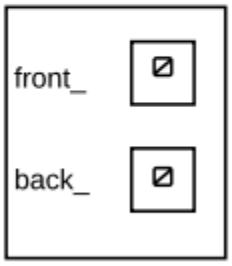
For insert draw over this image and modify all links that are changed as result of insertion. Add on new nodes in your drawing and show how they link up

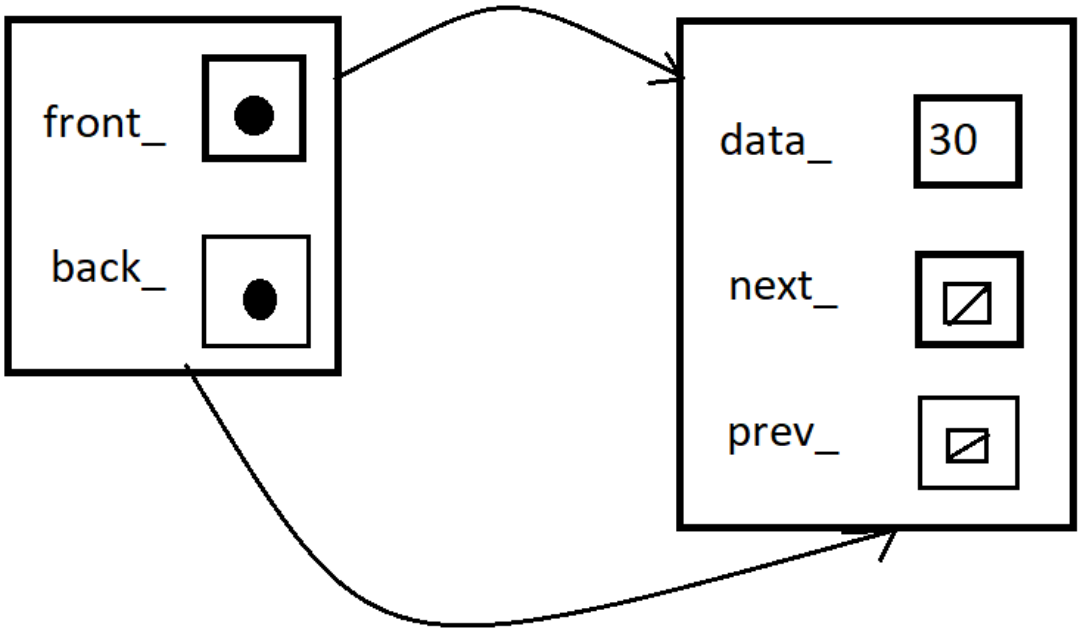
Ques 1)

insert(30);

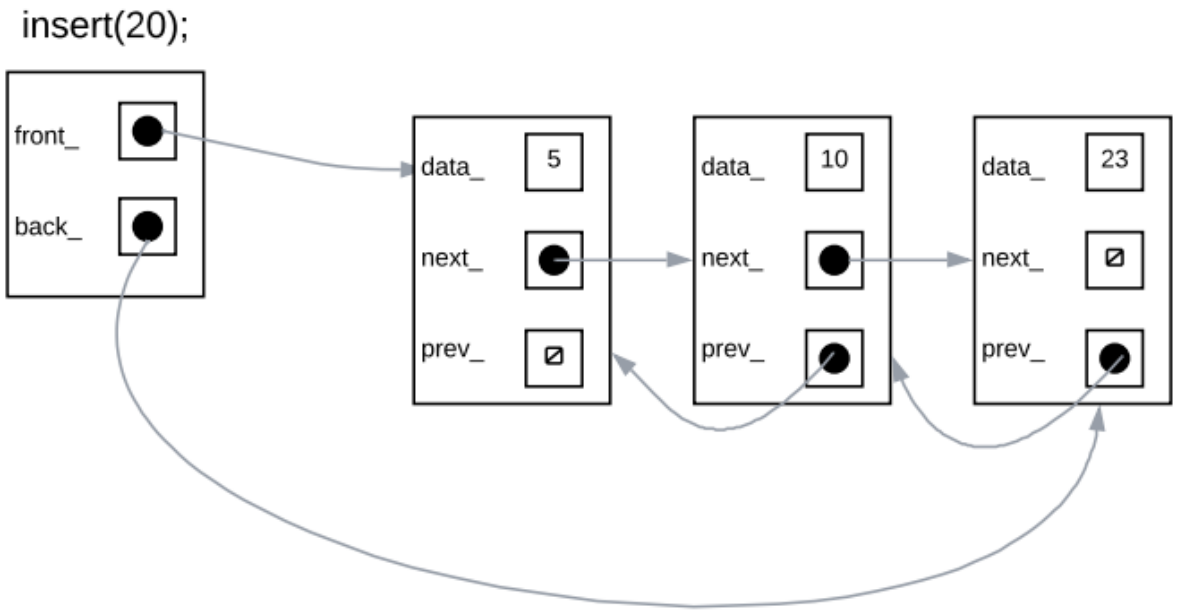


Ans 1)

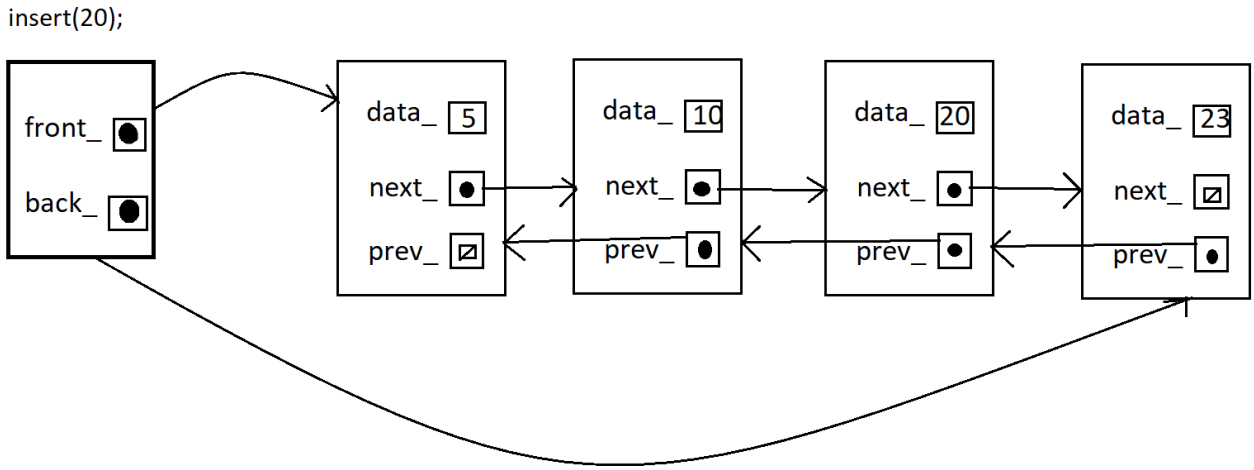
insert(30);



