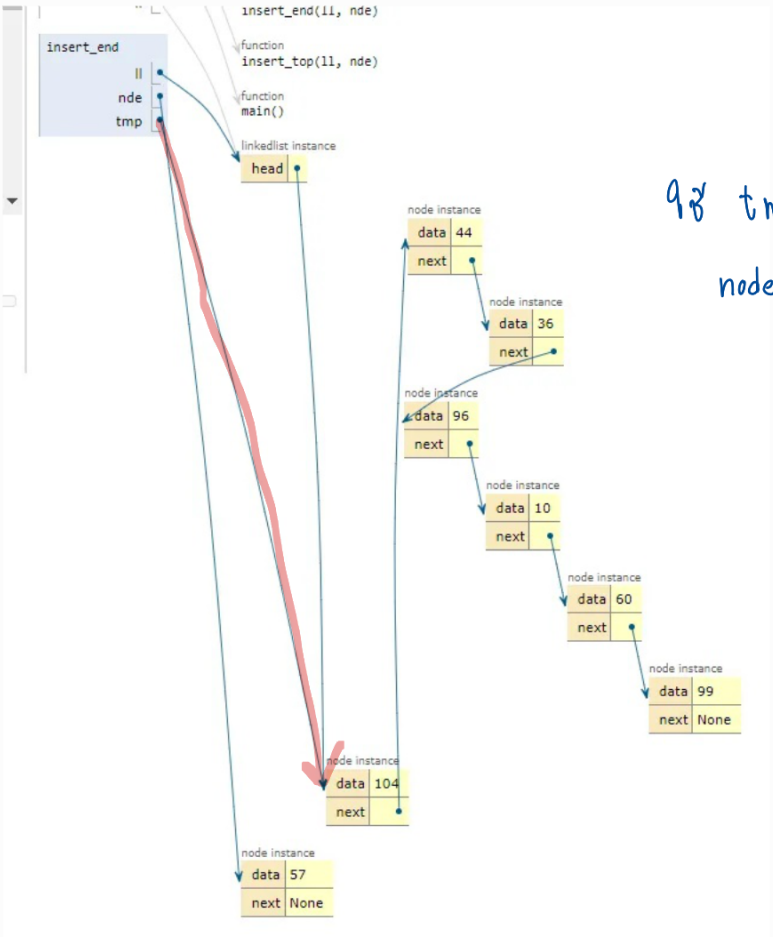
แล้วนำ 104 ชี้ไปที่ 44



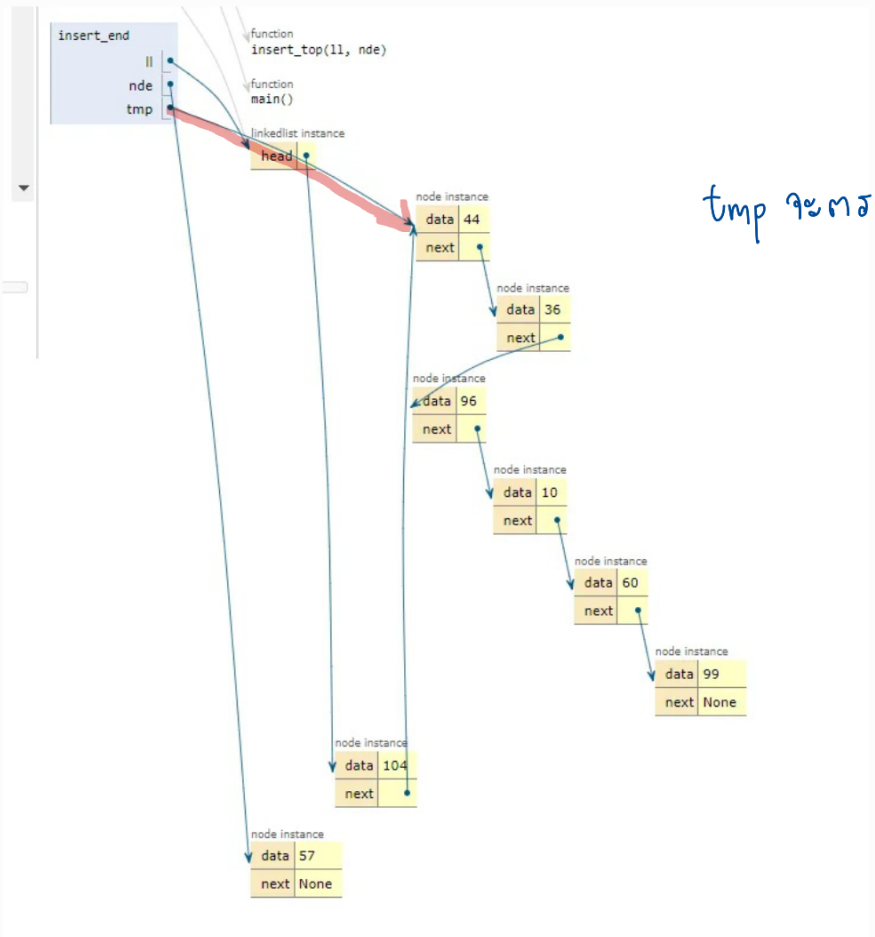
