

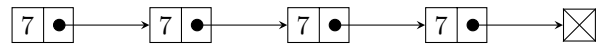
# Linked Lists

January 3, 2019

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## 1 Linked Lists

- A chain of Nodes
- Each node has 2 parts, an item and a pointer
- The last pointer points to *None*
- The first node is called a *Head*



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## 2 Linked List ADT

- `isempty()`    # is the linked list empty
- `add()`        # add an item to the linked list
- `remove()`    # remove an item from the linked list

### 3 Defining the Linked List

```
Class Node:
    def __init__(self, item, next):
        self.item = item
        self.next = next

Class LinkedList:
    def __init__(self):
        self.head = None

    def add(self, item):
        self.head = Node(item, self.head)

    def remove(self):
        self.is_empty():
            return None
        else:
            item = self.head.item
            self.head = self.head.next
            return item

    def is_empty(self):
        return self.head == None
```

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