

Explanation_PRJ5

1. Goal

- Use your knowledge of linked lists and hashing to create a blockchain implementation.

2. Code Design

A. Linked-List

- I've used two classes named Block(Node) and Blockchain(Linked-List) which has 3 methods 'append', 'size', 'to_list'

B. Hash generation

- I've used SHA-256 Hash with text string of data itself.

3. Efficiency

A. Time Efficiency

- append $\rightarrow O(1)$
- size $\rightarrow O(n)$
- to_list $\rightarrow O(n)$
- Total : $O(1+n+n) \rightarrow O(n)$

B. Space Efficiency

- Space Efficiency is $O(n)$ because it grows linearly when linked list (Blockchain) stores each node