

BPJ 52:

1. The acronym FIFO describes a type of data structure, that the first data entered into it will be the first data returned from it. It stands for First In First Out.
2. The acronym LIFO describes a type of data structure, that the first data entered into it will be the last data returned from it. It stands for Last In First Out.
3. A Queue is of type FIFO.
4. a. FIFO b. FIFO c. LIFO d. LIFO e. FIFO
5. The difference is that the peekFront method returns the first Object without removing it from the list, but the dequeue method both returns the object at the front of the list, and removes the object from the list.

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1. In either table, the key is meant to point towards a certain index in an array, rather than going through a complex math operation, or looking throughout the array for the value.
2. A lookup table, because the values are clustered, so a regular lookup table would be acceptable.
3. A hash table, because data storage and retrieval is faster than a lookup table, and it can store more, because multiple hash keys can point to a single bucket, meanwhile in a lookup table it is 1 key to an index.
4. A load factor is how many items are stored in the table, compared to the available amount of buckets in the table. A high load factor is more memory efficient, however it causes more collisions. A low load factor does not cause many collisions, but has more buckets, meaning it requires more memory.
5. A small load factor.