OPERATING SYSTEM

Kernel Data Structures

Dr Rahul Nagpal
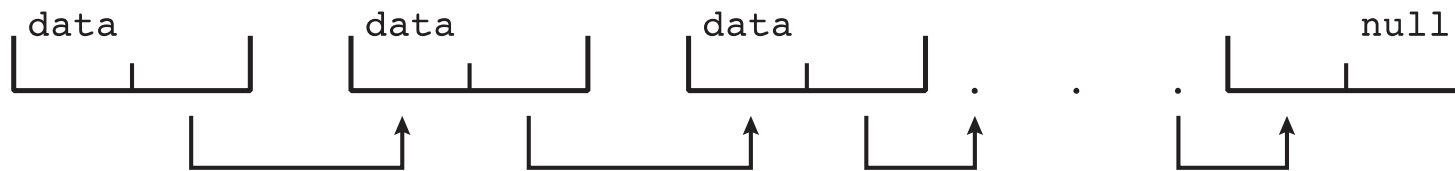Computer Science

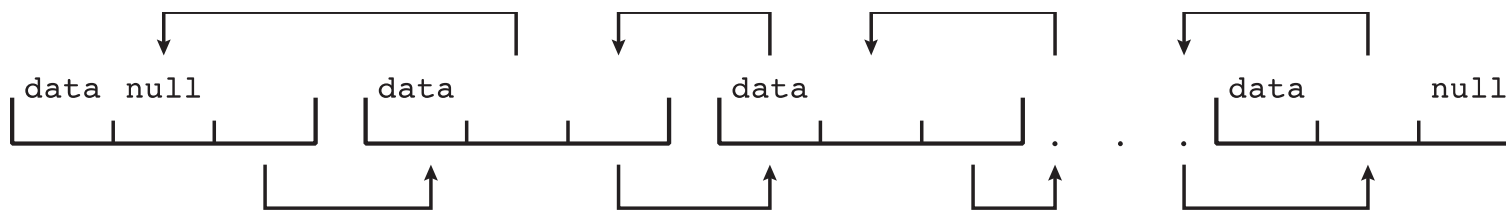# OPERATING SYSTEM

Kernel Data Structures

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Computer Science

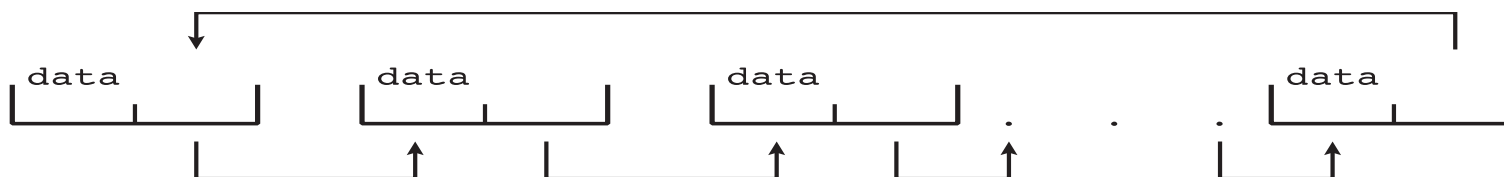Many similar to standard programming data structures

Singly linked list
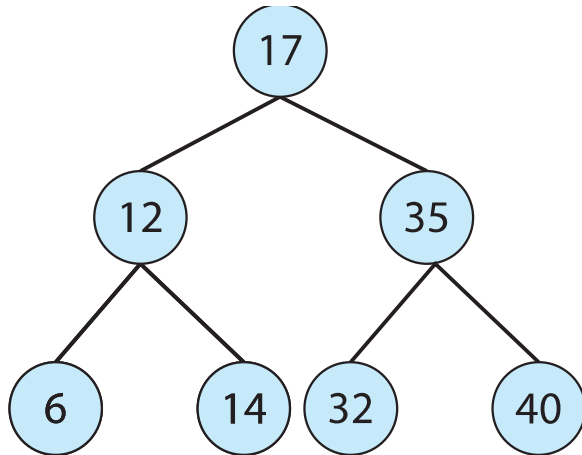

Doubly linked list
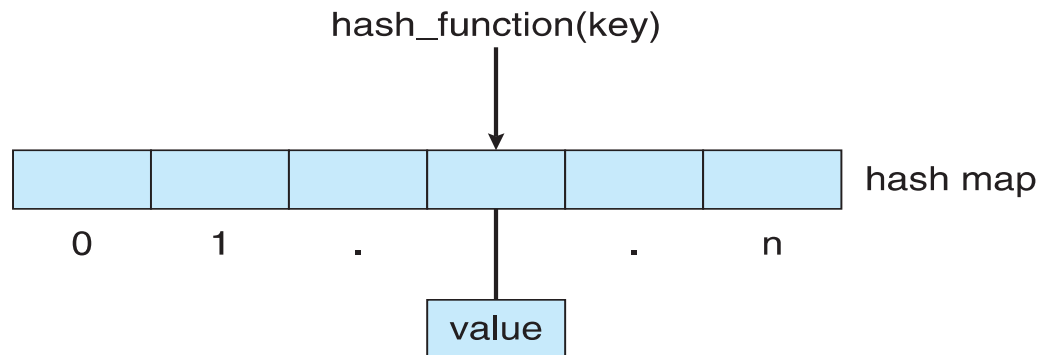

Circular linked list

Binary search tree

left <= right

    Search performance is *O(n)*

    Balanced binary search tree is *O(lg n)*

- **Hash function** can create a **hash map**

hash_function(key)

0	1	.		.	n

hash map

value

- **Bitmap** – string of *n* binary digits representing the status of *n* items
- Linux data structures defined in
- *include* files `<linux/list.h>, <linux/kfifo.h>, <linux/rbtree.h>`

THANK YOU

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