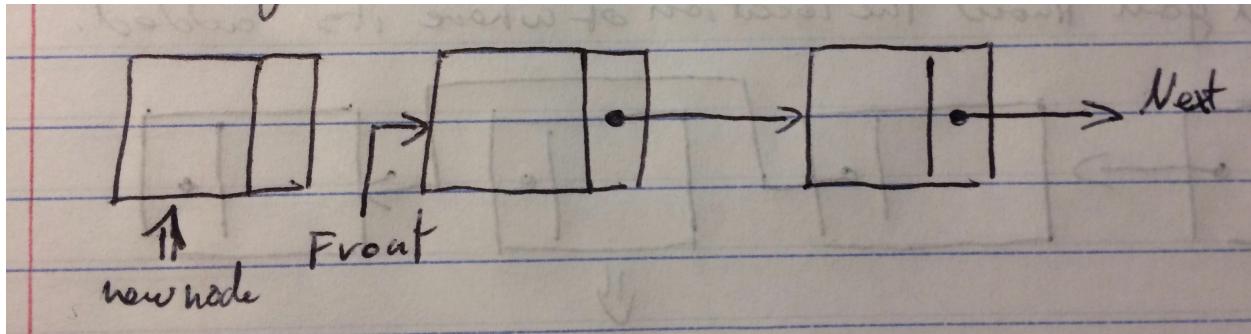


Lab4  
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EEN218  
Oct 30 2016

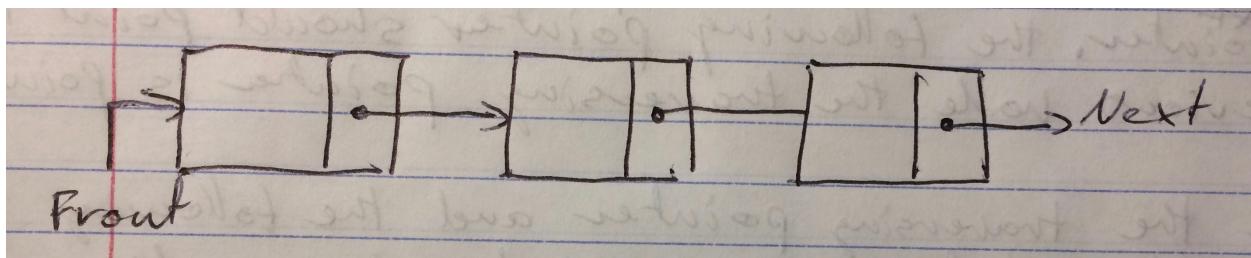
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### Algorithms used adding/deleting movies and reviews

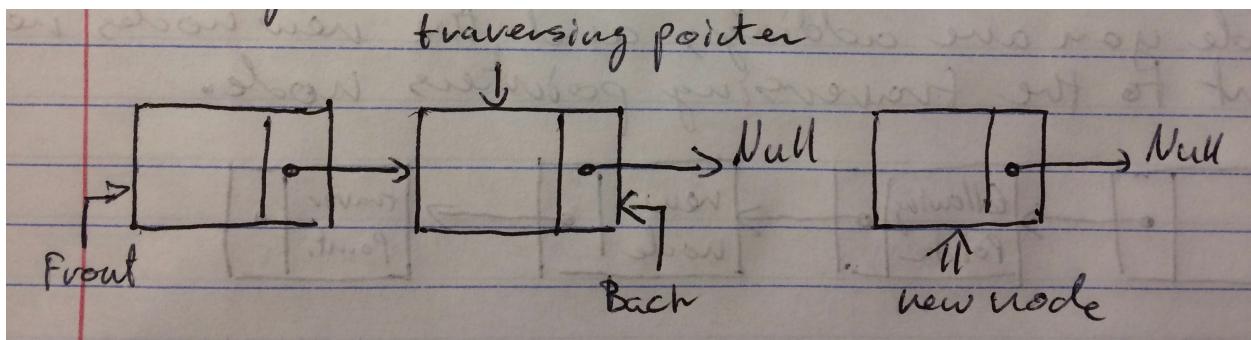
Adding an item to a link-list:



- Adding at the front
  - You make the new node next pointer point to the Front node pointer.
  - You then make the front node pointer point to the new node.

