comp1511 week 08

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admin

- **assignment 1** marking is underway!
- **assignment 2** has been released:

https://edstem.org/au/courses/12009/lessons/38948/slides/269807

agenda for today

- pointers revision
- malloc revision
- diagramming linked lists
- inserting into linked lists

pointer revision

what is a pointer?

how do we declare and initialise a pointer?

what is dereferencing?

malloc revision

what does malloc do?

what are the inputs?

what are the outputs?

malloc a struct

how do we malloc a struct node?

how do we initialise the fields?

can we turn this into a function?

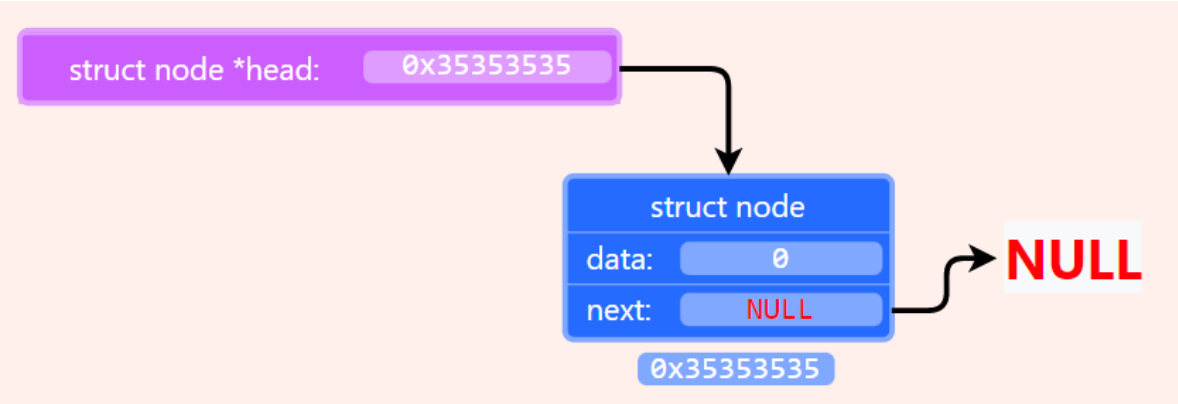
```
struct node {
    int data;
    struct node *next;
};
```

demo time!

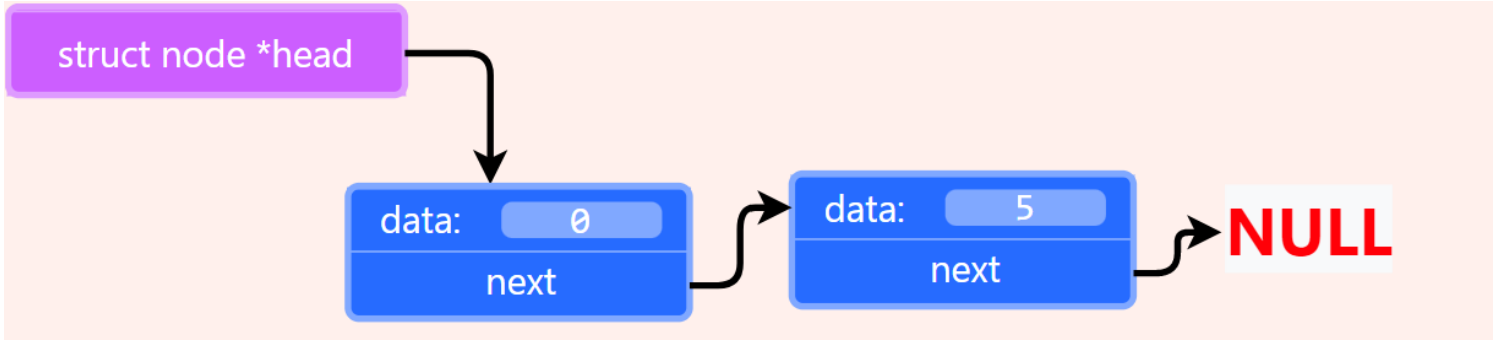
5 volunteers please!

so, what’s the point of linked lists?

