

Walkthrough of Code:

A blockchain is composed of the references to the previous hash, a unique self-hash, a time stamp, and data from initialization. A blockchain itself is a basic linked list, in that implements only an append method, which appends a Node block object with the above arguments

Time Complexity: $O(1)$

The time complexity in this case is constant. It wouldn't vary as the chain is appended to. The overall concept is a basic linked list. It only implements an append method, which references the head block data and constructs a new block out of it. Other than that, the class would not derive any data from it.

Space Complexity: $O(n)$

The block chain length and space complexity varies with the length of the input, appending a block given a new value as a list would append a value.