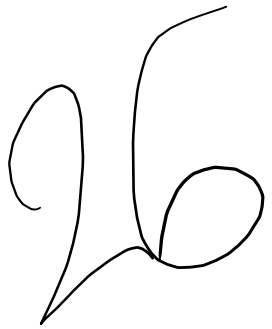
Let’s solve it



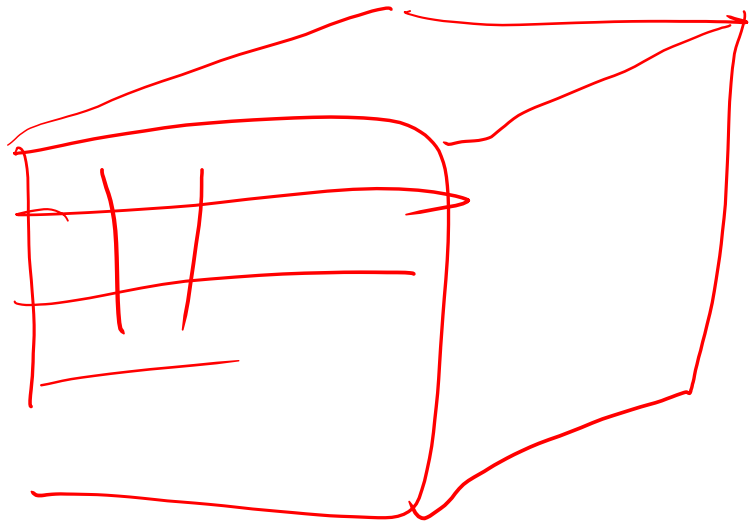
Multidimensional

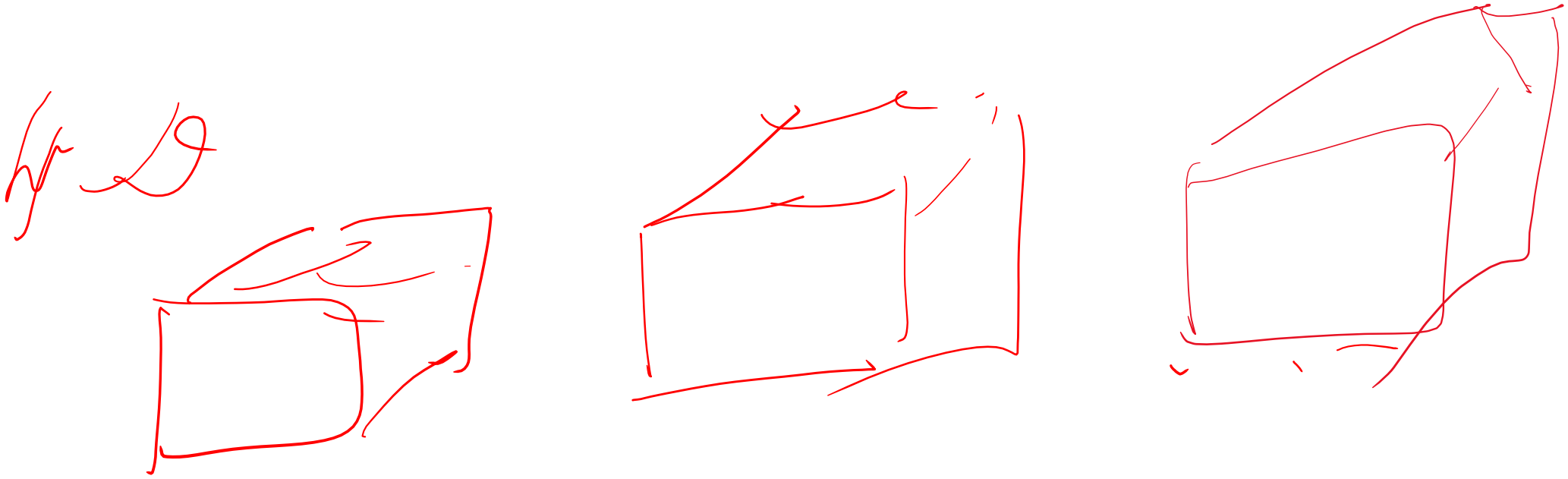
3D

int arr[5][12][4];