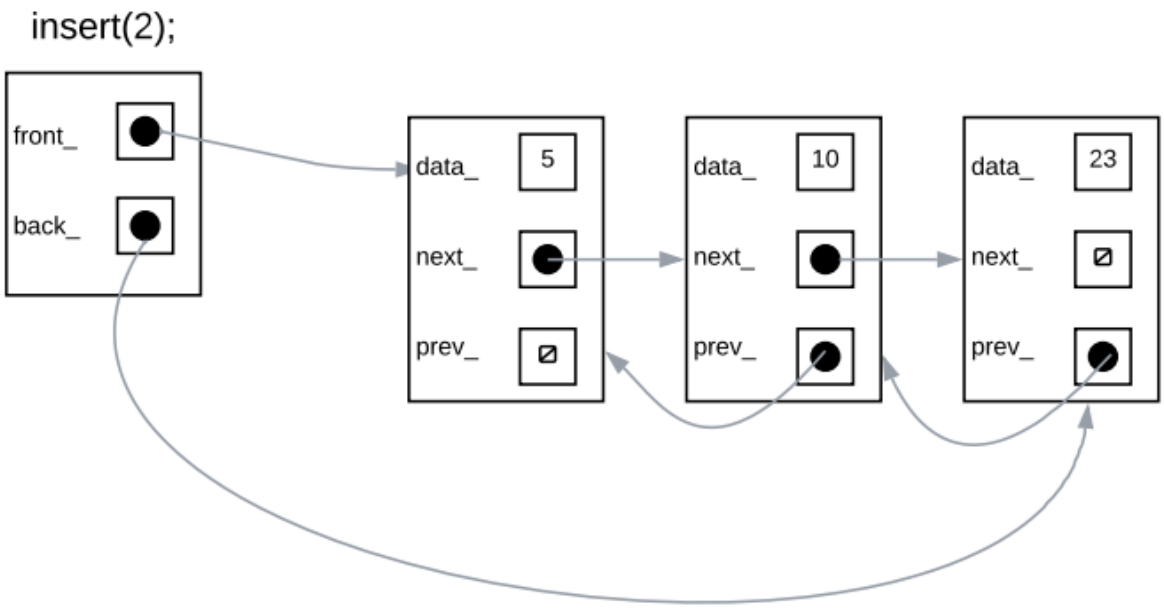
Ques 2)


insert(20);
front_
back_
data_
5
next_
prev_
data_
10
next_
prev_
data_
23
next_
prev_

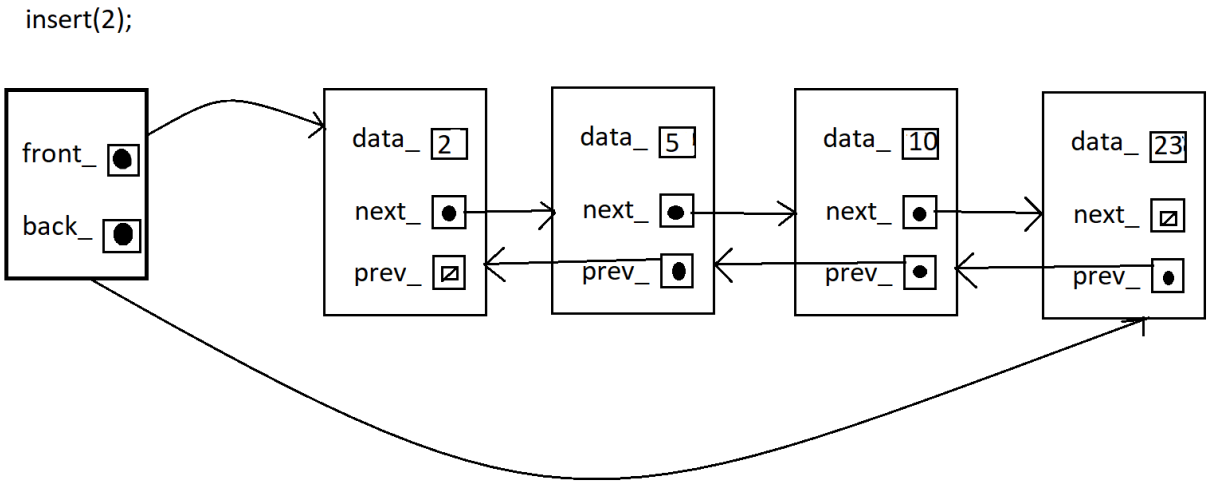
Ans 2)


insert(20);
front_
back_
data_
5
next_
prev_
data_
10
next_
prev_
data_
20
next_
prev_
data_
23
next_
prev_

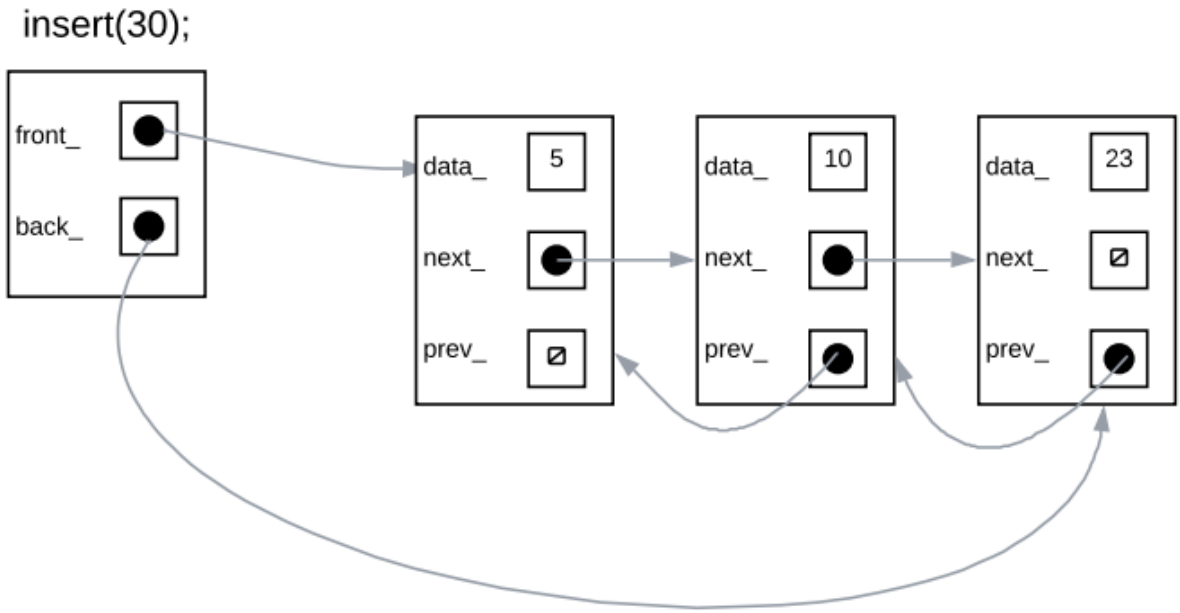
Ques 3)


insert(2);
front_
back_
data_
5
next_
prev_
data_
10
next_
prev_
data_
23
next_
prev_