ได้ linkedlist ใหม่ ที่มี 104 ขึ้นก่อน



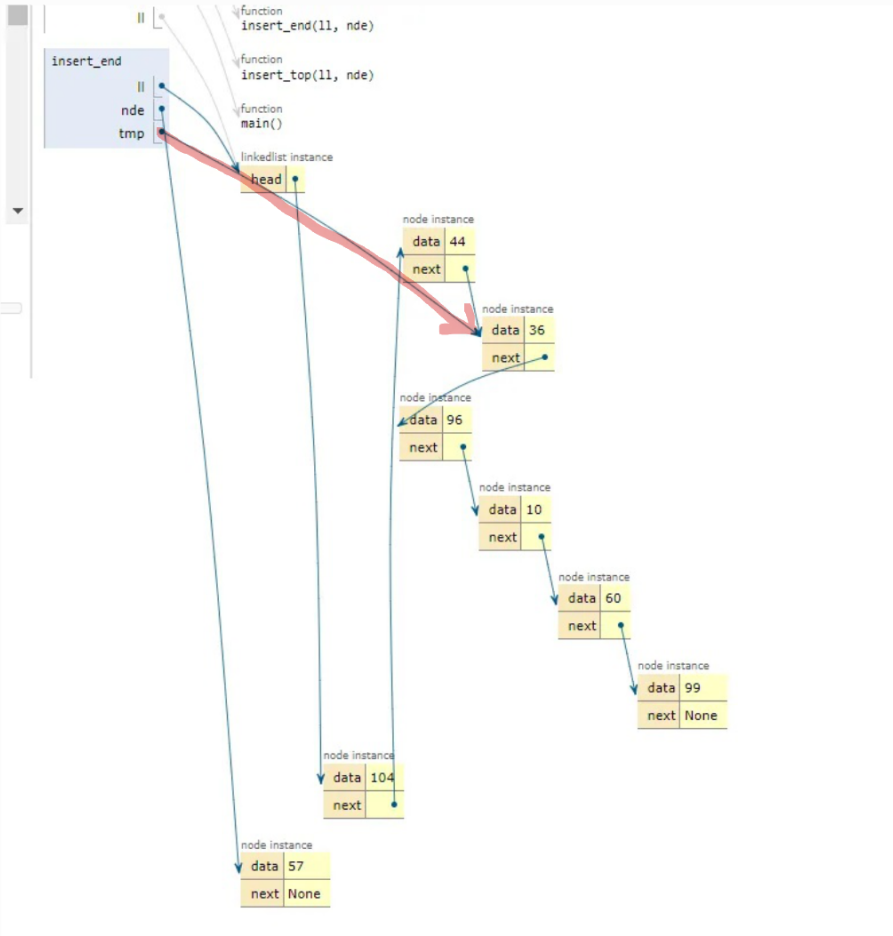
สร้าง node 57 แล้วเรียก function insert_end เพื่อเอาไปต่อท้าย