page row column

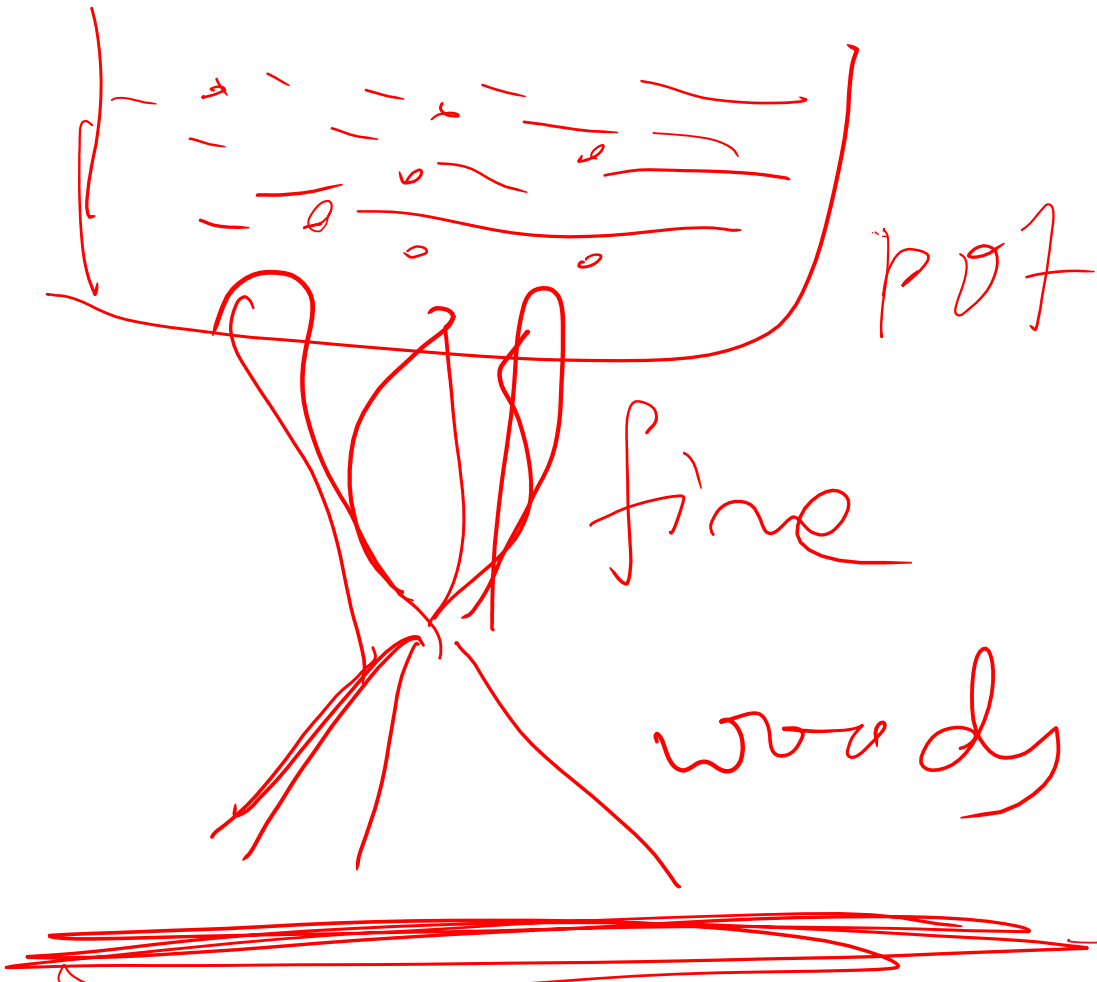
slice





Collection of cubes

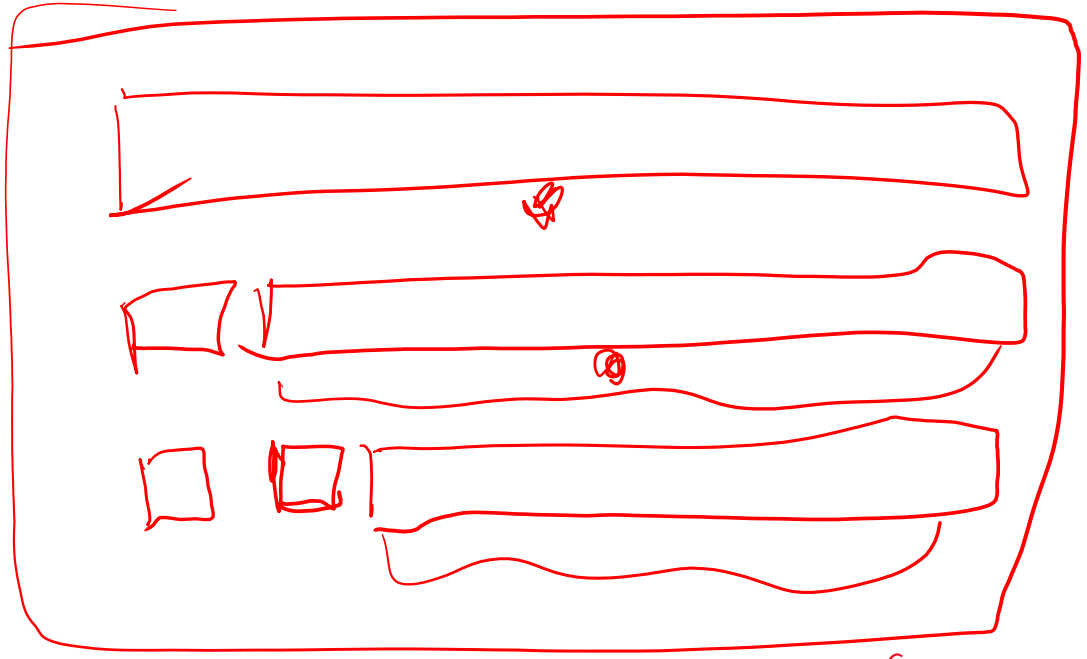
Bubble Sort



pot

fire

wood



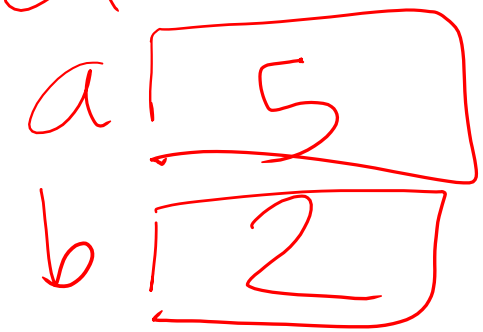
The smallest element bubbles up

of the largest bubbles down.

Swapping of two variables

Before

After



int a, b;

int temp;

temp = a;

a = b;

b = temp;

Swap w/o using temp.

(Integer)

