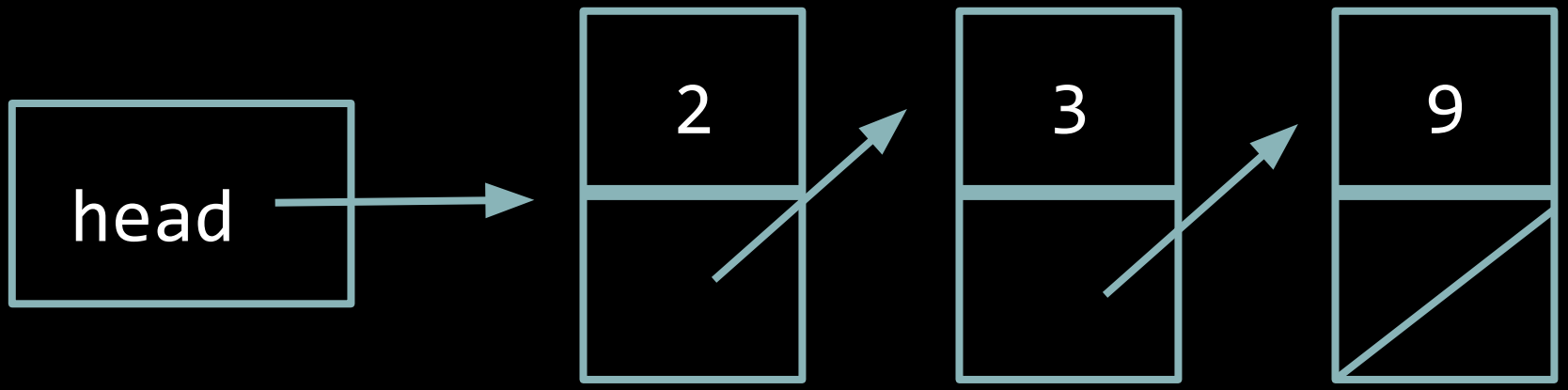
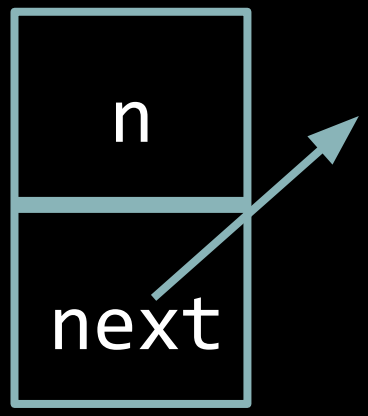
Linked Lists