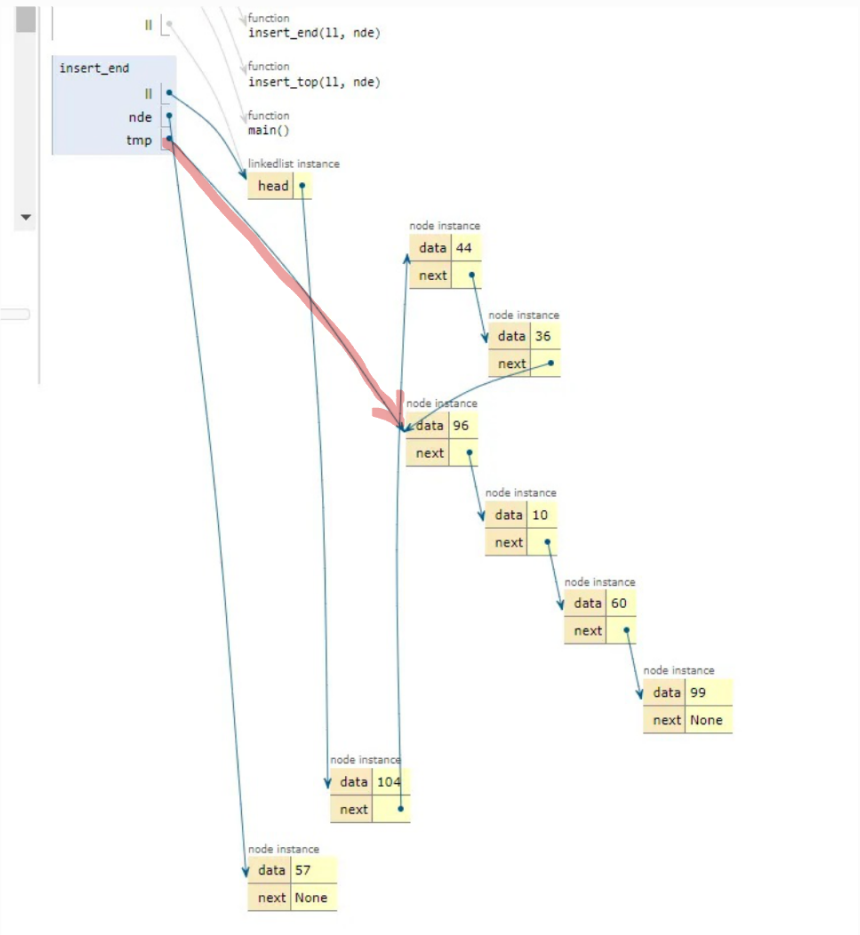


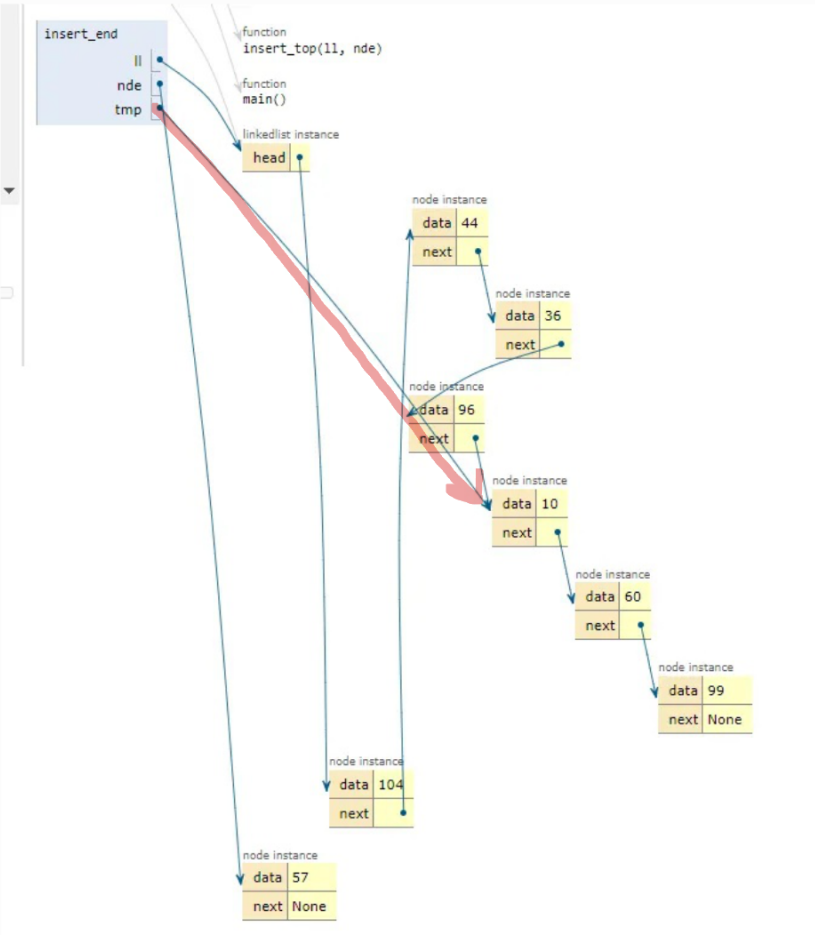
ใช้ tmp วน loop ตรวจสอบว่า node ไหน เป็นตัวสุดท้าย

