Linked List

Vars → Single data

- Int
- floats
- chars

int a = 10;

Arrays

int a[] = [1,2,3,4]

Strings

char a[] = "chelsea";

One single piece of Informatn

they were holding
just one data type

Int = Integers only

array of characters = Chars only

float = floats only

Structures → Create data of difrent types

Wanted to combine

int, string, float

→ Create a structure

→ Defing our own data type

Import the stdlib.h

```
struct bio_info
{
        char *name;
        int age;
};
```

Create a
variable of
type
struct that stor
all the data

```
struct person = {"Ernest", 20};
printf(person)
```

Create our own data types using Structures

vars -> Arrays -> Structures

Linked Lists

Data structures => ways of organis
data for efficien
processing.

Personal Management System

→ Storing information about a
user

- → name
- → age
- → DoB
- → village

PMS → variables

20 (printf) ↔

1 Name _ s

2 Age _

3 Village _

4

:

20 Mothers Villag

Not the best way!!

Bio data for the PMS

Array] Its holds items of the data type, fixed length

structure

```
struct Bio data
{
    char *name;
    int age;
    char *village;
}
```

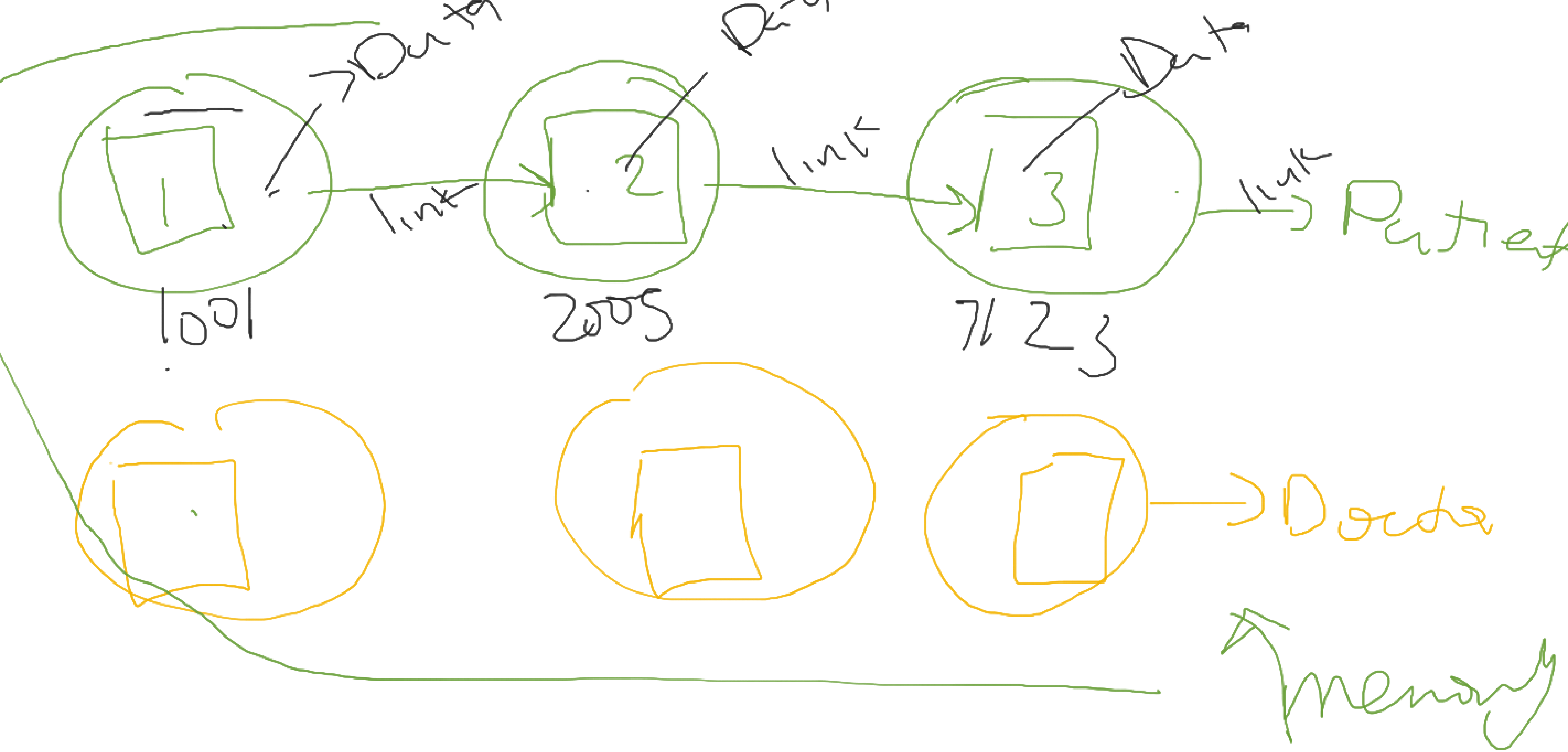
Data

Structure] Better representat of our Data

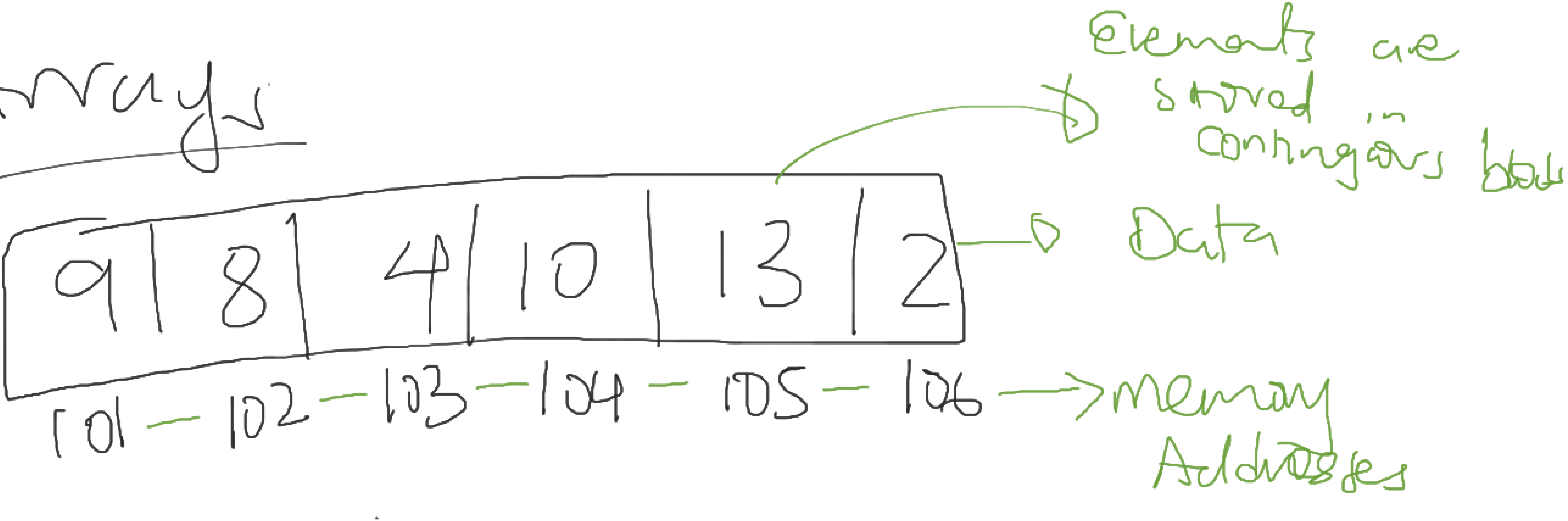
Struct Person1 = (*Biodata)malloc(sizeof( ))

