

# QUIZ 1

File format: **Class\_NIM\_NAMA.C** (Ex: LA05\_2702200000\_Dature.C)

## Money Tracker System

XYZ, a leading financial application, wants to upgrade its system to provide enhanced services to its customers. As part of the upgrade, XYZ can add transactions, view transaction histories, and delete transactions when necessary. The XYZ hires you to do the job. You want to leverages **double linked lists** data structures to optimize data storage and retrieval operations.

### Input:

1. The first input will be:

***B***

Where:

- ***B*** is an integer for the balance in the account.

2. The second input will be:

***N***

Where:

- ***N*** is an integer for the number of expense transactions in an account.

3. The third input will be:

***C<sub>1</sub>D<sub>1</sub>A<sub>1</sub>***

***C<sub>2</sub>D<sub>2</sub>A<sub>2</sub>***

***...***

***C<sub>N</sub>D<sub>N</sub>A<sub>N</sub>***

Where:

- ***C*** is a string for categories of transactions (**food / house / entertainment / other**),
- ***D*** is a string for detail of the transactions
- ***A*** is an integer for amount spends money for that transaction.

4. The fourth input will be:

***T***

Where:

- ***T*** is a string for the detail of the history transactions that want to be deleted from the list

### Output:

1. Print the balance in the account.
2. Print the expense of each category.
3. Print all the transactions.

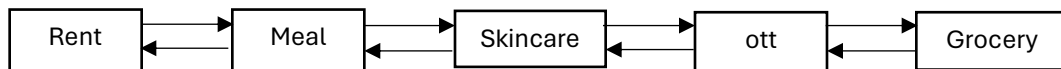
### Examples:

Sample input	Sample output
3500000 5 house rent 1800000 food meal 450000 other skincare 250000 entertainment ott 450000 food grocery 150000 ott	Account Balance: 850000 food: 600000 house: 1800000 entertainment: 0 other: 250000 rent (house): 1800000 meal (food): 450000 skincare (other): 250000 grocery (food): 150000

Explain:

- The initial account balance: 3.500.000
- There are 5 transactions:

Category	Detail	Amount	Balance
house	rent	1.800.000	1.700.000
food	meal	450.000	1.250.000
other	skincare	250.000	1.000.000
entertainment	ott	450.000	550.000
food	grocery	150.000	<b>400.000</b>



- Users want to delete “ott” from the transaction history list
  - o Account balance = last balance + ott  
= 400.000 + 450.000  
= **850.000**

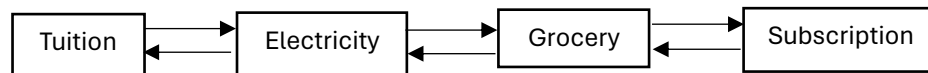


Sample input	Sample output
7000000 4 other tuition 1500000 house electricity 1000000 food grocery 750000 entertainment subscription 1250000 subscription	Account Balance: 3750000 food: 750000 house: 1000000 entertainment: 0 other: 1500000 tuition (other): 1500000 electricity (house): 1000000 grocery (food): 750000

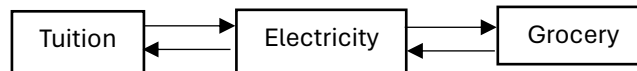
Explain:

- The initial account balance: 7.000.000
- There are 4 transactions:

Category	Detail	Amount	Balance
Other	Tuition	1.500.000	5.500.000
House	Electricity	1.000.000	4.500.000
Food	Grocery	750.000	3.750.000
entertainment	subscription	1.250.000	<b>2.500.000</b>



- Users want to delete “subscription” from the transaction history list
  - o Account balance = last balance + subscription  
= 2.500.000 + 1.250.000  
= **3.750.000**

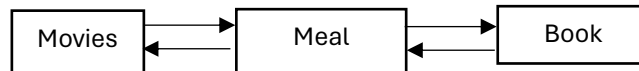


Sample input	Sample output
1000000 3 entertainment movies 150000 food meal 300000 other book 250000 movies	Account Balance: 450000 food: 300000 house: 0 entertainment: 0 other: 250000 meal (food): 300000 book (other): 250000

Explain:

- The initial account balance: 1.000.000
- There are 4 transactions:

Category	Detail	Amount	Balance
Entertainment	Movies	150.000	850.000
Food	Meal	300.000	550.000
Other	Book	250.000	<b>300.000</b>



- Users want to delete “movies” from the transaction history list
  - o Account balance = last balance + movies  
= 300.000 + 150.000  
= **450.000**

