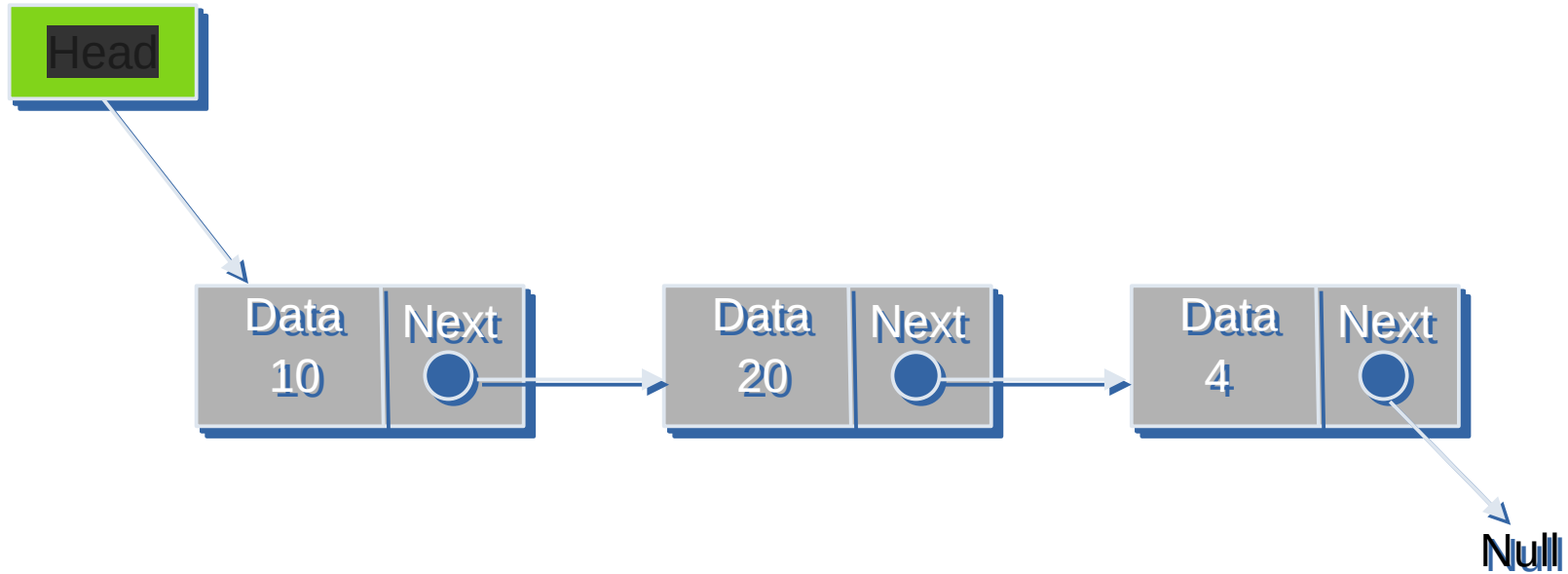# Linked List

Data
10

Next ⬤

Node

2 parts

- Data
- Reference to the next node

Linked List

Linked List
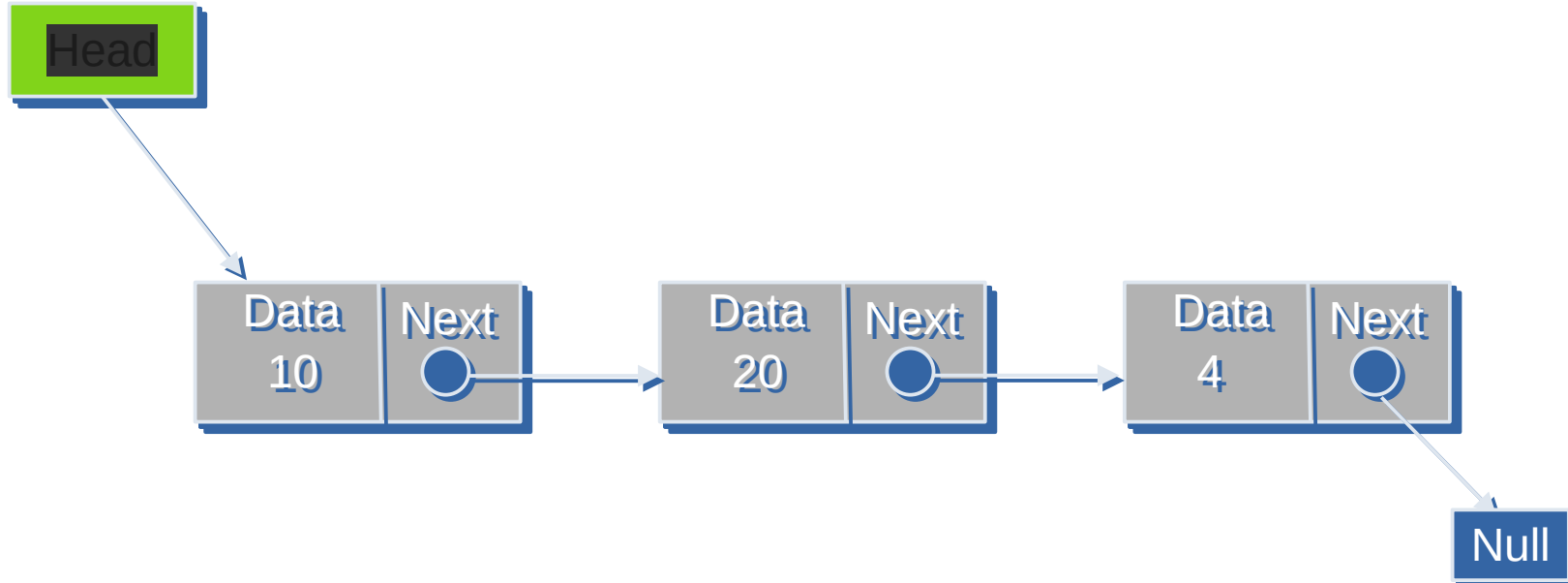
Common Operations

- append(data) // add at the end
- prepend(data) // add at the beginning
- delete(data)
- getSize()
- find(data)
- insert(data)
- printList()

Linked List

Example

prepend(5)

