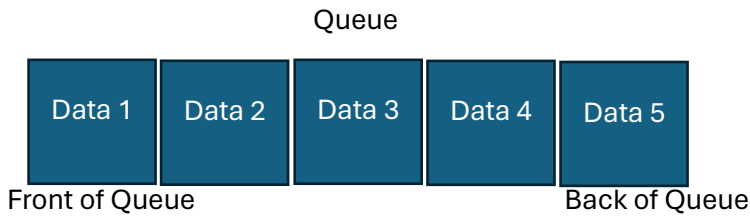## QUEUES

Queues are a way of structuring data. They act the same way people in a line do. Data can be added to the queue at the back. Data at the front of the queue can be removed.

For the queue to function properly we would need to know the associated value of each item in the queue. We would need to know the order that the items are in. We would need to know how many items the queue can hold.

Queue

Data 1	Data 2	Data 3	Data 4	Data 5

Front of Queue   Back of Queue

Functions:

Remove the first data point.

Add data point to end of queue.

If the queue cannot hold any more data points the oldest data is put into a heap. The indexes of all the data points still in the queue need to be updated.

LINKED LISTS

Linked lists allow more variability in terms of adding and removing data than queues do. Data can be inserted at any index of the stack. Any data point at any index can be removed from the stack. All items in the stack need to have an associated value and index.

Functions:

Remove item at certain index. Then update all items with index higher than the removed item.

Insert item at any index in list. Update index of old items surrounding new item.

If the queue cannot hold any more data points the oldest data is put into a heap. The indexes of all the data points still in the queue need to be updated.