Use/logins → Patient

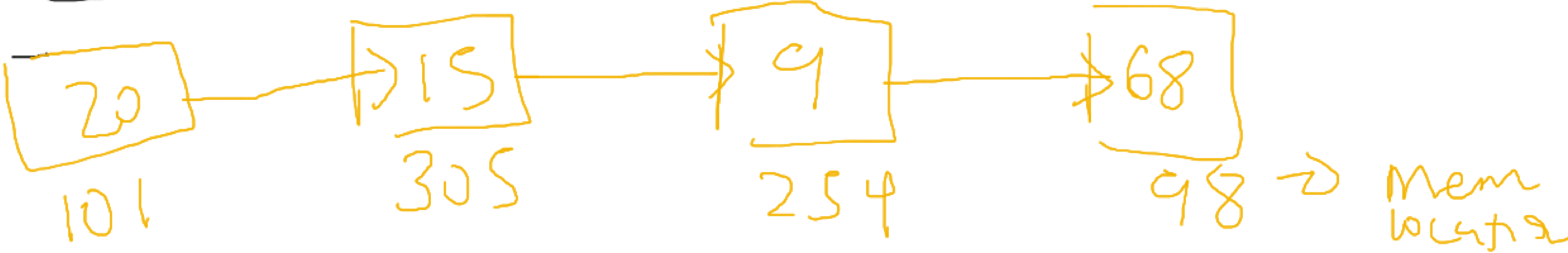
/login/doctor → Doctor


Data
Data
Data
1
link
2
link
3
link
1001
2005
7123
Patte
Data
memory

Arrays

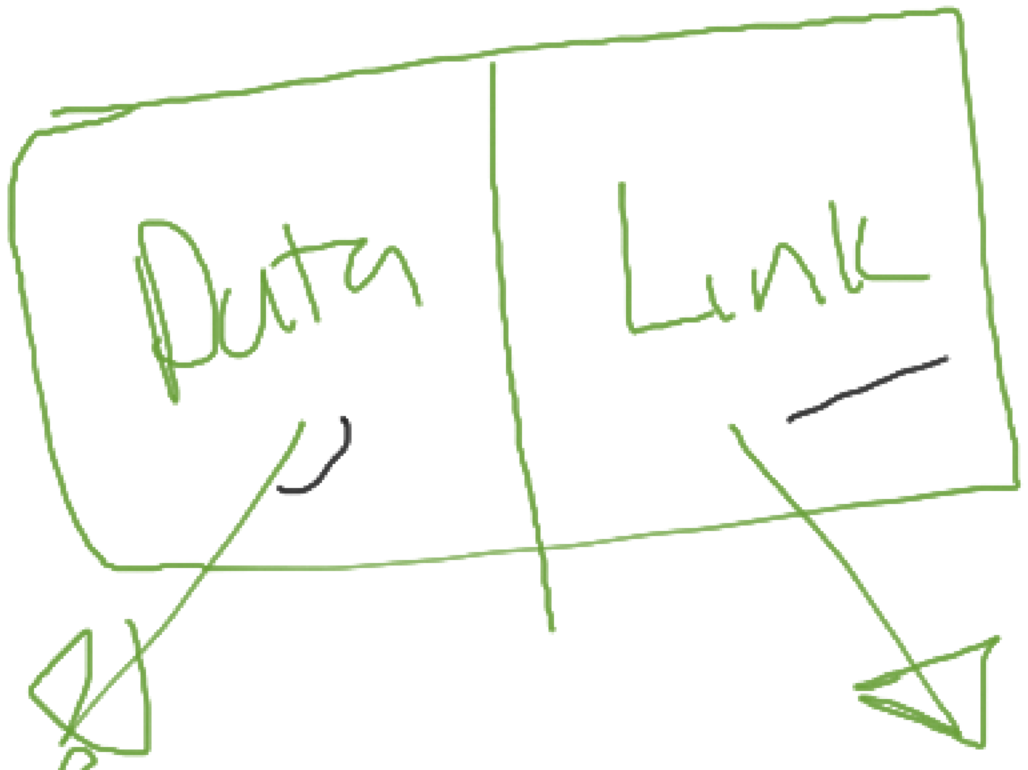


Linked List



Linked List

① Nodes : (Data Points)