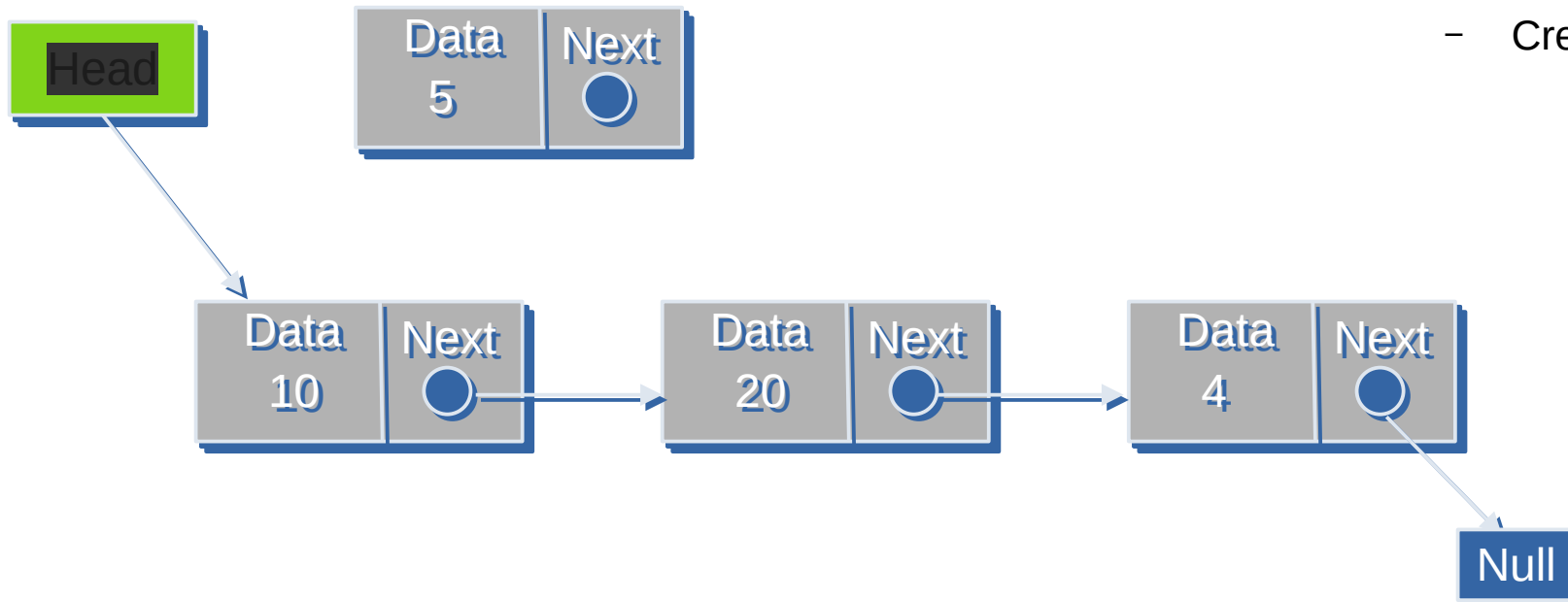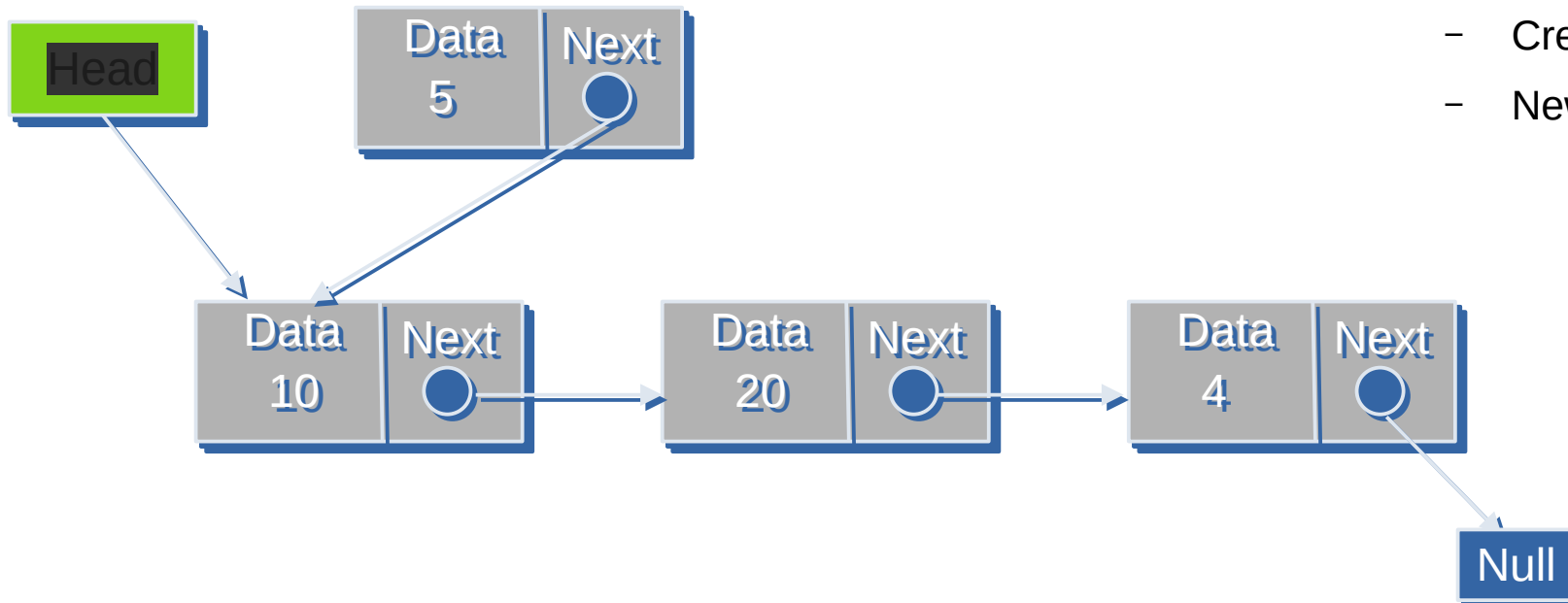# Linked List

Example

prepend(5)

– Create new node

| Head |

| Data 5 | Next |

| Data 10 | Next | → | Data 20 | Next | → | Data 4 | Next |

Null

Linked List

Example

prepend(5)

- Create new node
- New Next to Head

Head

Data 5 | Next

Data 10 | Next

Data 20 | Next

Data 4 | Next

Null

Linked List

Example

prepend(5)