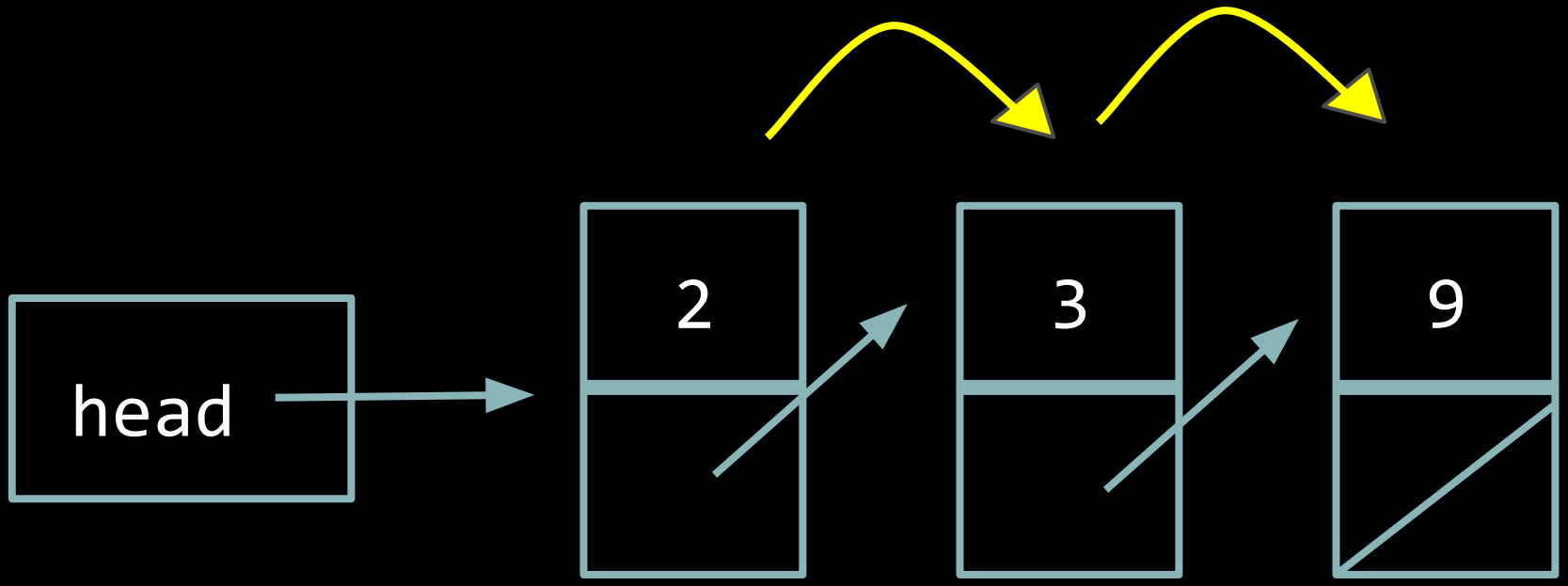


Nodes



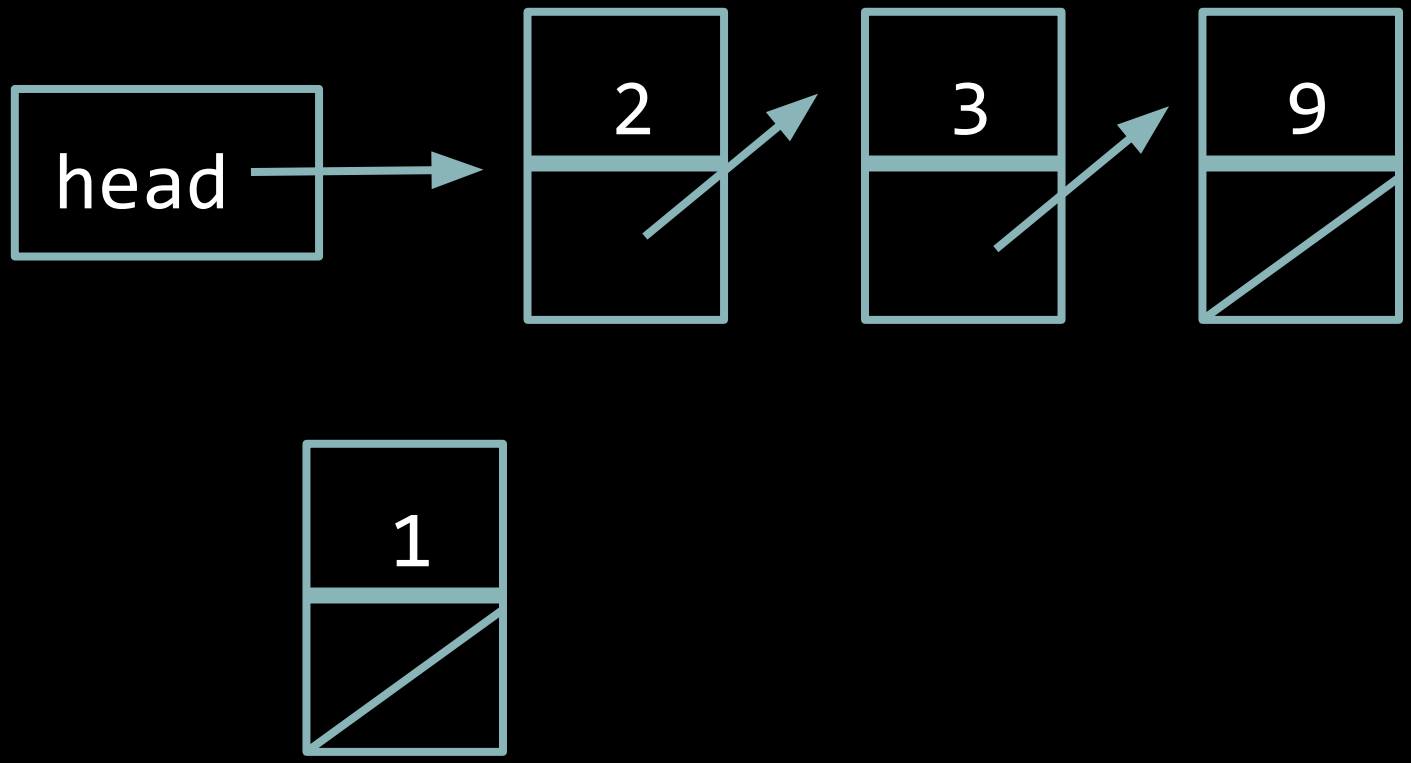

```
typedef struct node
{
    int n;
    struct node* next;
}
node;
```

