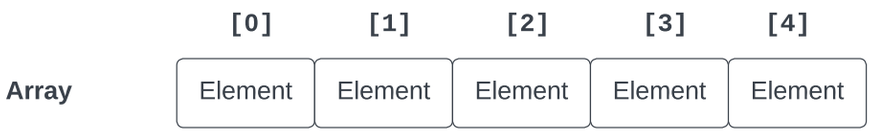
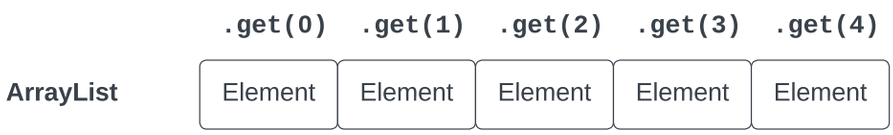
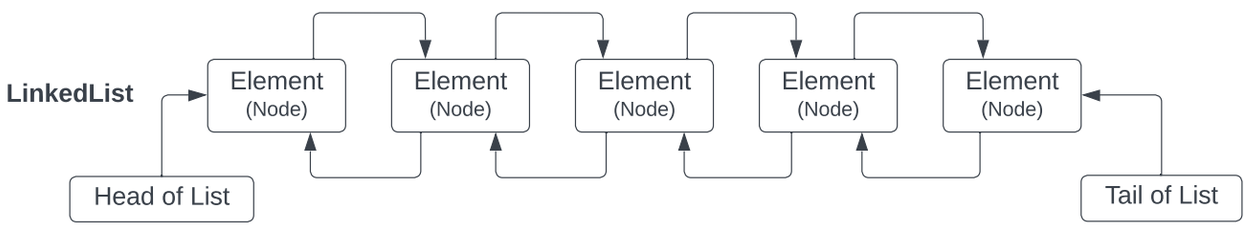
01 - Collection Class Objects Illustrated



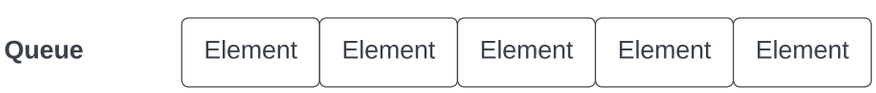
Array is NOT a Collections class object - it is included for comparison
Array is fixed size;
Size must known at instantantiation;
Cannot add or remove element;
Access is by index [ ]



ArrayList is variable size;
Add or remove elements;
Access via get() , add(), remove() methods;
Somewhat inefficient when add/remove elements (has to move elements around)



LinkedList is variable size;
Add/remove elements
Access via add(), addFirst(), addLast(), getFirst(), getLast(), get(), listIterator
More efficient that ArrayList, Stack when add/remove elements



Queue is variable size;
Only add elements to end - **add()**
Only retrieve elements from the beginning - **poll()**
FIFO (First-In, First-Out) data structure
Once an element is retrieved, it is removed from the Queue

Stack is variable size;
Only add elements to the top - **push()**;
Only retrieve elements from the top - **pop()**;
LIFO (Last-In, First-Out) data structure
Once an element is retrieved, it is removed from the Stack