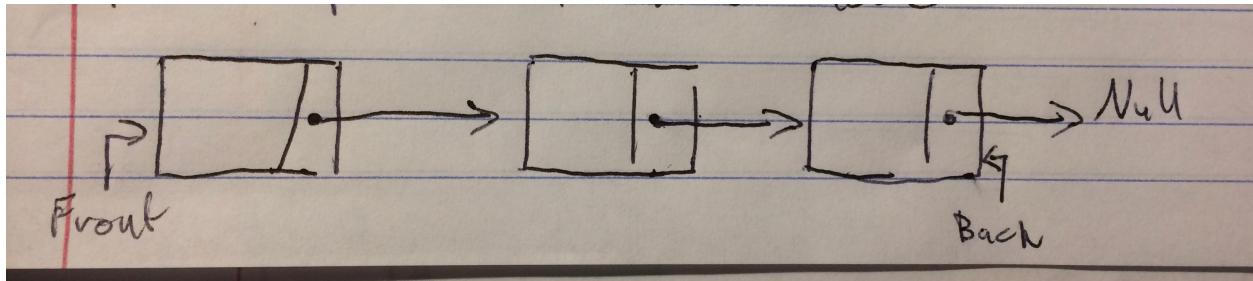


- Adding at the back
  - Assuming there is no back node pointer

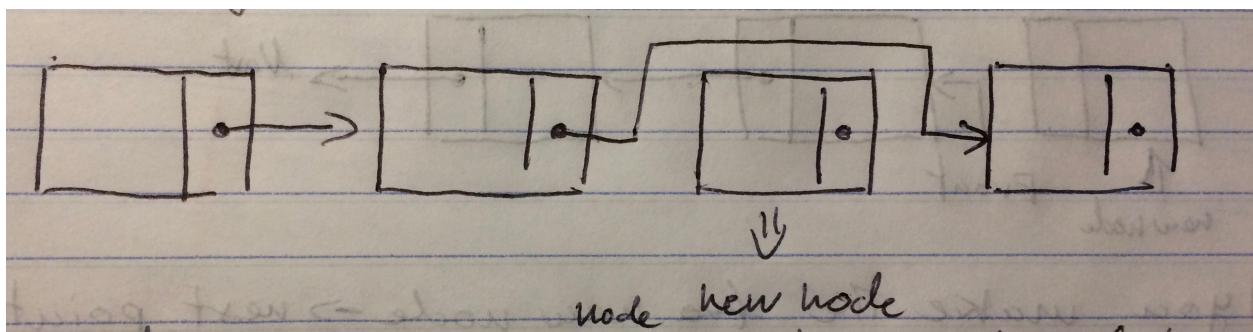


- You create a traversing node pointer and make it equal to the front pointer. You then traverse the entire link list until the traversing's next pointer is pointing to NULL.

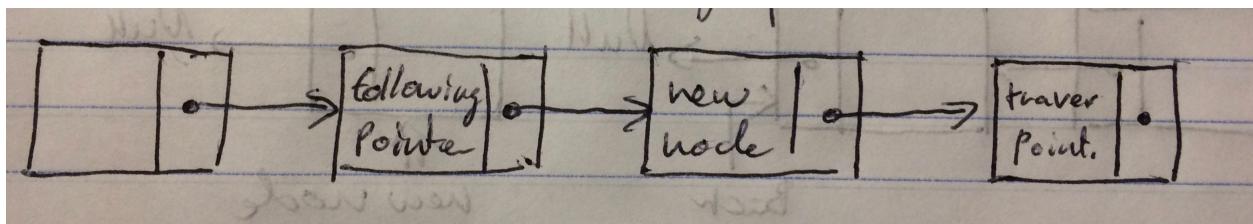
- Once the traversing pointer is at the last node, you make its next node pointer point to the new node. You then make the new node's next pointer point to NULL.



- Adding at location
- Assuming you're not adding at the front or back and you know the location of where the node is being added (or have the correct comparison method to find the point of insertion).

