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4.1 Theroie

|  |  |  |  |
| --- | --- | --- | --- |
| Operation | best | average | worst |
| insert operation at the end of a single linked list | O(1) | O(n) | O(n) |
| insert operation at the end of a list backed by an array | O(1) | O(1) | O(1) |
| insert operation of a hash table | O(1) | O(1) | O(1) |
| contains operation of a list | O(1) | O(n) | O(n) |
| contains operation of a hash table | O(1) | O(1) | O(n) |
| insert operation at the end of a single linked list | O(1) | O(n) | O(n) |
| insert operation at the end of a list backed by an array | O(1) | O(1) | O(1) |
| insert operation of a hash table | O(1) | O(1) | O(1) |
| contains operation of a list | O(1) | O(n) | O(n) |
| contains operation of a hash table | O(1) | O(1) | O(n) |

4.2 What would be a suitable Java datatype to implement a FIFO-structure

A linked list