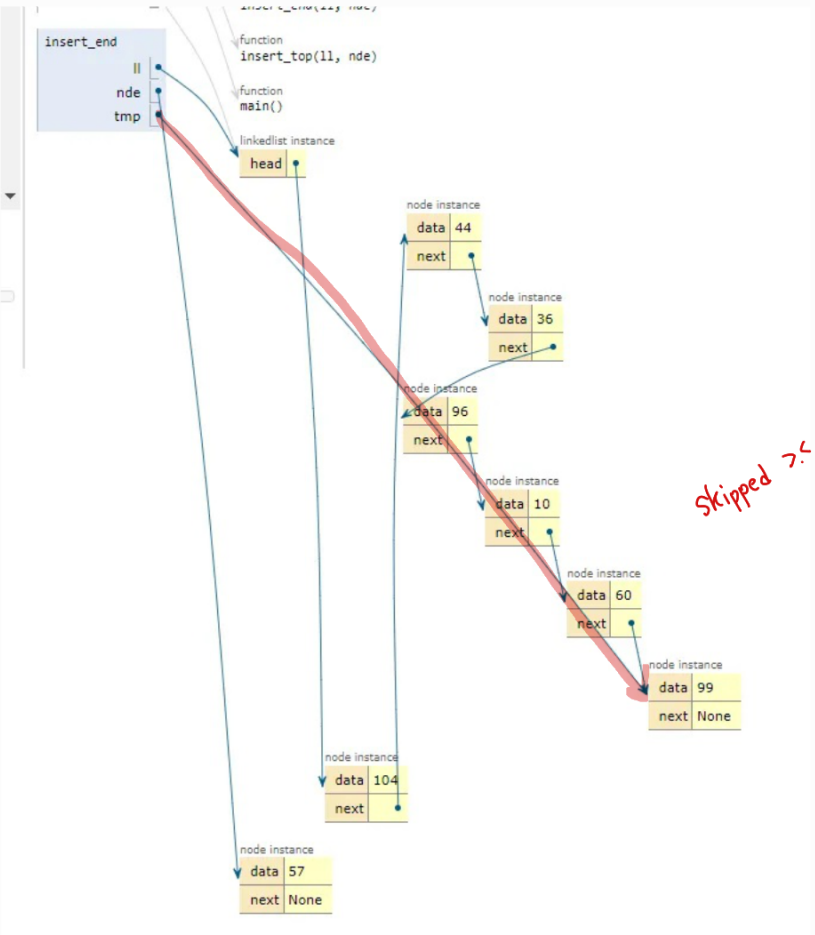


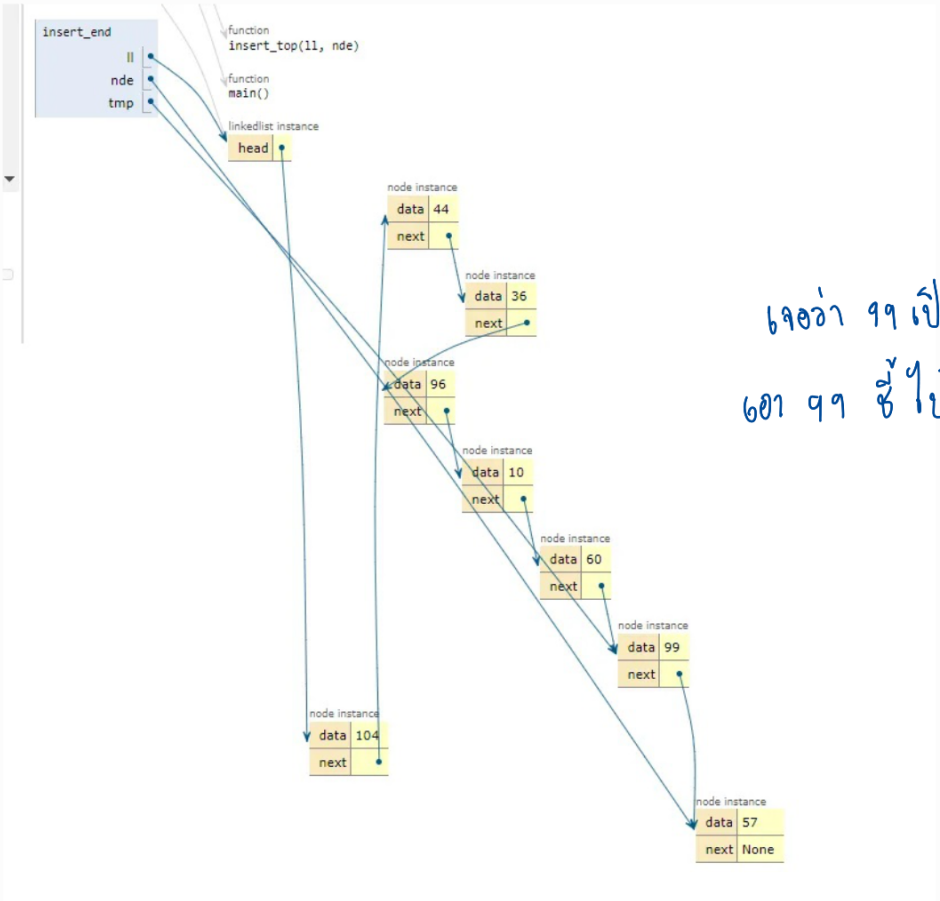
tmp จะตรวจสอบไปเรื่อยๆ


function
insert_end(ll, nde)
function
insert_top(ll, nde)
function
main()
insert_end
ll
nde
tmp
linkedlist instance
head
node instance
data 44
next
node instance
data 36
next
node instance
data 96
next
node instance
data 10
next
node instance
data 60
next
node instance
data 99
next None
node instance
data 104
next
node instance
data 57
next None


function
insert_end(ll, nde)
function
insert_top(ll, nde)
function
main()
insert_end
ll
nde
tmp
linkedlist instance
head
node instance
data 44
next
node instance
data 36
next
node instance
data 96
next
node instance
data 10
next
node instance
data 60
next
node instance
data 99
next None
node instance
data 104
next
node instance
data 57
next None