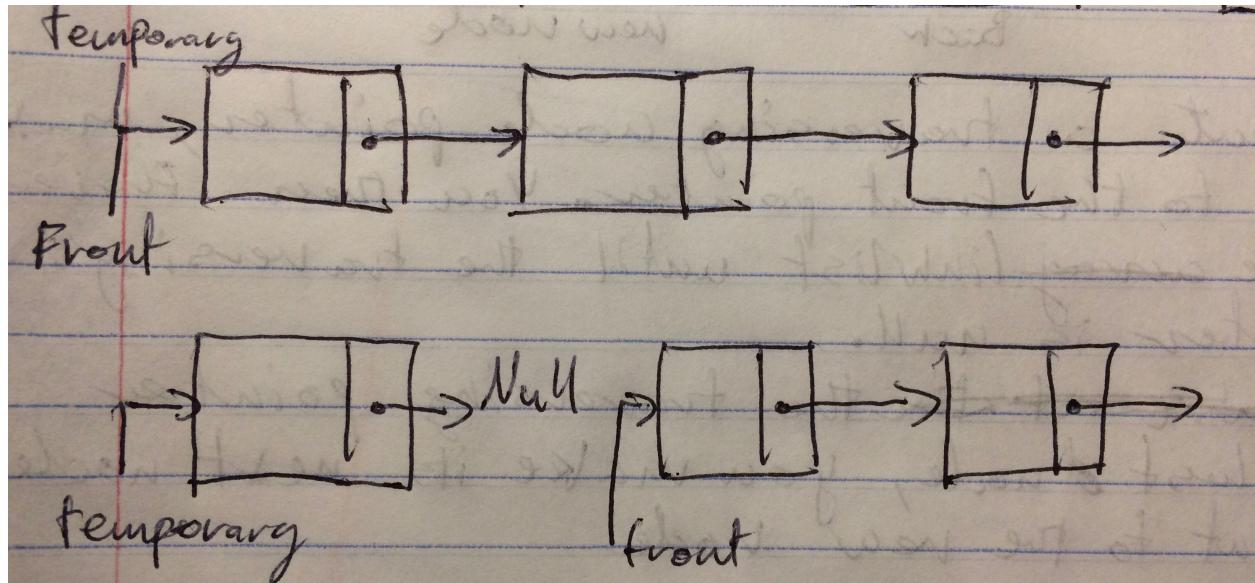


- Create a traversing and following node pointers
- Make the traversing node pointer point to the same node as the front pointer. The following pointer should always point to the previous node the traversing pointer is pointing to.
- Once the traversing pointer and the following pointer are in-between the point of insertion, you make the following pointer's next pointer point to the node you are adding, and the

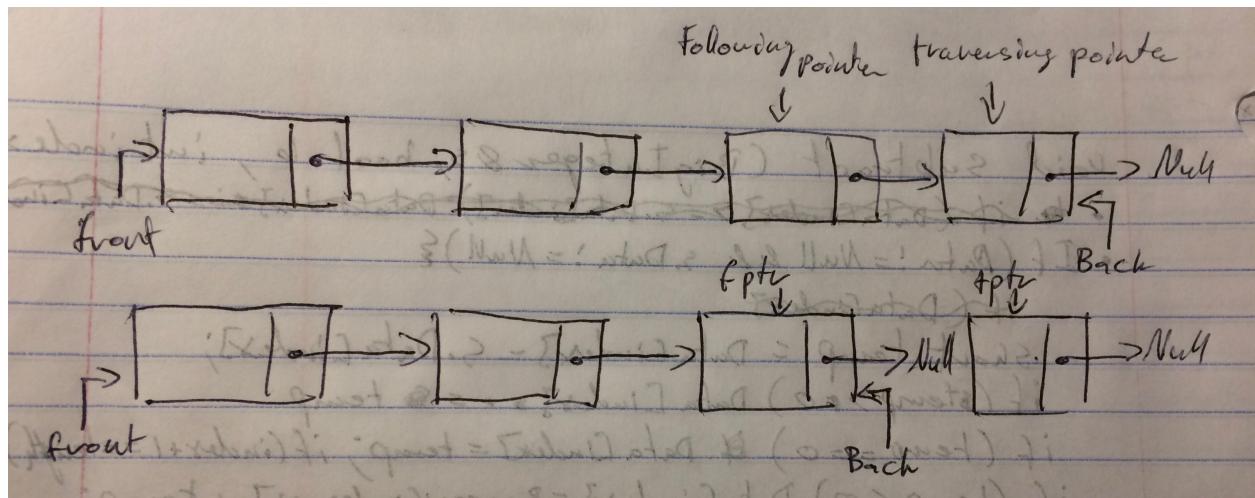


new node's next pointer point to the traversing pointer's node.