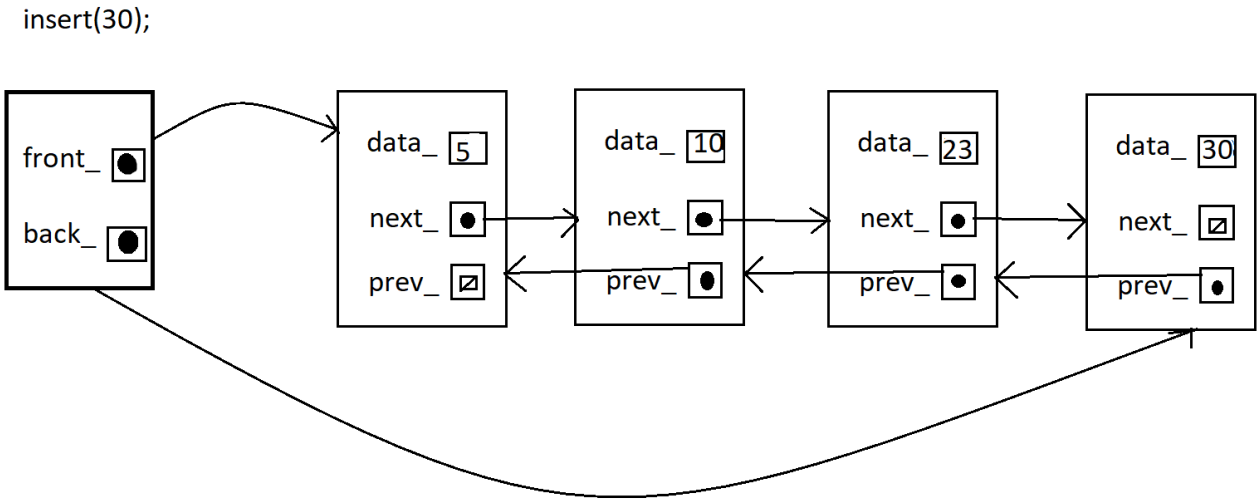
Ans 3)


insert(2);
front_
back_
data_
2
next_
prev_
data_
5
next_
prev_
data_
10
next_
prev_
data_
23
next_
prev_

Ques 4)

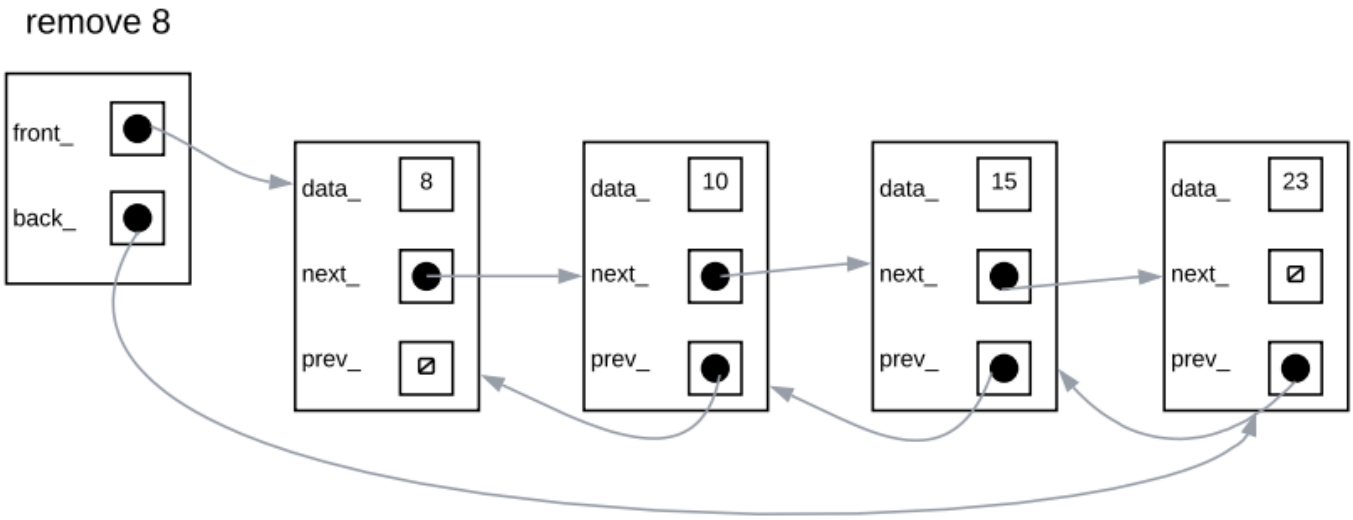

insert(30);
front_
back_
data_
5
next_
prev_
data_
10
next_
prev_
data_
23
next_
prev_

Ans 4)

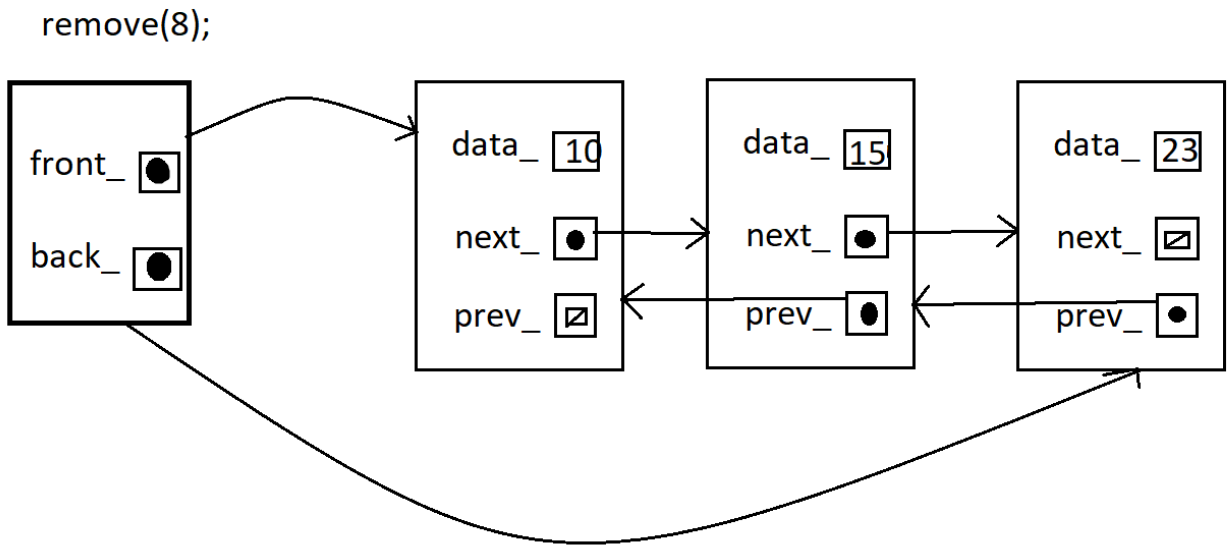

insert(30);
front_
back_
data_
5
next_
prev_
data_
10
next_
prev_
data_
23
next_
prev_
data_
30
next_
prev_

For remove() indicate how the list will change as well as return value.

