

## Explanation\_PRJ6

### 1. Goal

- Take in two linked lists and return a linked list as union or intersection, respectively..

### 2. Code Design

#### A. Linked-List $\rightarrow$ set

- I put the value from each linked-list into two sets respectively.

#### B. `union` and `intersect`

- I used union and intersection as Python's built in type and function for finding Union and Intersection respectively.

### 3. Efficiency

#### A. Time Efficiency

- For the worst case, the time of the set from union function  $\rightarrow O(n+m)$
- For the worst case, the time of the set from intersection function  $\rightarrow O(n)$  or  $O(m)$

#### B. Space Efficiency

- For the worst case, the space of the set from union function  $\rightarrow O(n+m)$
- For the worst case, the space of the set from intersection function  $\rightarrow O(n)$