

Comparison of Different List Implementations

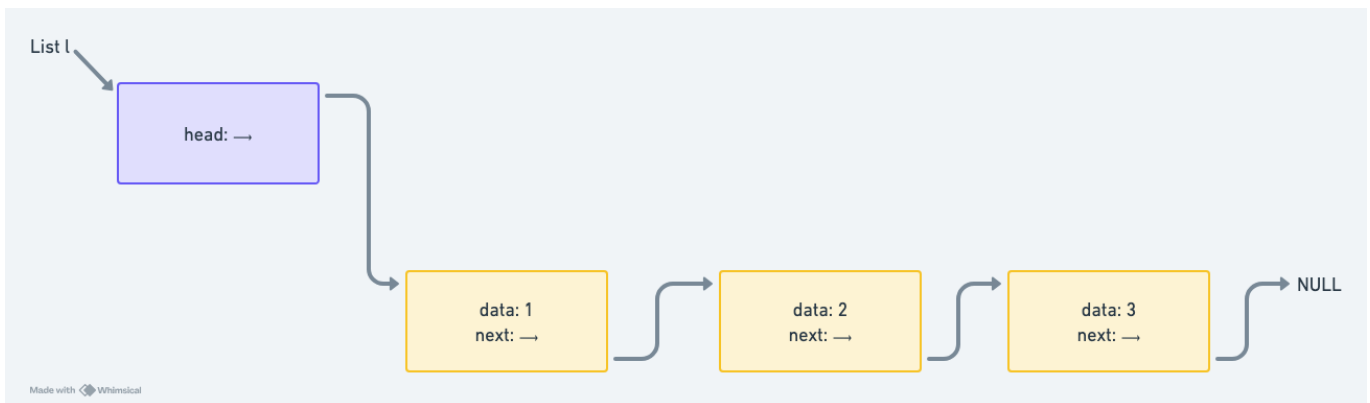
Array

```
struct list {  
    Item data[MAX_SIZE];  
    int size;  
};
```



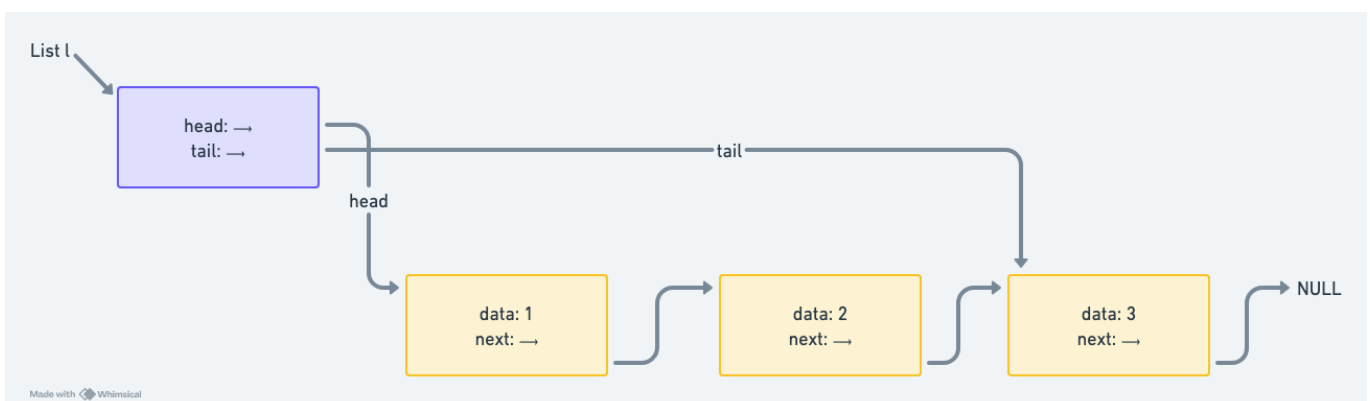
Linked List (Simple)

```
struct node {  
    Item data;  
    struct node * next;  
};  
  
struct list {  
    struct node * head;  
};
```



Linked List with a Head and Tail

```
struct node {  
    Item data;  
    struct node * next;  
};  
  
struct list {  
    struct node * head;  
    struct node * tail;  
};
```



Doubly Linked List with a Head and Tail

The images below depict the same data structure, but in a slightly different visual representation.

```
struct node {  
    Item data;  
    struct node * prev;  
    struct node * next;  
};  
  
struct list {  
    struct node * head;  
    struct node * tail;  
};
```