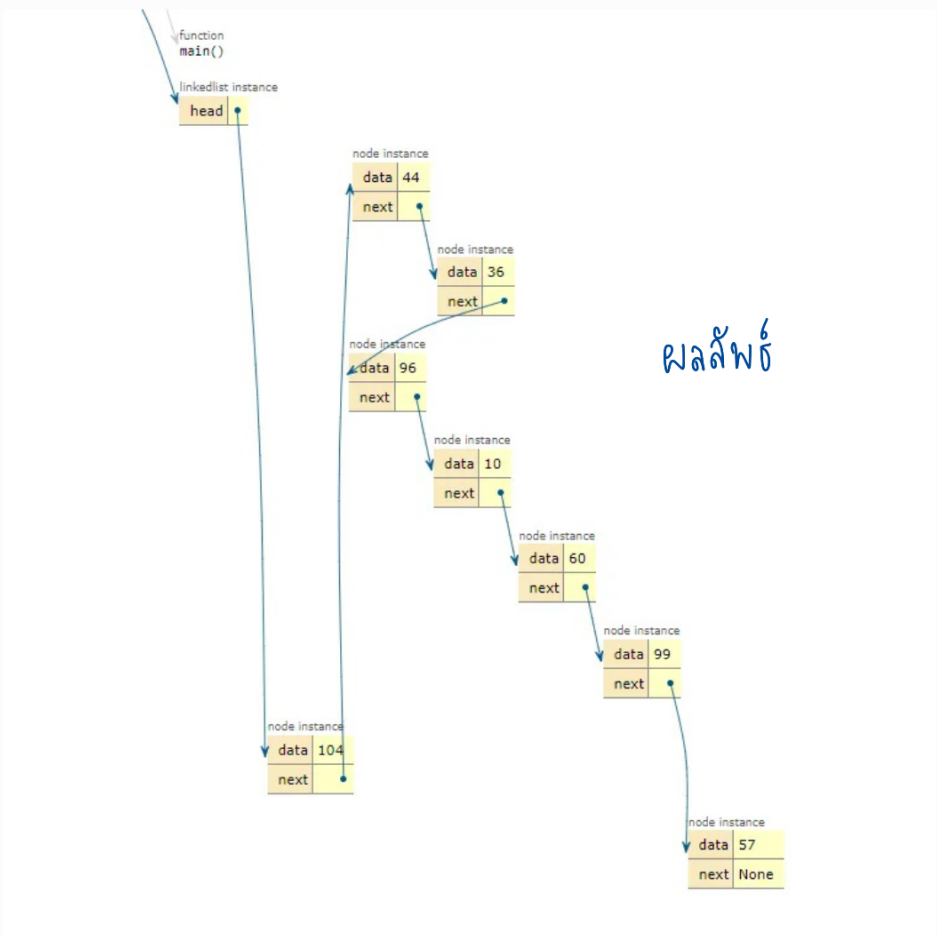

insert_end
ll
nde
tmp
function
insert_top(ll, nde)
function
main()
linkedlist instance
head
node instance
data 44
next
node instance
data 36
next
node instance
data 96
next
node instance
data 10
next
node instance
data 60
next
node instance
data 99
next None
node instance
data 104
next
node instance
data 57
next None


insert_end
ll
nde
tmp
function
insert_top(ll, nde)
function
main()
linkedlist instance
head
node instance
data 44
next
node instance
data 36
next
node instance
data 96
next
node instance
data 10
next
node instance
data 60
next
node instance
data 99
next None
node instance
data 104
next
node instance
data 57
next None
Skipped ><