Search

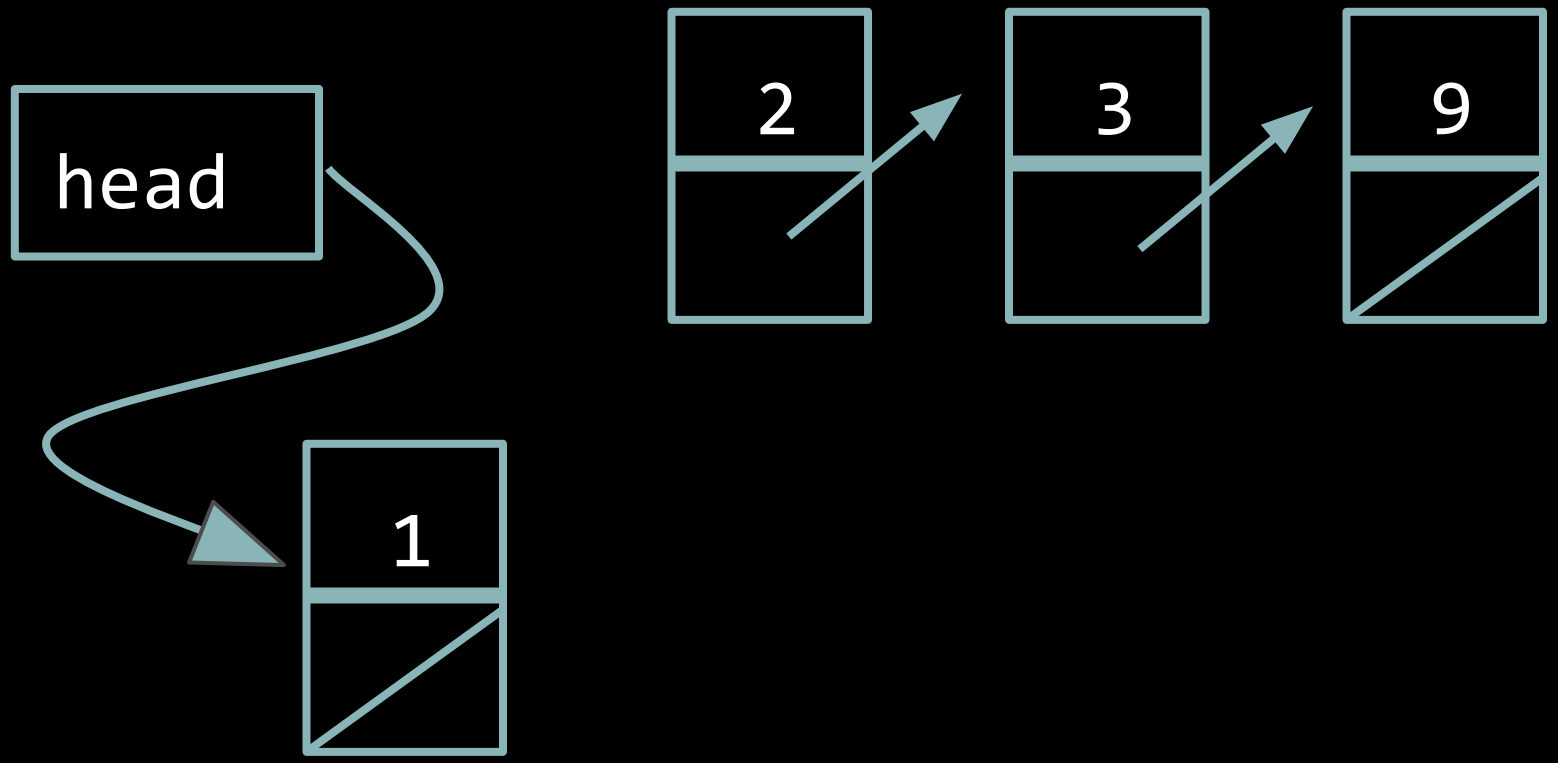


```
bool search(node* list, int n)
{
    node* ptr = list;

    while (ptr != NULL)
    {
        if (ptr->n == n)
        {
            return true;
        }
        ptr = ptr->next;
    }
    return false;
}
```