Ques 1)

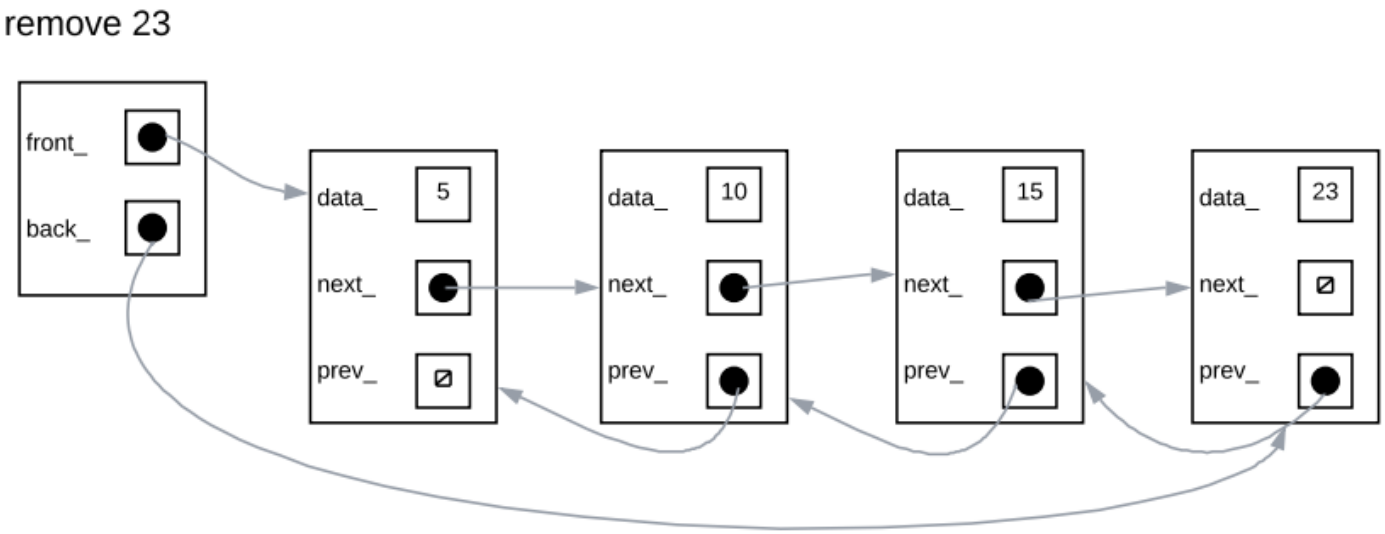


Ans 1)

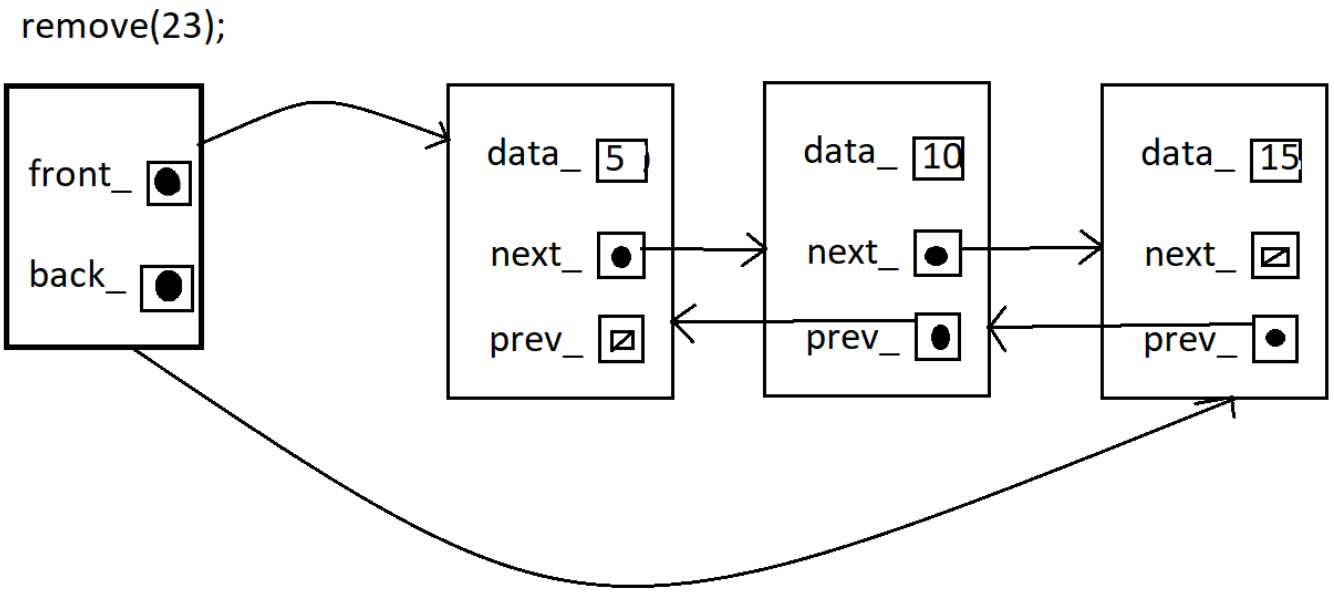


return true;

Ques 2)