- Deleting front node
- You create a temporary front node pointer that is equal to the front.
- You then make the front equal to front's next node pointer.
- You net make the temporary pointer's next pointer point to NULL

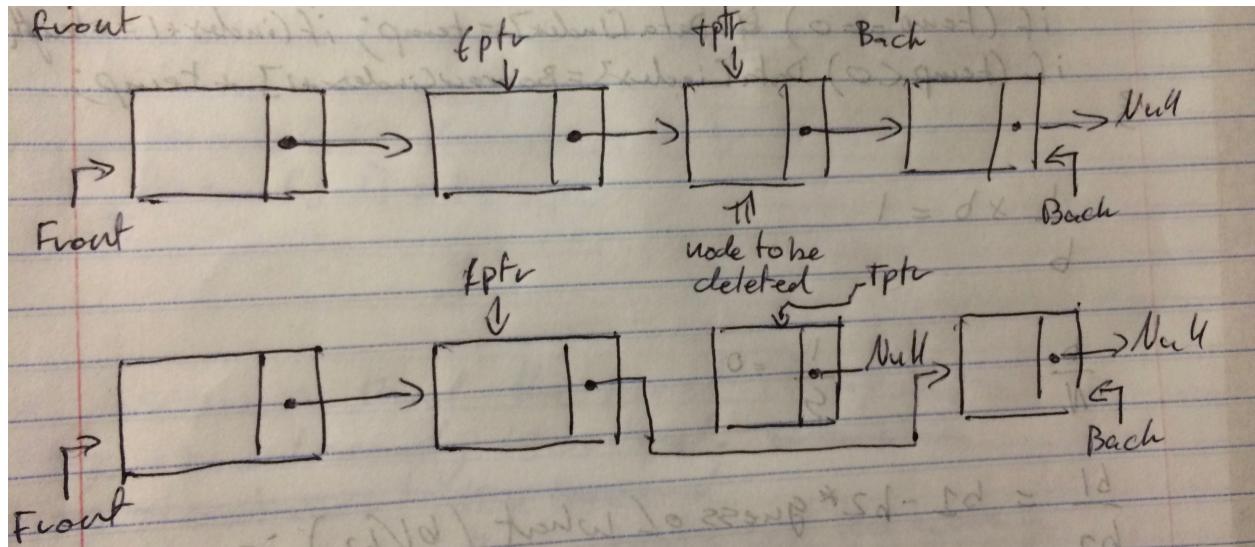


- you then delete the temporary node pointer
- Deleting back node
  - You make a traversing pointer and following node pointers. Making the temporary pointer equal to the front pointer (point to the same direction).
  - The following pointer should always point to the previous node the traversing pointer is pointing to.
  - You then make it traverse the entire array until the temporary's next pointer is pointing to NULL.
  - You then make the following pointer's next node pointer point to NULL and set it equal to the back pointer.



- you then delete the traversing pointer's node.
- Deleting in between the array
  - Assuming you don't have to delete the front or back node and you know the location of the node you want to delete either by comparison or index within the link-list.

- You make a traversing pointer and following node pointers. Making the temporary pointer equal to the front pointer (point to the same direction).
- The following pointer should always point to the previous node the traversing pointer is pointing to.
- Once the traversing node pointer is pointing to the node you want to delete, you make the following node pointer's next node pointer point to the traversing node pointer's next node pointer.
- You then make the traversing node pointer's next node pointer point to NULL and delete the node.



### Compiling Instructions

- There are various ways you can input and output data with the classes
- The general rule to follow is that object.print() prints out a more detailed information about the object than cout>>object.
  - ostream outputs the file in the correct file format that ifstream uses.
- Similarly, if you cin>>object you will get a more user friendly way to input the information. If you are reading in from a file, then it will follow the file reading protocols provided by Dr. John.
- Other than that you should just add all the files into a directory on rabbit and compile it.
  - You can copy and paste this into your terminal and it should generate a working executable: **g++ lab4.cpp Rating.h Rating.cpp RatingList.h RatingList.cpp RTime.h RTime.cpp Movie.h Movie.cpp MovieList.h MovieList.cpp MovieNet.h MovieNet.cpp**
  - Make sure that all the files have the correct names.
  - The text file I used in lab4.cpp was under the name of movies.txt, make sure you have a properly formatted file in order for ifstream to be able to read your file.
- I also included a man for movies, I was experimenting to see if I could add a manual to my classes so that if you forgot something about the class you can just call it.
  - ex: Movie temp; temp.man(); should print the movie's manual when compiled and run.

