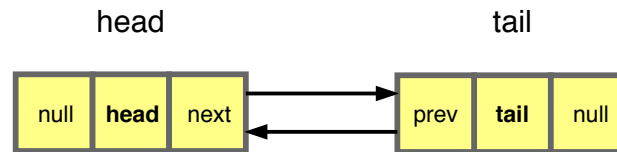# Data Structure of LRU Cache

head   tail

| null | **head** | next | | prev | 4 | next | | prev | 3 | next | | prev | 1 | next | | prev | 2 | next | | prev | **tail** | null |

Initialization

head   tail

| null | **head** | next | | prev | **tail** | null |
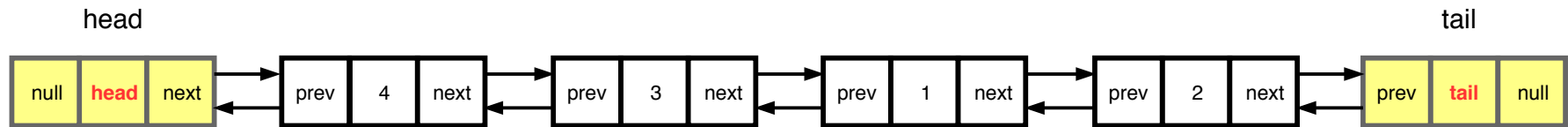
Add New Elements(size < capacity)

Add(1)

| null | **head** | next | | prev | 1 | next | | prev | **tail** | null |

Add(2)

| null | **head** | next | | prev | 2 | next | | prev | 1 | next | | prev | **tail** | null |

Add(3)

| null | **head** | next | | prev | 3 | next | | prev | 2 | next | | prev | 1 | next | | prev | **tail** | null |
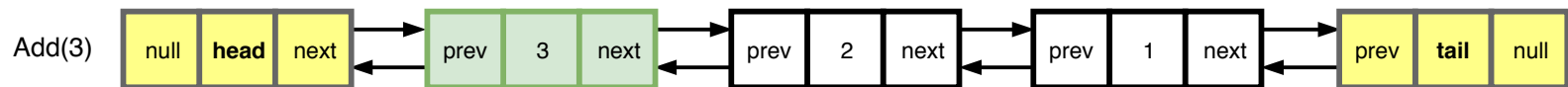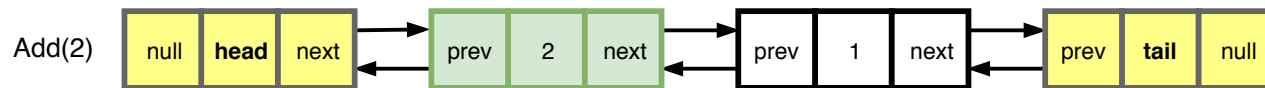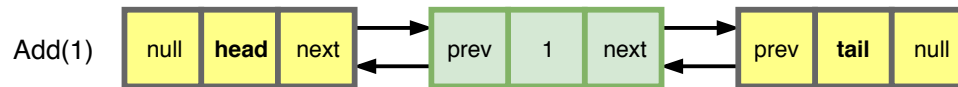
Add Element If Cache Is Full - Add(4)

Capacity = 3

| | prev | 4 | next |

Before

| null | **head** | next | | prev | 1 | next | | prev | 3 | next | | prev | 2 | next | | prev | **tail** | null |

After

| null | **head** | next | | prev | 4 | next | | prev | 1 | next | | prev | 3 | next | | prev | **tail** | null |

Get Element - Get(1)

Move

Before

| null | **head** | next | | prev | 3 | next | | prev | 2 | next | | prev | 1 | next | | prev | **tail** | null |

After

| null | **head** | next | | prev | 1 | next | | prev | 3 | next | | prev | 2 | next | | prev | **tail** | null |