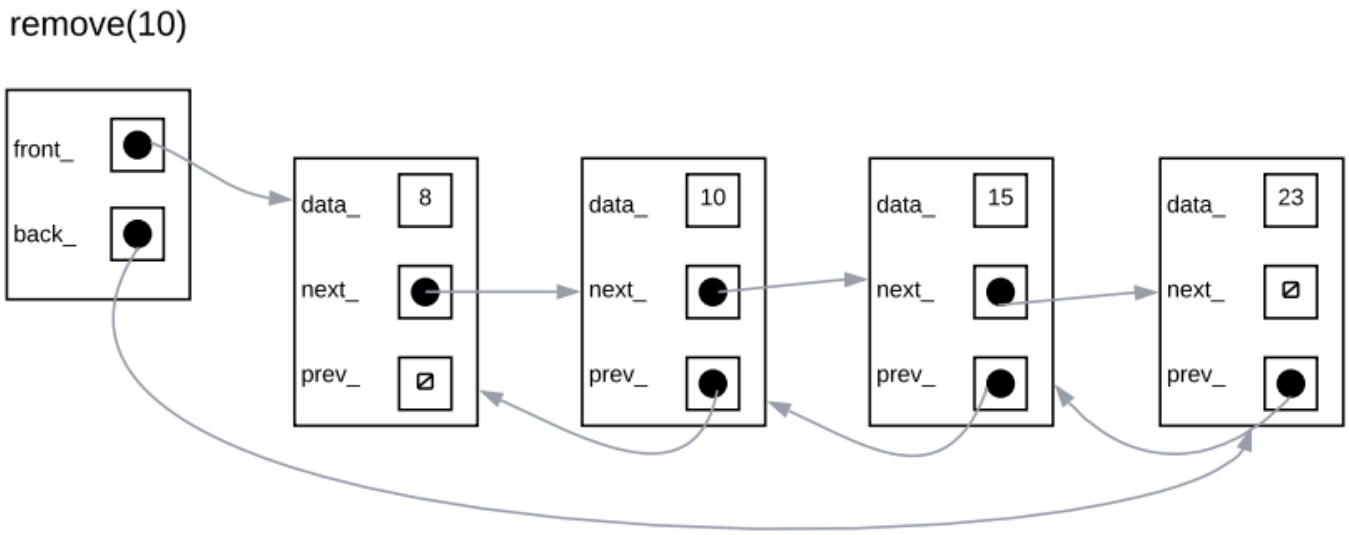


Ans 2)

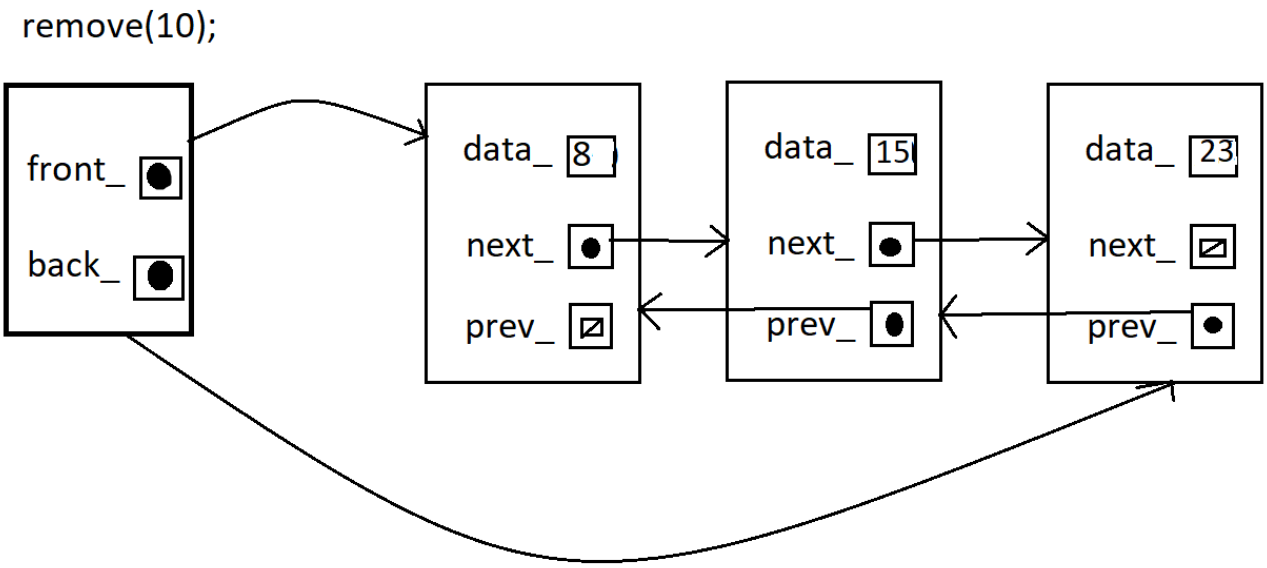


return true;

Ques 3)



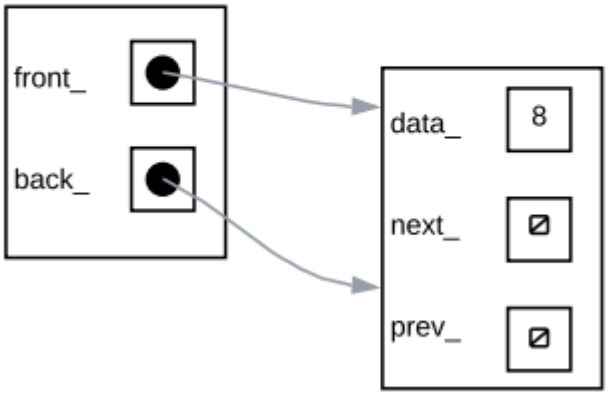
Ans 3)



return true;

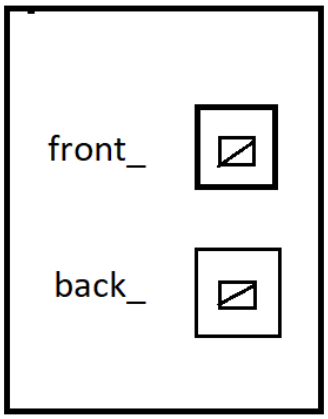
Ques 4)

remove(8)



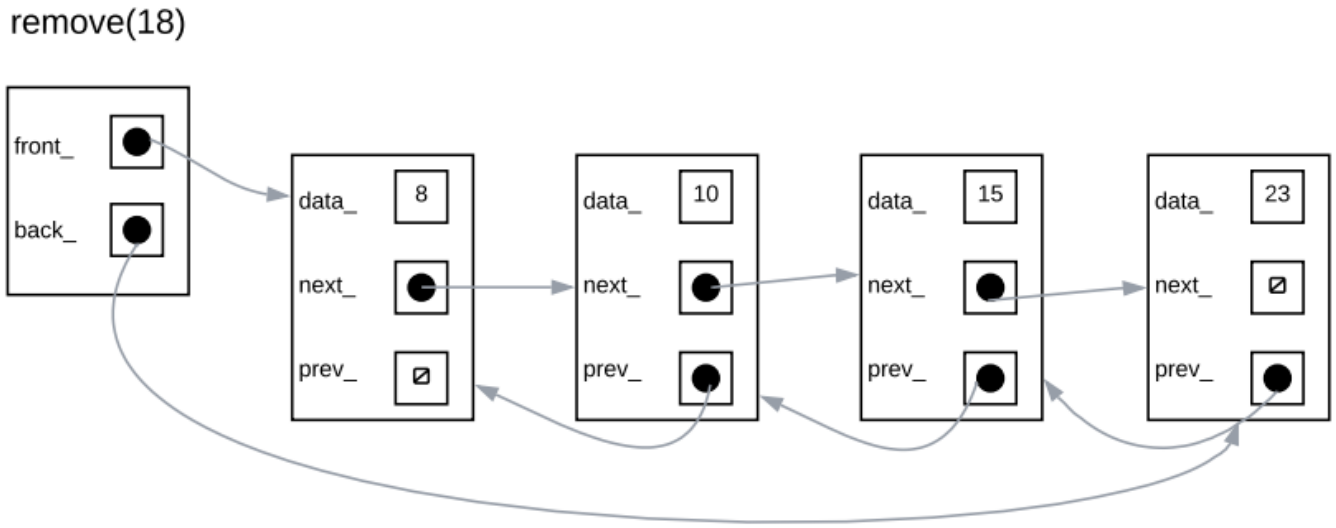
Ans 4)

remove(8);