Int age
float mony
char name

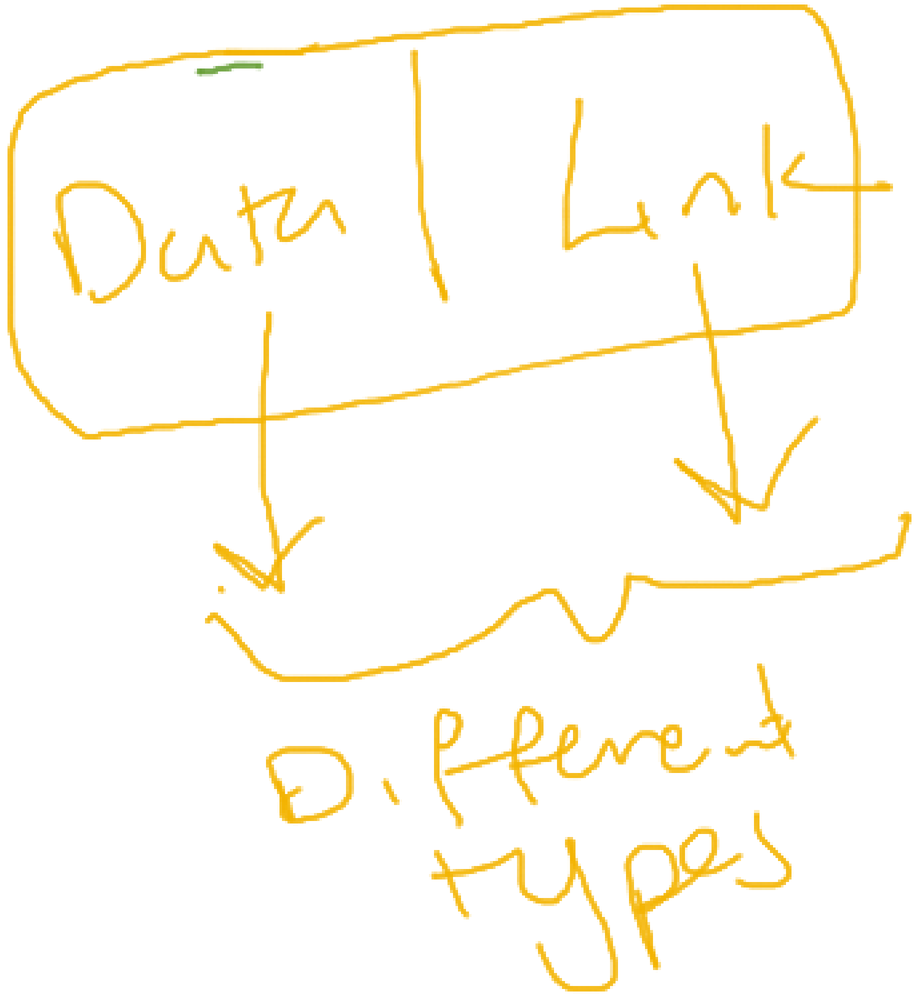
Pointer to the next node

2 parts to a node :

i) Data

ii) Link to the next node

How do we create a Node ?