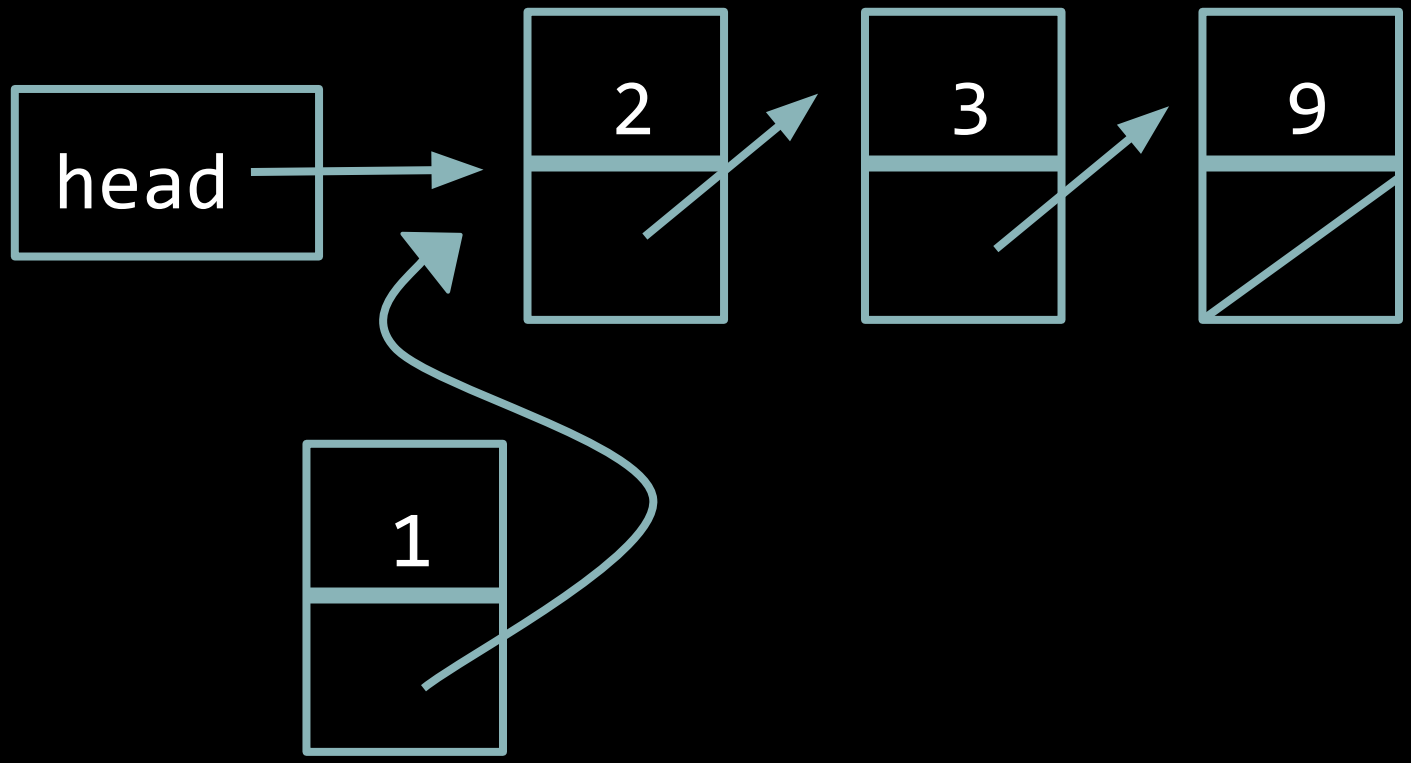
Insertion



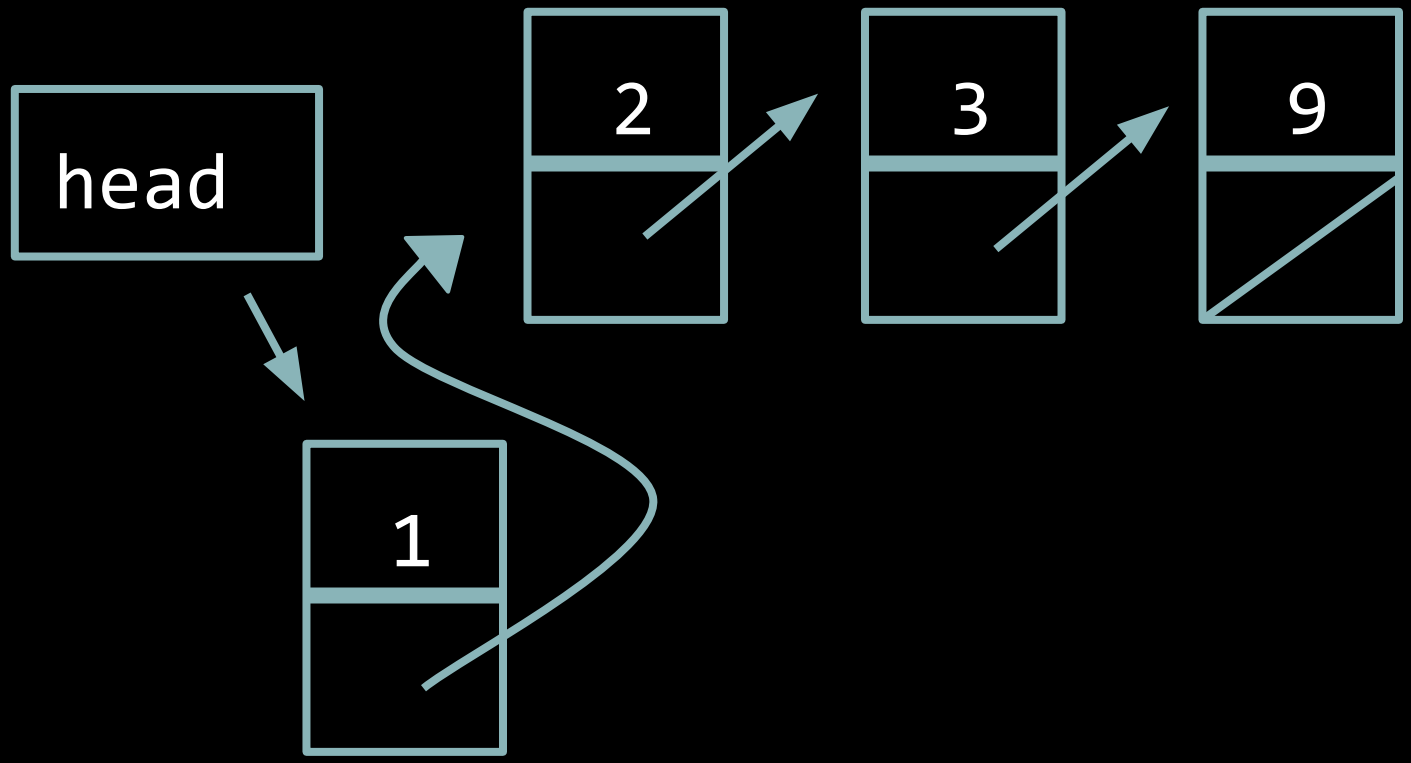
Insertion



Insertion

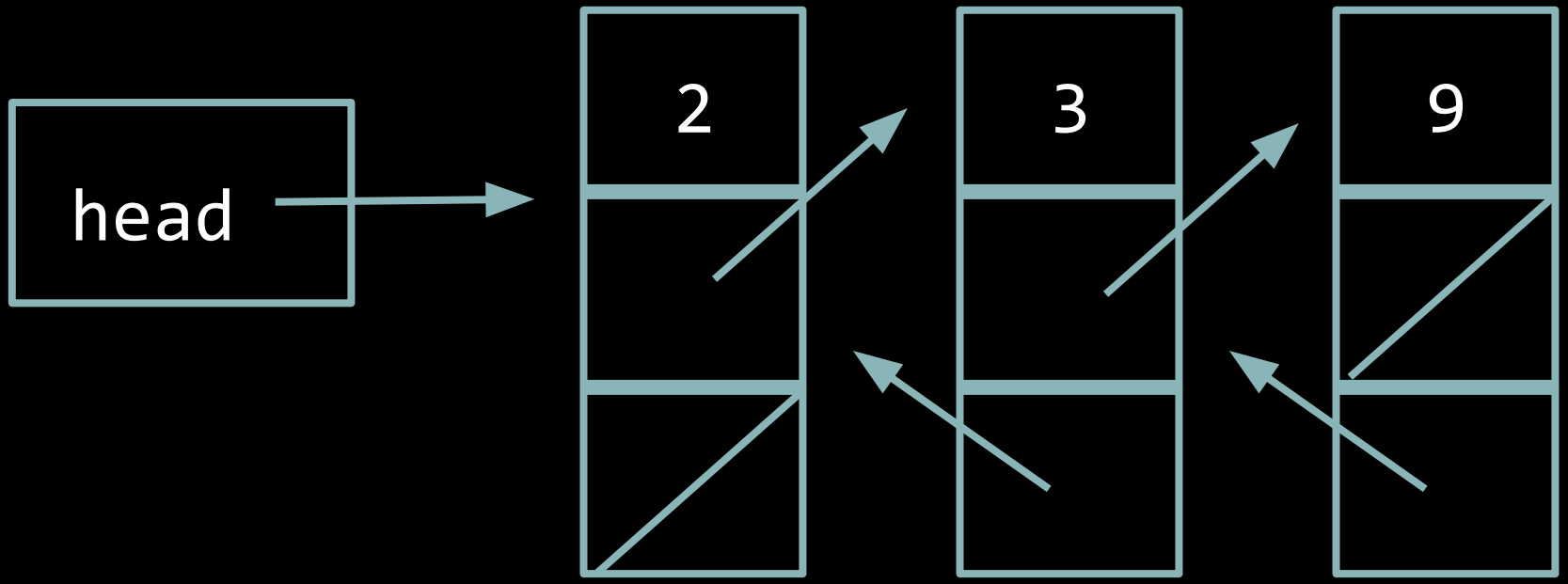


Insertion

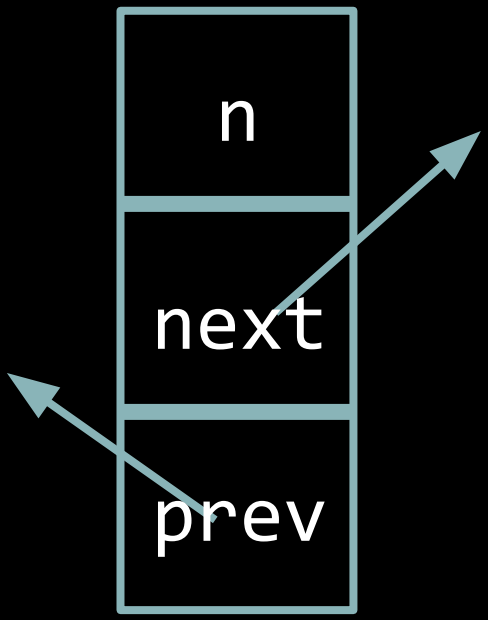


```c
void insert(int n)
{
    // create new node
    node* new = malloc(sizeof(node));

    // check for NULL
    if (new == NULL)
    {
        exit(1);
    }
    // initialize new node
    new->n = n;
    new->next = NULL;

    // insert new node at head
    new->next = head;
    head = new;
}
```

Doubly Linked Lists



DLL Nodes




```
typedef struct  node
{
   int n;
   struct node* next;
   struct node* prev;
}
node;
```