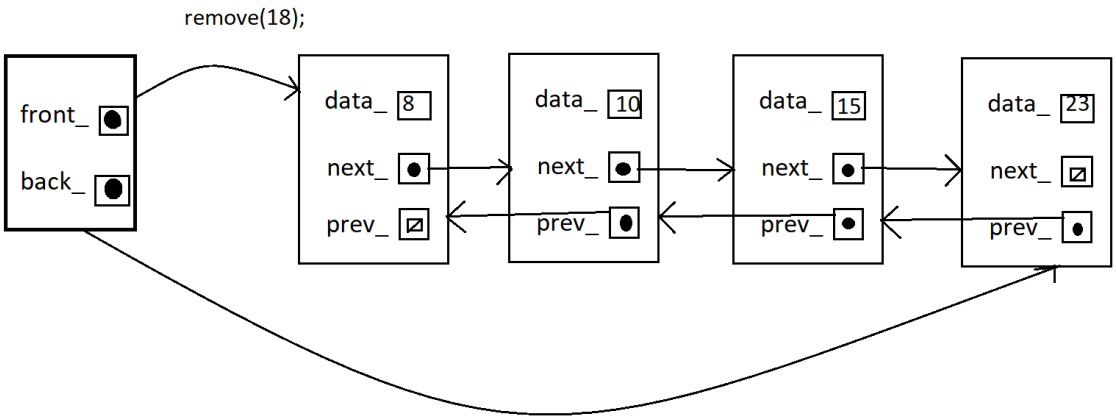


return true;

Ques 5)



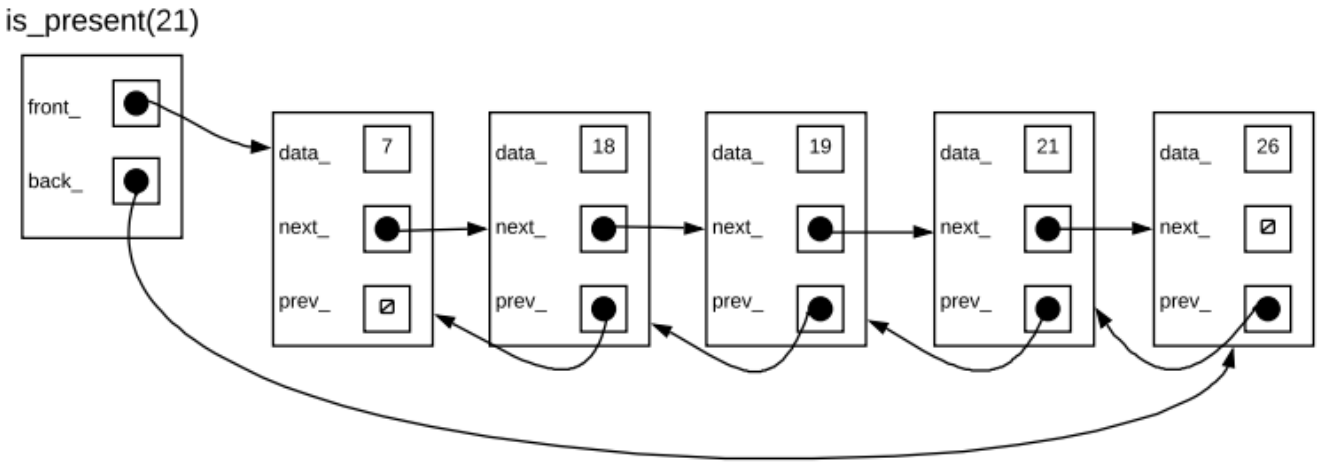
Ans 5)



return false;

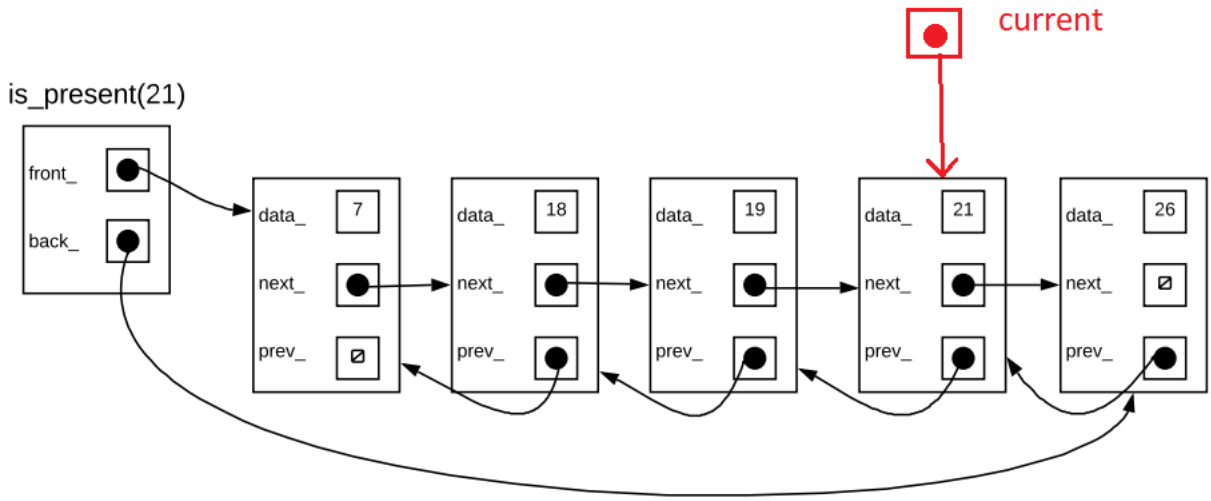
For is_present list will not change, mark out which nodes you will be looking at and in what order. Indicate what you will return

Ques 1)