linked lists



adding nodes to linked lists

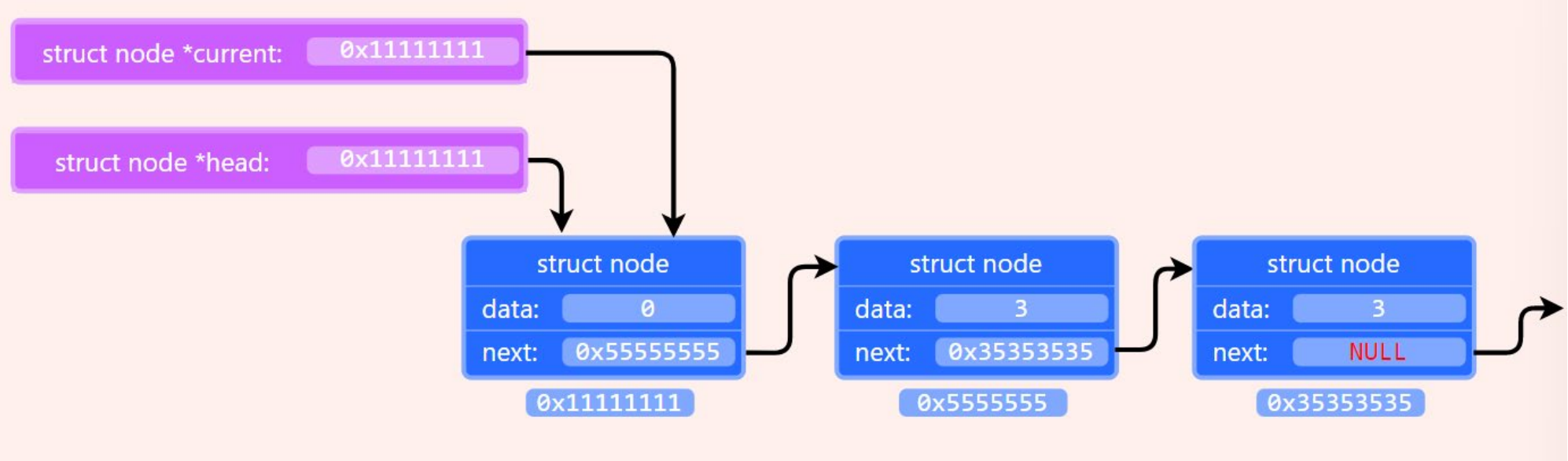


iterating through a linked list?

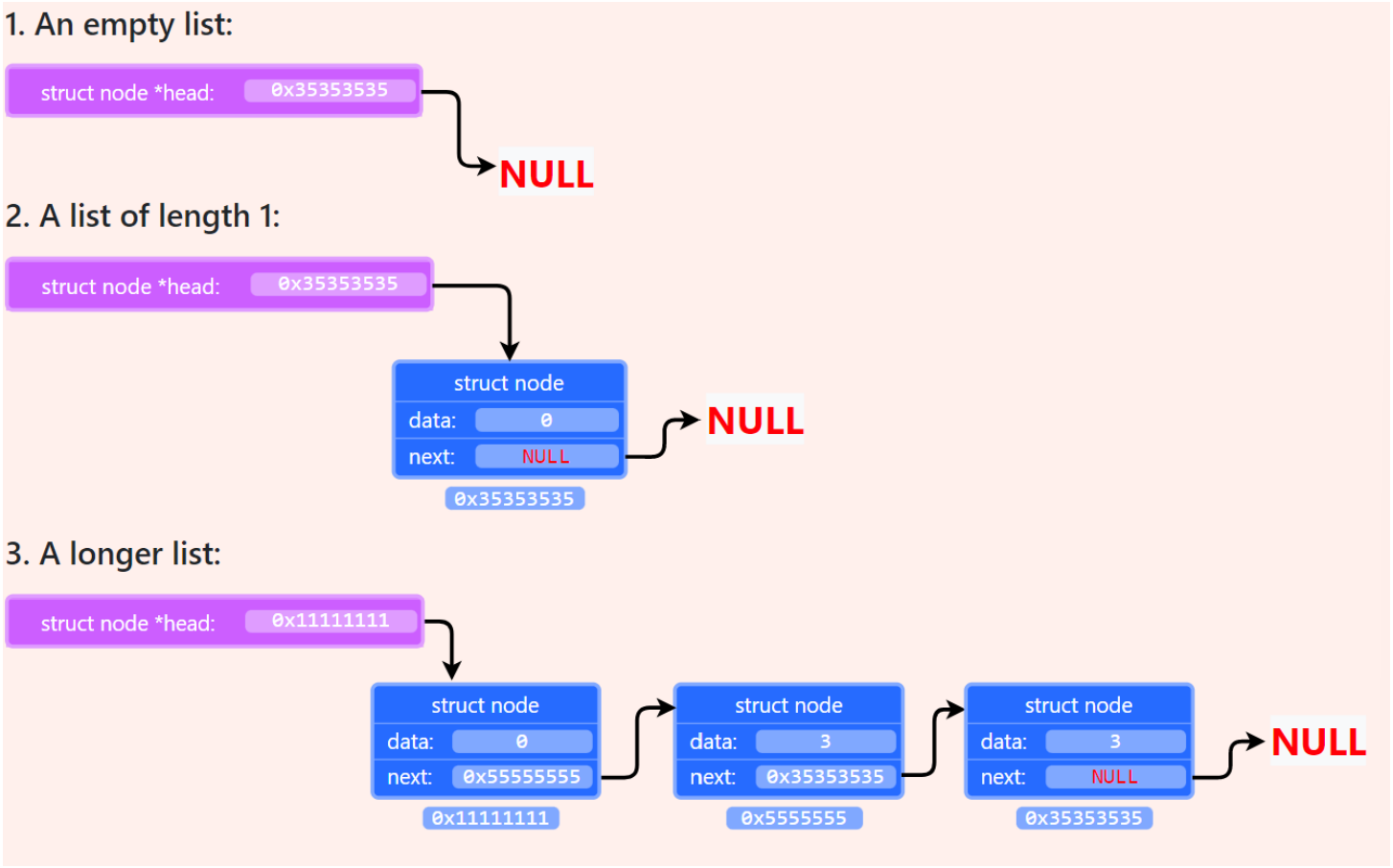
how do we iterate through a linked list?

how do we stop one before the end of the linked list?

any special cases to consider?



cases to consider



inserting into a linked list

given a linked list, how can we write a function to:

1. adding to the head of a list
2. adding to the end of a list
3. adding in the middle of a list

any questions?