- Create new node
- New Next to Head
- Head to new node

Head	

Data 5	Next ●

Data 10	Next ●

Data 20	Next ●

Data 4	Next ●

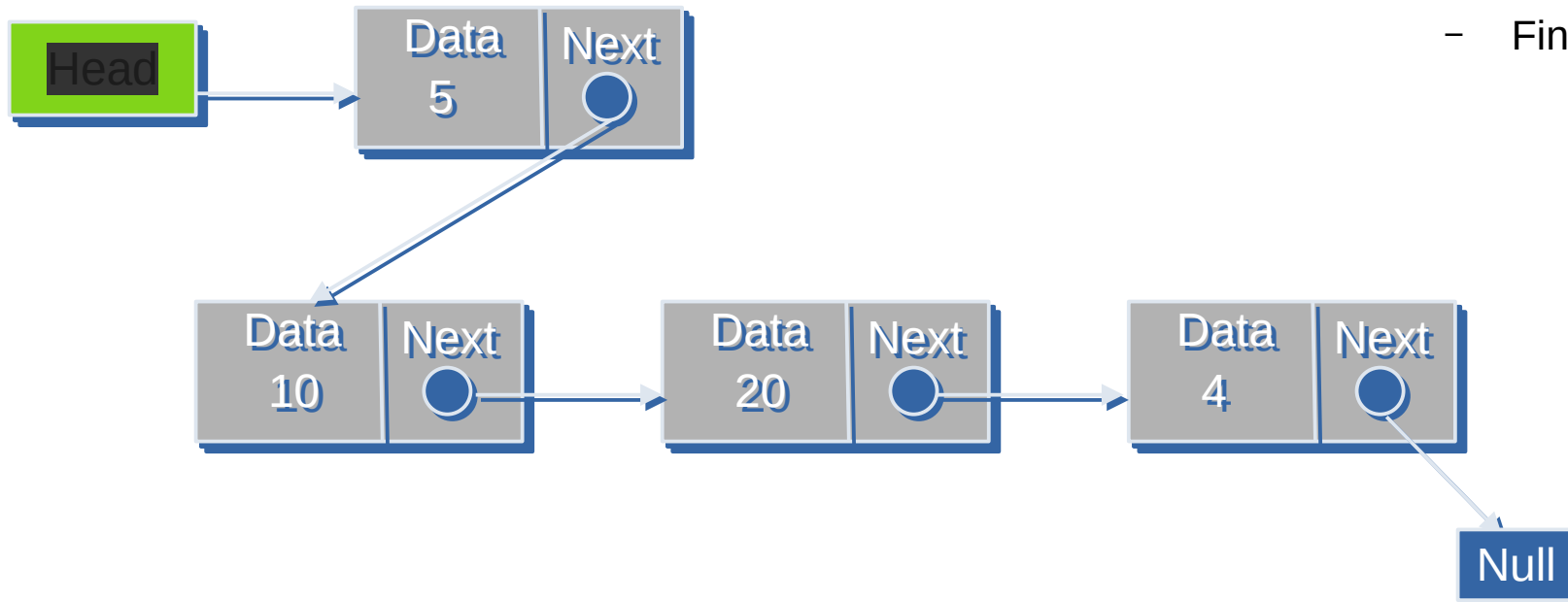| Null |
|------|
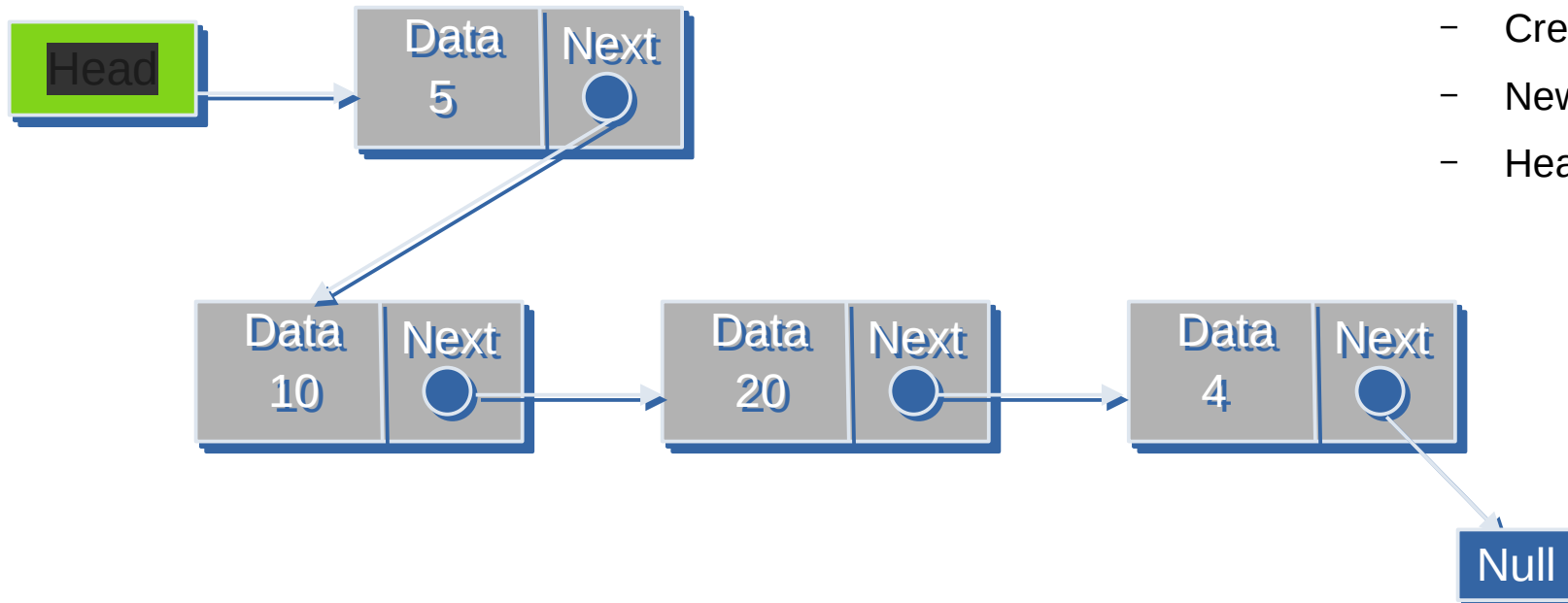
Linked List
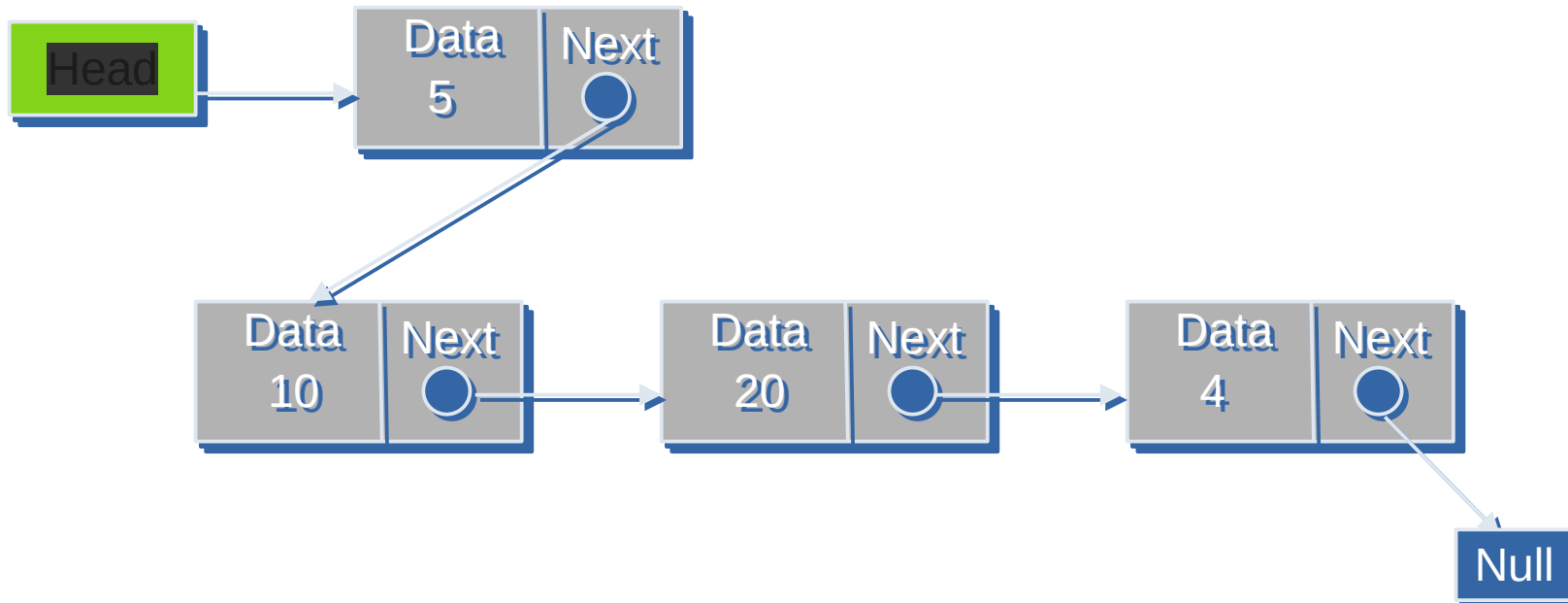
Example