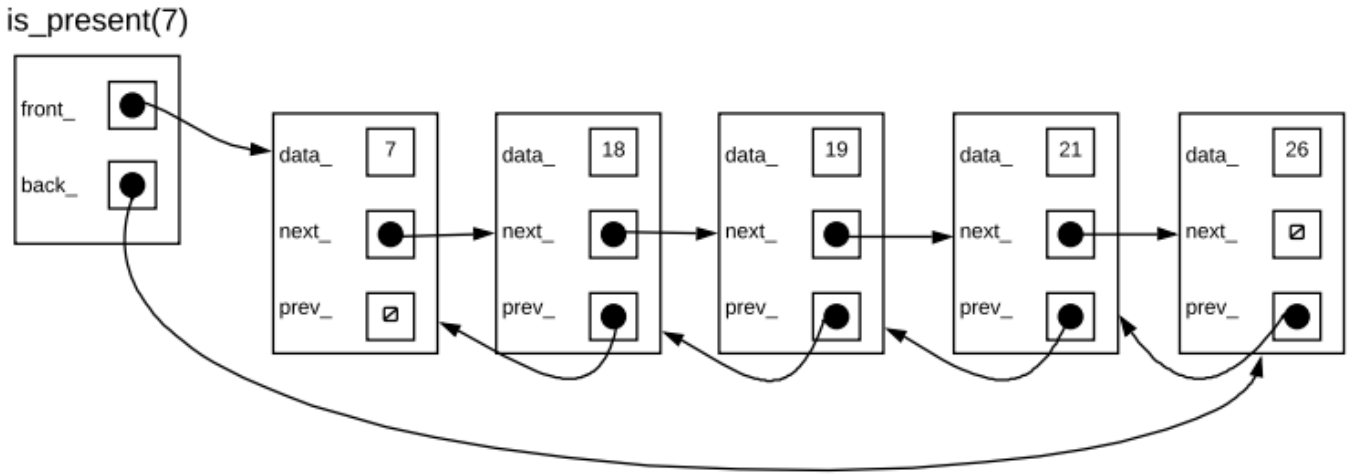
Ans 1)

Is current == data ?
1) 7 != 21, false
2) 18 != 21, false
3) 19 != 21, false
4) 21 == 21, true



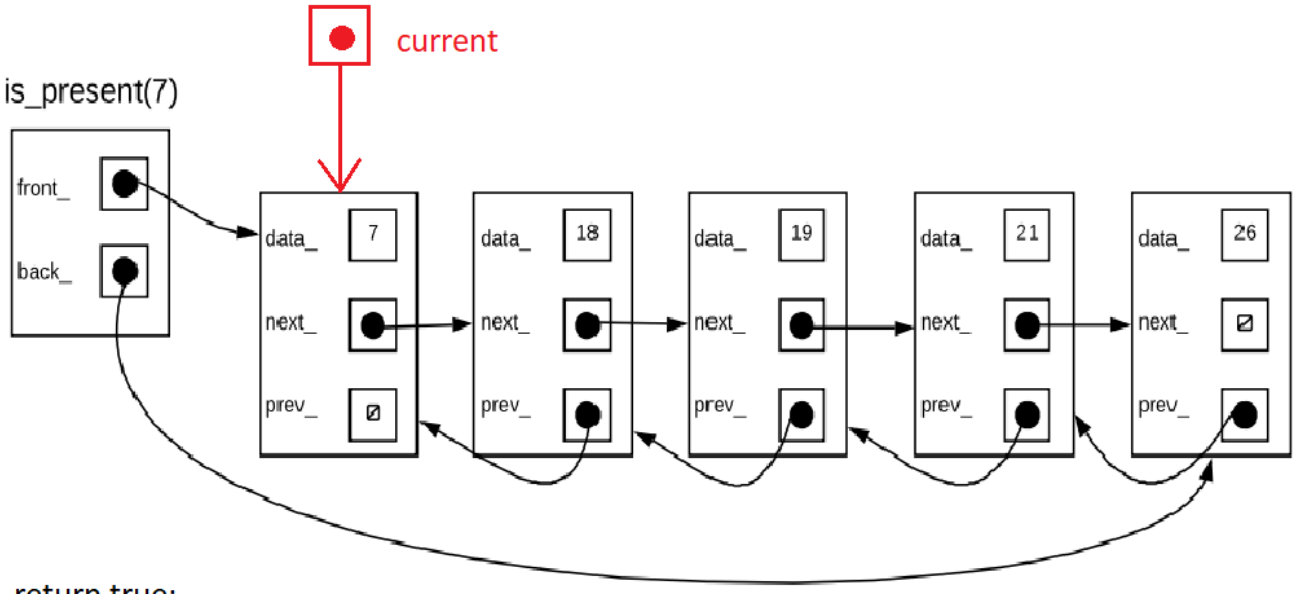
return true;

Ques 2)



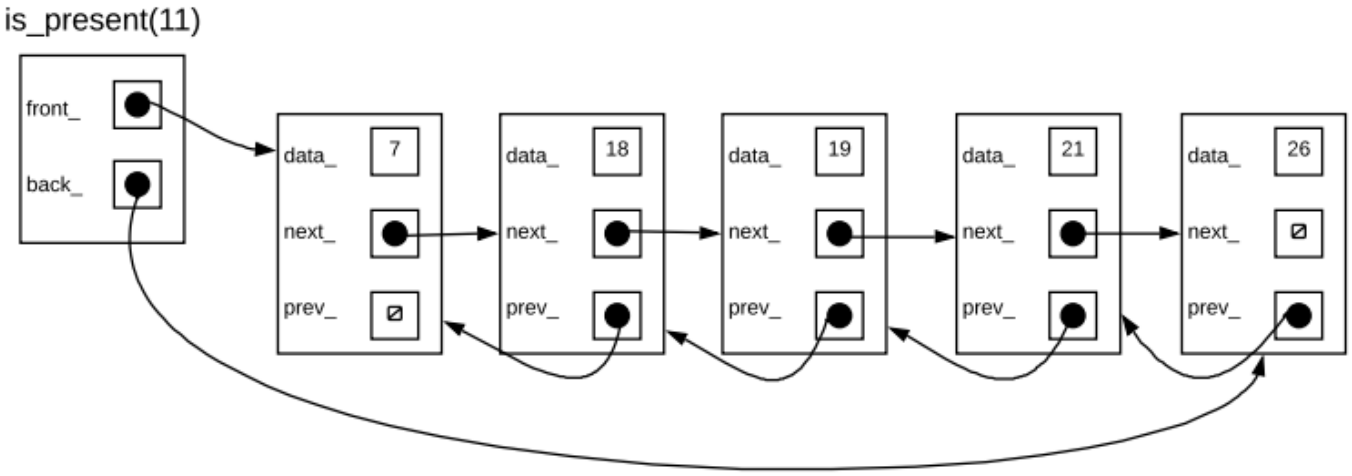
Ans 2)