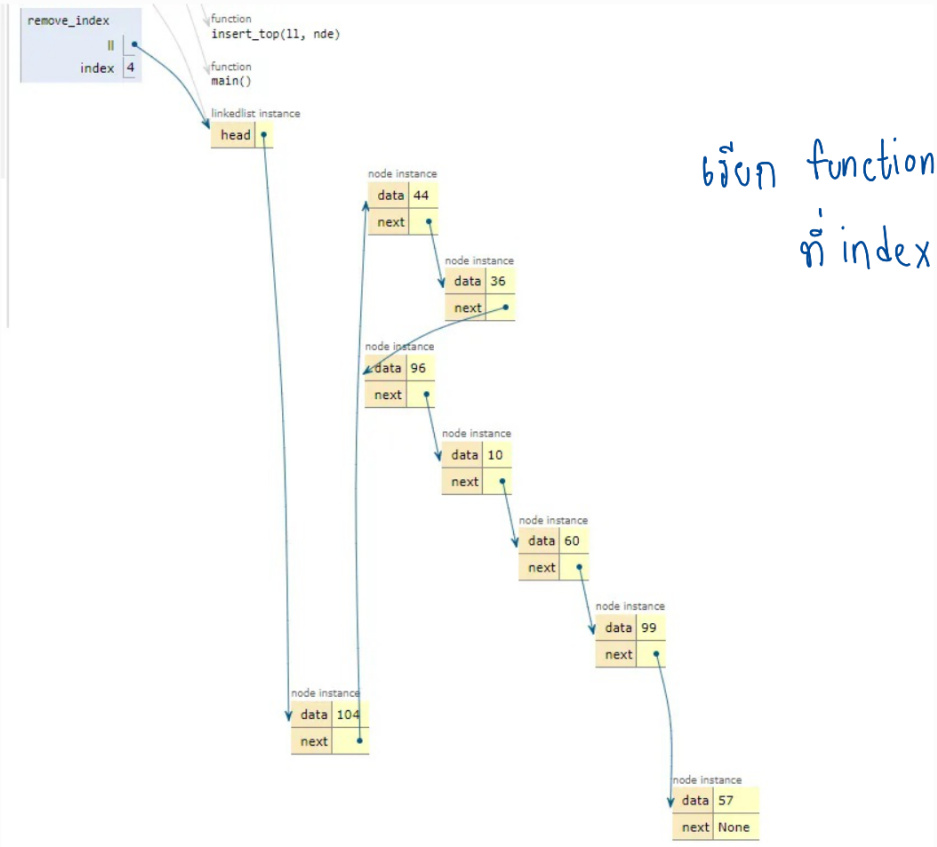


เจอว่า ๆๆ เป็นตัวสุดท้าย

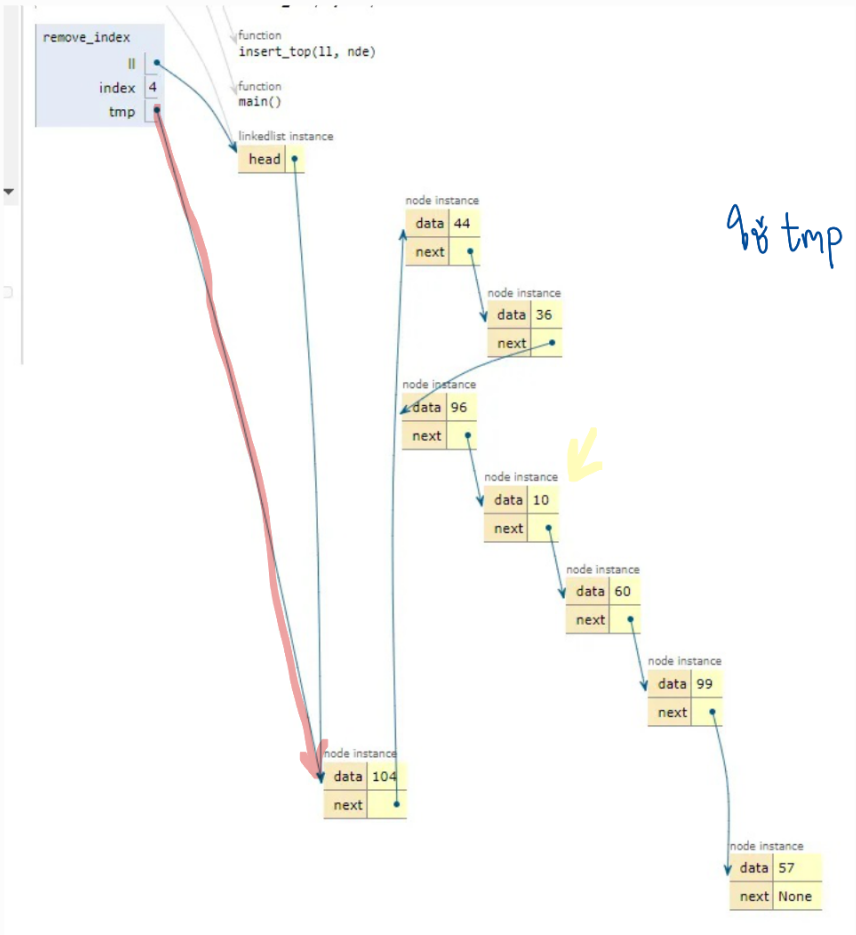
เอา ๆๆ ชี้ไปที่ node 57



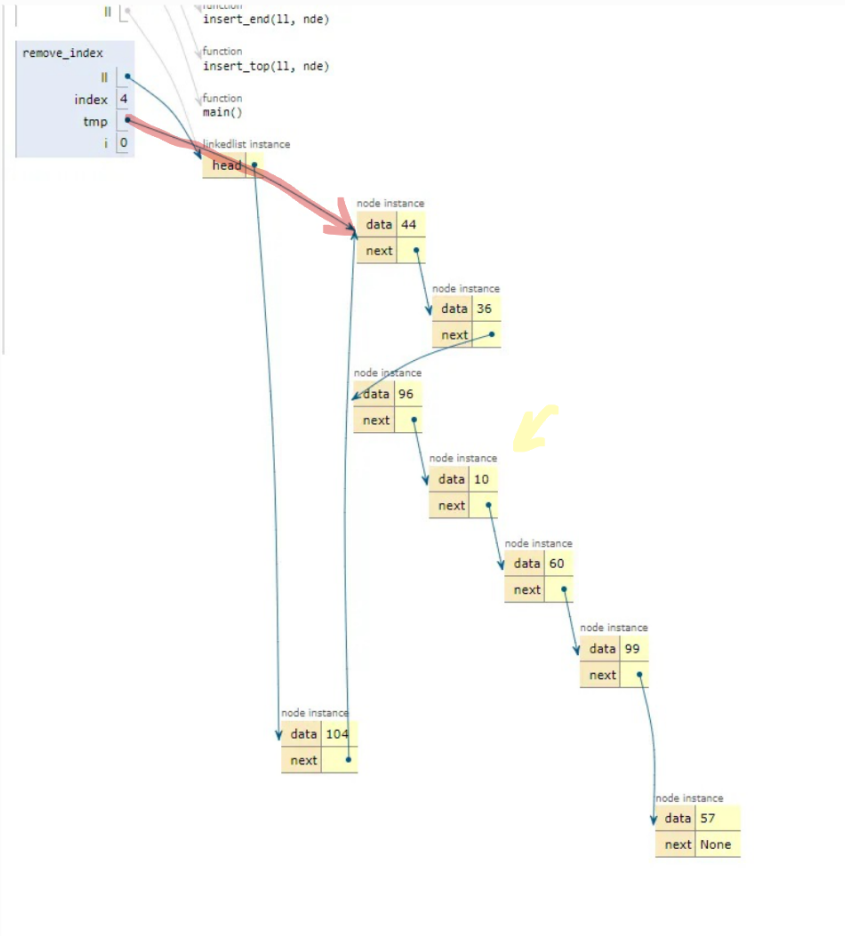
ผลลัพธ์

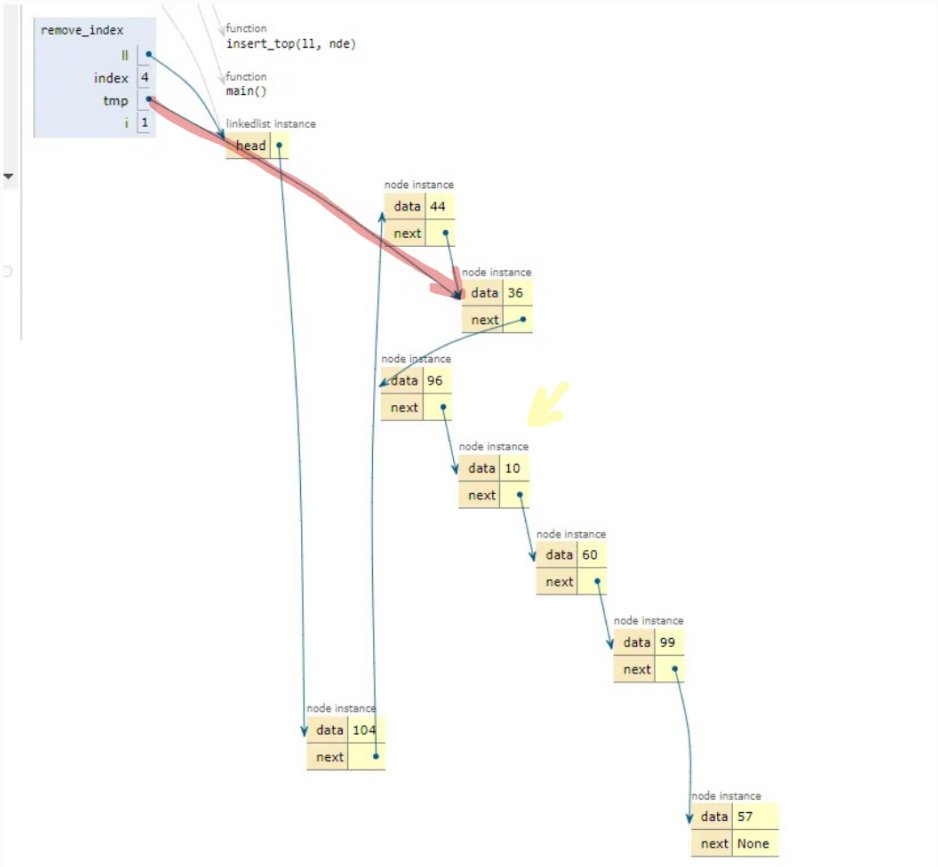


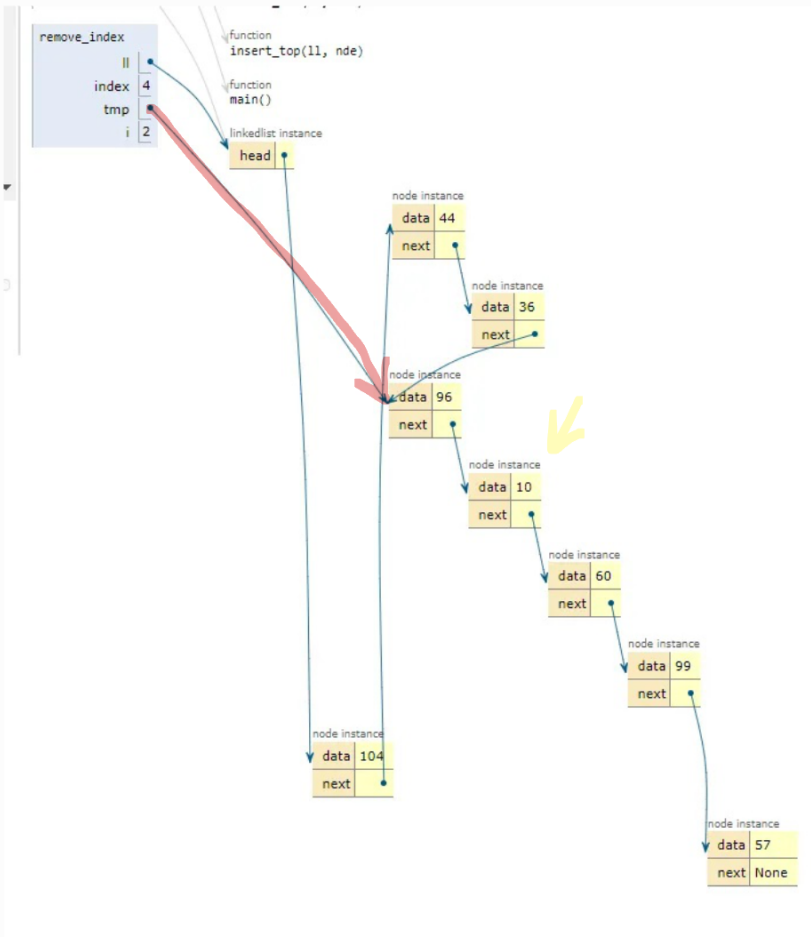
เรียก function remove_index
ที่ index 4

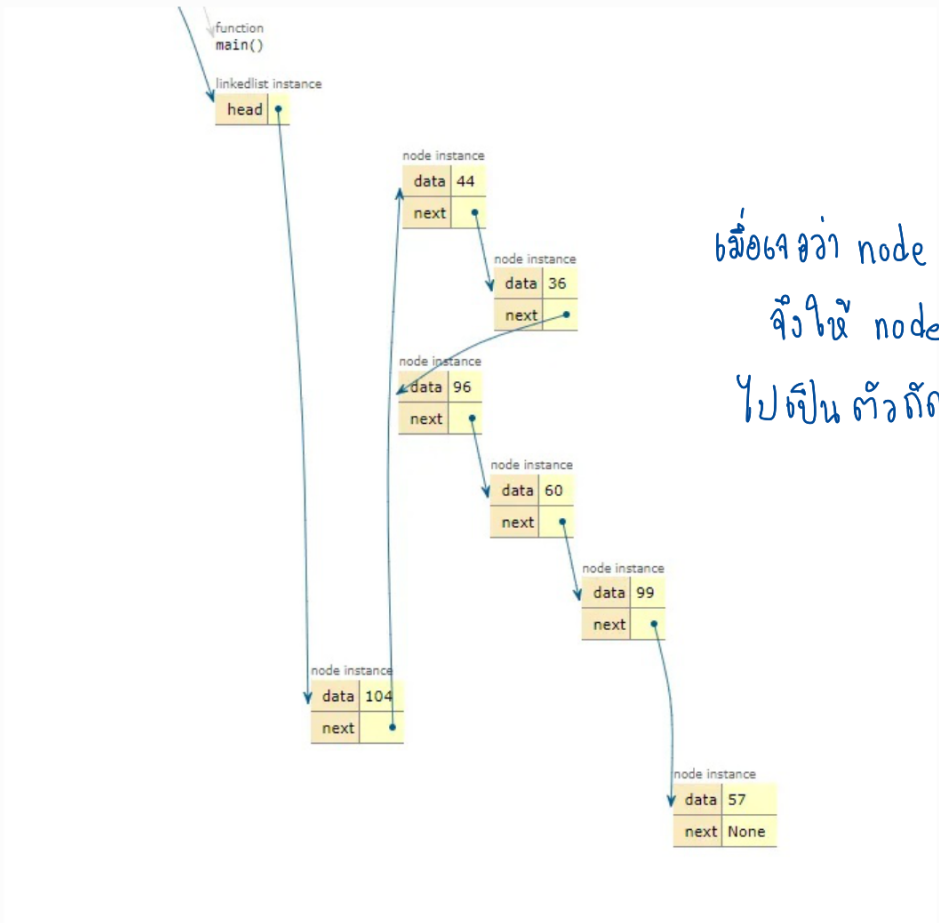


ใช้ tmp loop หา ตัว index ที่ 4


insert_end(ll, nde)
function
insert_top(ll, nde)
function
main()
remove_index
ll
index 4
tmp
i 0
linkedlist instance
head
node instance
data 44
next
node instance
data 36
next
node instance
data 96
next
node instance
data 10
next
node instance
data 60
next
node instance
data 99
next
node instance
data 104
next
node instance
data 57
next None


remove_index
ll
index 4
tmp
i 1
function
insert_top(ll, nde)
function
main()
linkedlist instance
head
node instance
data 44
next
node instance
data 36
next
node instance
data 96
next
node instance
data 10
next
node instance
data 60
next
node instance
data 99
next
node instance
data 104
next
node instance
data 57
next None





เมื่อเจอว่า node 10 คือตัวที่ index = 4
จึงให้ node 60 ชี้ข้ามตัว node 10
ไปเป็นตัวถัดไปเลย แล้ว node 10 หายไป