delete(10)

Linked List
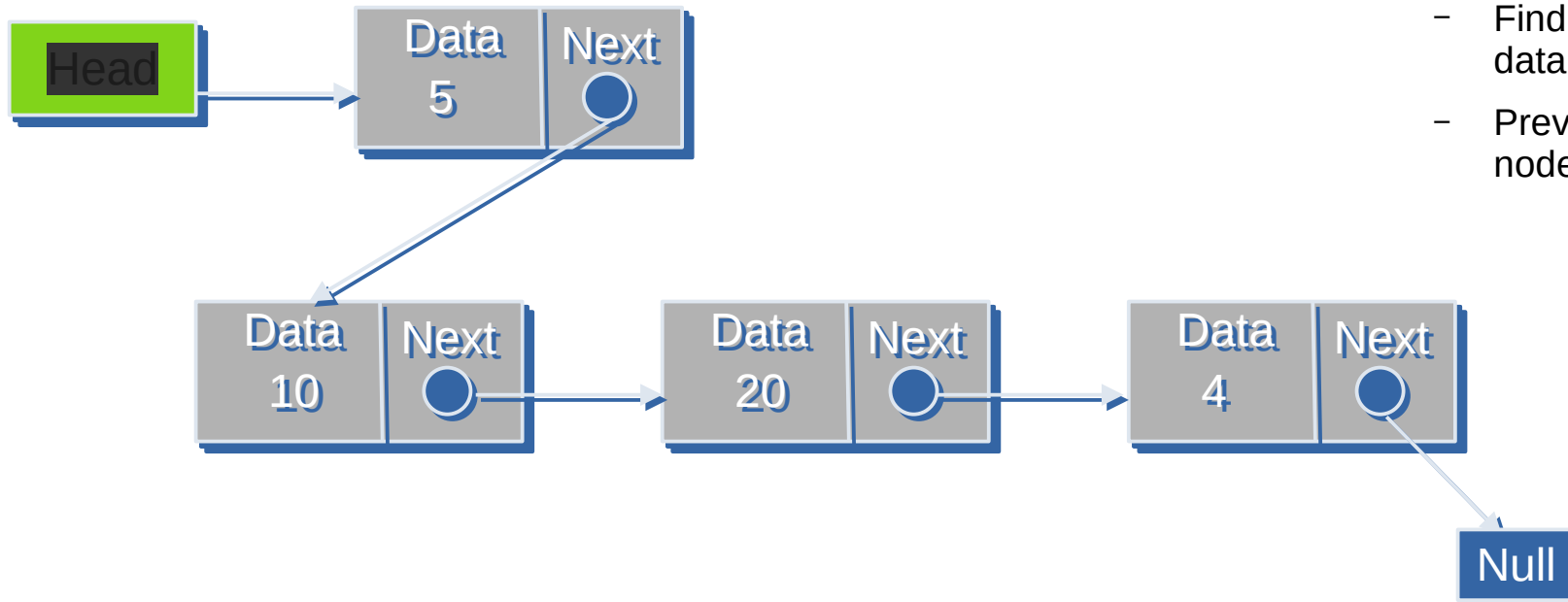
Example

delete(10)

– Find data

Linked List

Example

delete(10)

- Find the node where data
- Prev's next to this node's next

Linked List

Example

delete(10)

– Find data

– Prev's next to the node's next

Head

Data 5	Next

Data 10	Next

Data 20	Next

Data 4	Next

Null