Is current == data ?
1) 7 == 7, true



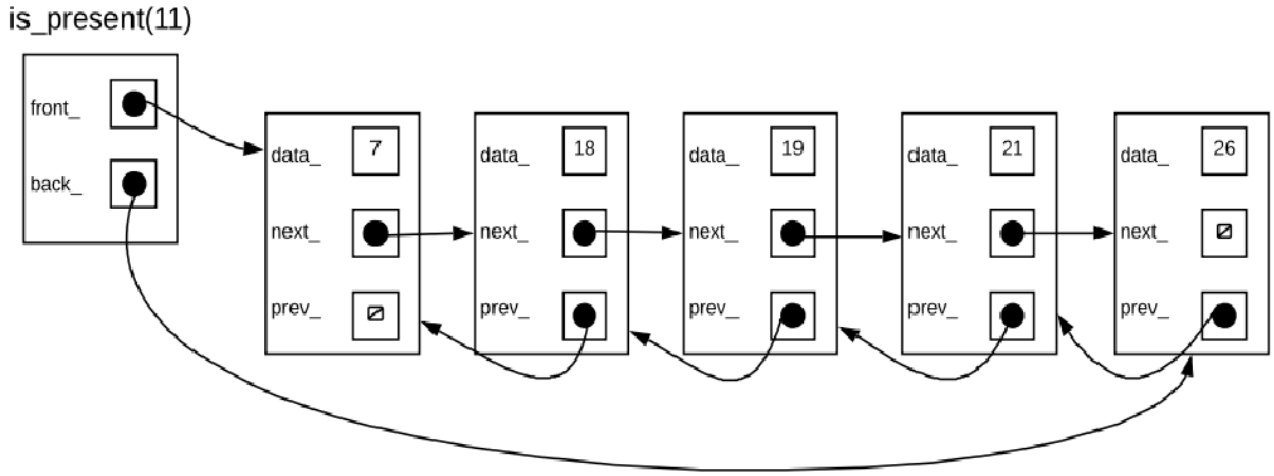
return true;

Ques 3)



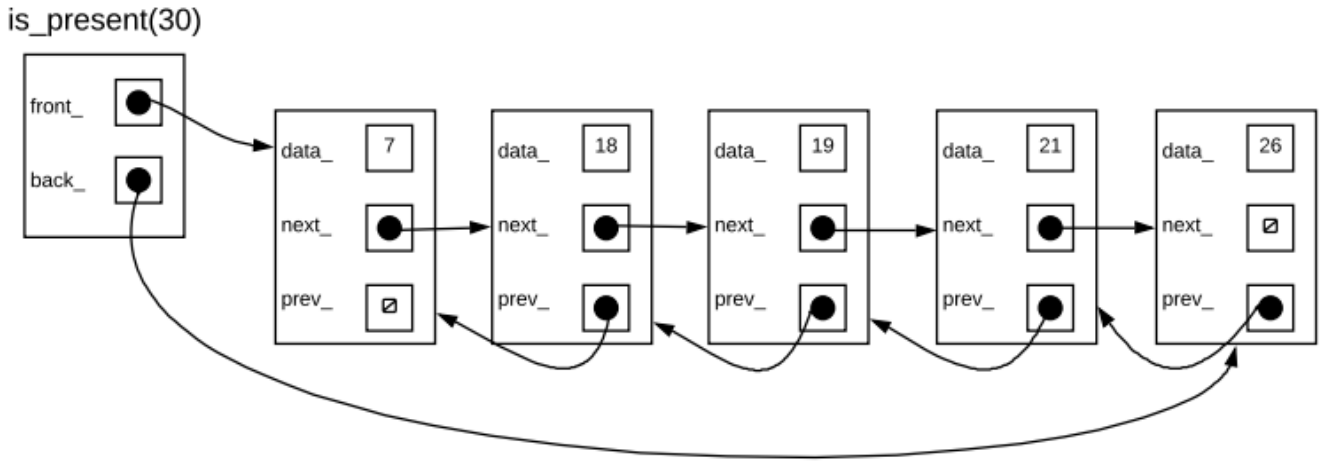
Ans 3)

Is current == data?
1) 7 != 11, false
2) 18 != 11,false
3) 19 != 11, false
4) 21 != 11, false
5) 26 != 11, false



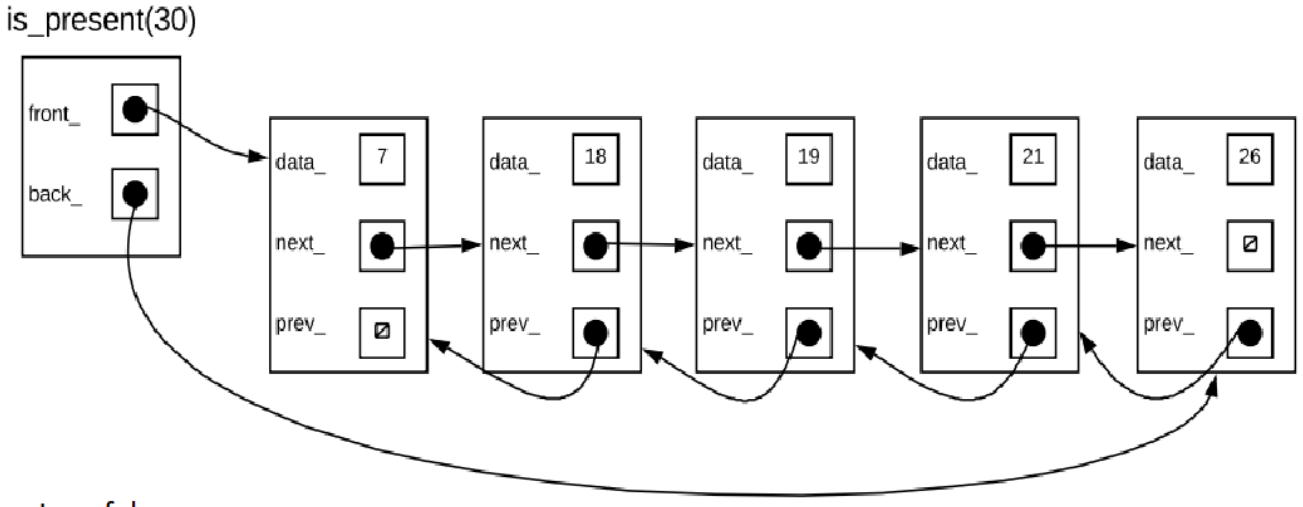
return false;

Ques 4)



Ans 4)

Is current == data ?
1) 7 != 30, false
2) 18 != 30, false
3) 19 != 30, false
4) 21 != 30, false
5) 26 != 30, false



return false;