

## 1) Introduction -----

In this lab, you will write a C program to imitate a movie database. To achieve this, you will need to implement the struct movie given in part 5 and keep the movies in a linkedlist. You will dynamically create movie objects, insert them to the linkedlist and make modifications on them when it is required. Operation commands will be given from standard input. After each command, the movies in the list will (or not) change and you will apply the next operation on the changed movie list.

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## 2) Specifications -----

Movies will be represented by their names, ratings, year and duration. Movie names will be unique, there will be only one movie with a specific name. Movie names will not exceed 100 characters and will not contain space. Ratings will be between 0.0 to 10.0 and you will print them with one digit precision, years and duration (duration is in minutes) will be integers. You will write the main and other necessary functions to solve the task. In an infinite loop you will read inputs from standard input and execute demanded functions. Only if the "FINISH" (without quotation marks) input is received, the program should terminate. To store the movie related input, you will need to use structs. A struct example is provided in part 5

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## 3) Operations -----

1. If "FINISH" input is received , terminate

2. If input is "ADD", you will get the name, rating, year and duration of the movie from standard input respectively, create a new movie object and add it to the end of your linkedlist.

ADD

The\_Godfather 9.2 1972 120

3. If the input is "GETALL" you will print all of the movies line by line in (movie\_name rating year duration) format without paranthesis.

4. If input is "DELETEYEAR" you will read an integer from standard input and then delete all of the movies whose year equal to input.

5. If input is "CHANGERATING" you will read an input string from standard input then find the movie whose name is equal to input then read a float from standard input and then change the rating of the movie with new rating input. If no movie exists with first name input, make no change.

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## 4) Input-Output Examples -----

INPUT:

ADD

The\_Godfather 9.2 1972 120

ADD

Piyanist 8.5 2002 150  
ADD  
Terminator 8.1 1984 107  
GETALL  
DELETEYEAR 1972  
GETALL  
ADD  
UNDISPUTED 6.1 2002 94  
GETALL  
CHANGERATING UNDISPUTED 10  
GETALL  
FINISH

OUTPUT:

The\_Godfather 9.2 1972 120  
Piyanist 8.5 2002 150  
Terminator 8.1 1984 107  
Piyanist 8.5 2002 150  
Terminator 8.1 1984 107  
Piyanist 8.5 2002 150  
Terminator 8.1 1984 107  
UNDISPUTED 6.1 2002 94  
Piyanist 8.5 2002 150  
Terminator 8.1 1984 107  
UNDISPUTED 10.0 2002 94

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5) HINTS -----

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struct movie{  
char name[20];  
float rating;  
int year;  
int duration;  
struct movie * next;  
}
```

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