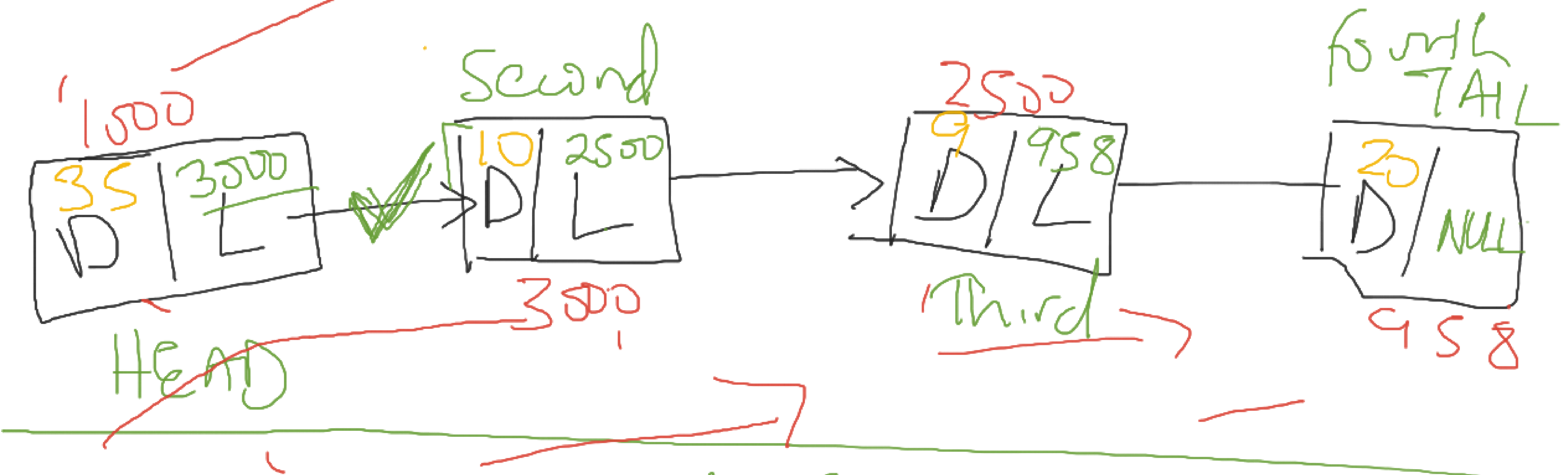
⇒ Structure

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

Data

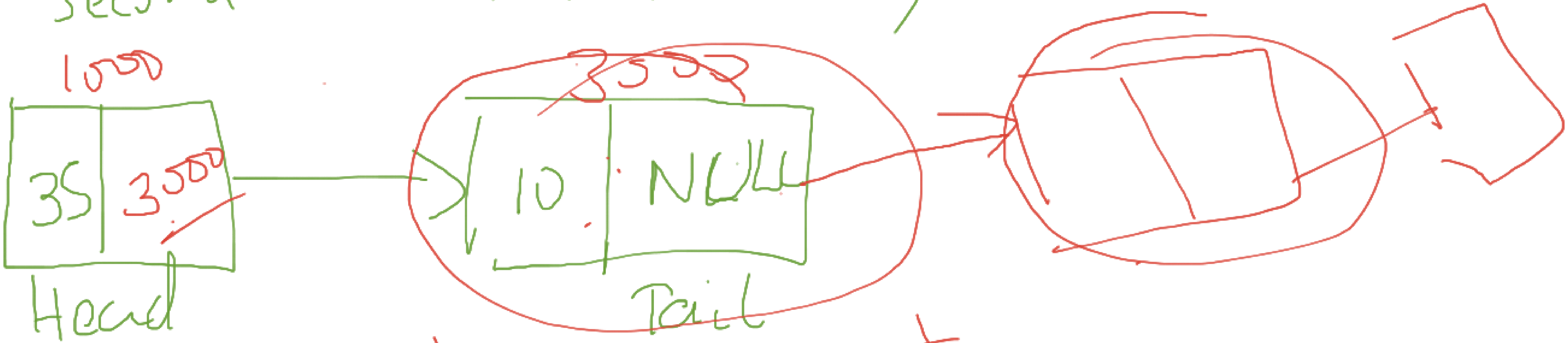
Link

recursive structure



```
head = (struct Node *)malloc(sizeof(struct Node
head->data = 35;
second = (struct Node *)malloc(sizeof(struct N
head->next = second;
second->data = 10;
```

```
Second -> next = NULL;
```



```
head->next
head->next->next
head->next->next->next
```