---

### Sample Runs

**loading data...**

```
printing loaded data from file movies.txt
Temporary MovieNet Title
START [REDACTED]
Avengers: Age of Ultron
141 [REDACTED]
RSTART
REND
Batman Begins
140 [REDACTED]
RSTART
5
Everything I could have hoped for
1
heavily overrated
5
The BEST movie of the year!!!
2
Batman Begins To Smell
REND
Casablanca
102 [REDACTED]
RSTART
10000 [REDACTED]
A masterwork for all time
5
Of all the classics in all the films in all the world, this is the best!
5
Cinema par Excellence!
1
Am I missing something?
2
Casablah
REND
Waterworld
235 [REDACTED]
RSTART
4
Not nearly as bad as everyone says
-10 [REDACTED]
Glug-Glug-Glug ...&... Gurgle-Gurgle-Gurgle
3
NOT the worst movie ever made
REND
END
sotring data in file moviesSorted.txt
overwriting stored data with manual input
MovieNet's name      ~>All About Action
Movie's Title        ~>Fight Club
Movie's Runtime       ~>231
Input RatingList.
    - Type REND to end RatingList.
Rating              ~>5
Comment             ~>If you haven't watched this movie do...
Rating              ~>4
Comment             ~>The movie was good but it was released in 1999
Rating              ~>1
Comment             ~>Fell asleep... Ruined the plot
Rating              ~>REND
```

```
Type END to end MovieList ~>
Movie's Title          ~>The Reverant
Movie's Runtime         ~>236
Input RatingList.      [REDACTED]
    - Type REND to end RatingList.
Rating                ~>3
Comment               ~>I felt tooo much suffering in this movie.
Rating                ~>5
Comment               ~>Awesome loved how the director made you feel like
you were in the film [REDACTED]
Rating                ~>4
Comment               ~>Very unrealistic, he should of died from hy-
pothermia [REDACTED]
Rating                ~>1
Comment               ~>My boyfriend made me watch this..
Rating                ~>1000
Comment               ~>Harambe... never forget
Rating                ~>REND
Type END to end MovieList ~>[REDACTED]
Movie's Title          ~>Dead Pool
Movie's Runtime         ~>148
Input RatingList.      [REDACTED]
    - Type REND to end RatingList.
Rating                ~>1
Comment               ~>I though I was going to watch Deadpool don't be
fooled by the title [REDACTED]
Rating                ~>2
Comment               ~>good copy of deadpool but no fourth wall was bro-
ken [REDACTED]
Rating                ~>5
Comment               ~>Wowowowowow!!! peu peu peu boom!!
Rating                ~>REND
Type END to end MovieList ~>END
printing overwritten MovieNet
All About Action [REDACTED]
START [REDACTED]
Dead Pool
148 [REDACTED]
RSTART
1
I though I was going to watch Deadpool don't be fooled by the title
2
good copy of deadpool but no fourth wall was broken
5
Wowowowowow!!! peu peu peu boom!!
REND [REDACTED]
Fight Club [REDACTED]
231 [REDACTED]
RSTART
5
If you haven't watched this movie do...
4
The movie was good but it was released in 1999
1
Fell asleep... Ruined the plot
REND [REDACTED]
The Reverant [REDACTED]
236 [REDACTED]
```

```
RSTART
3
I felt tooo much suffering in this movie.
5
Awesome loved how the director made you feel like you were in the film
4
Very unrealistic, he should of died from hypothermia
1
My boyfriend made me watch this..
1000
Harambe... never forget
REND
END
2:31 ~/EEN218/lab4 >
```

---

### Sample Text File

```
Random MovieNet Name
START
Batman Begins
140
RSTART
5
Everything I could have hoped for
1
heavily overrated
5
The BEST movie of the year!!!
2
Batman Begins To Smell
REND
Waterworld
235
RSTART
4
Not nearly as bad as everyone says
-10
Glug-Glug-Glug ...&... Gurgle-Gurgle-Gurgle
3
NOT the worst movie ever made
REND
Avengers: Age of Ultron
141
RSTART
REND
Casablanca
102
RSTART
10000
```

A masterwork for all time

5

Of all the classics in all the films in all the world, this is the best!

5

Cinema par Excellence!

1

Am I missing something?

2

Casablah

REND

END