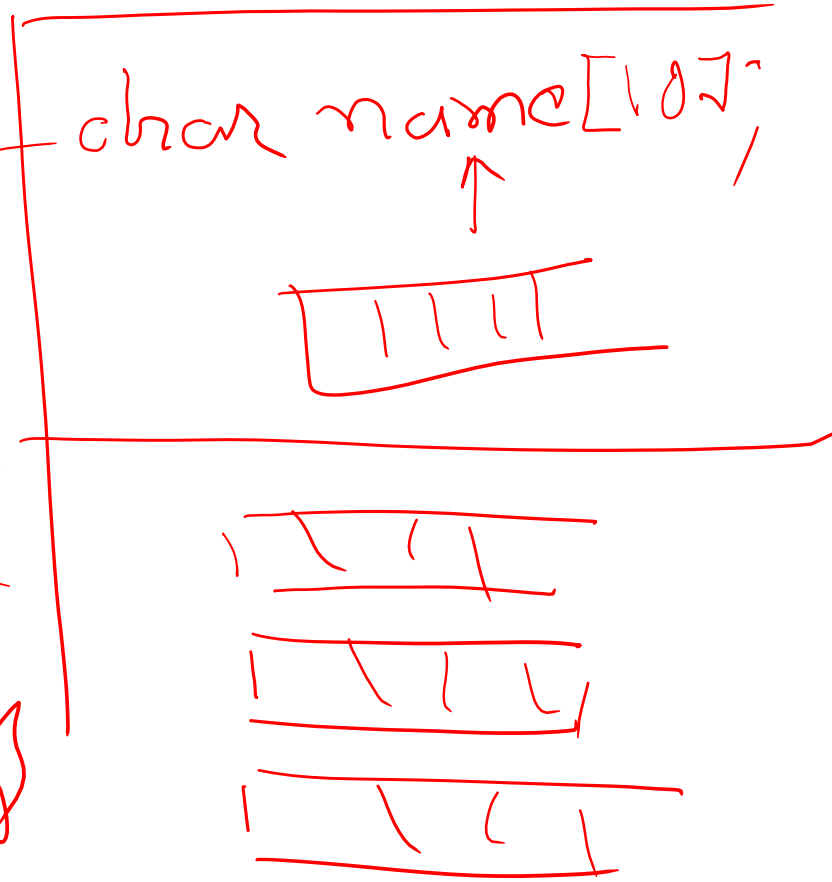
Two Dimensional String

To store name of 10 students

name1[ ]

name2[ ]

name3[ ]



Sorting of Table Strings

(2D array → rows and columns)

```
char names[10][50+1];
```

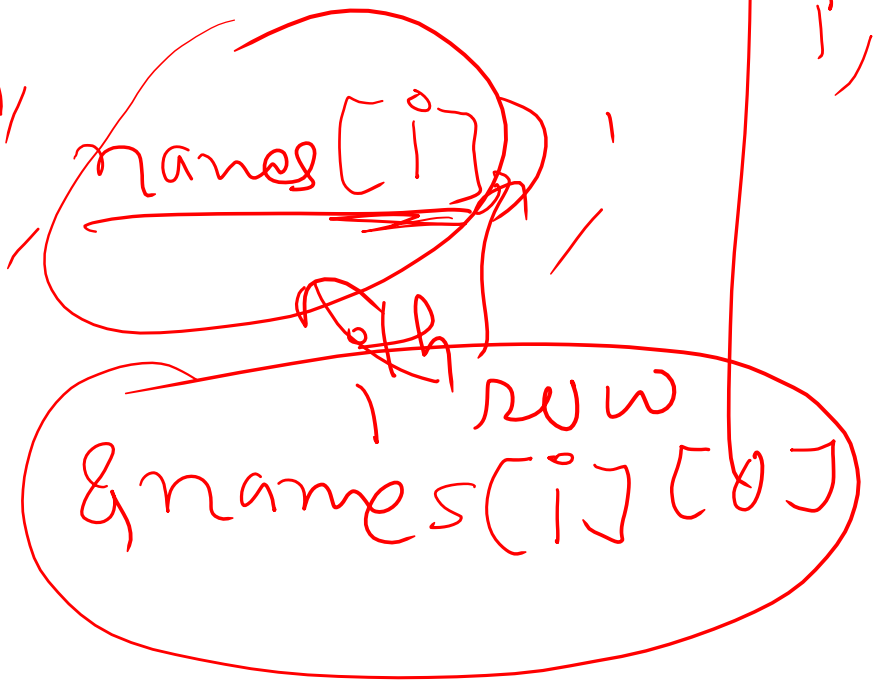
10 → students

50+1 → for null

```
for(i=0; i<10; i++
{
}
scanf("%s", names[i]);
```

index ⇒ also subscript

i, j



```
printf("Before sorting");
for(i=0; i<10; i++)
  {
    printf("%s\n", names[i]);
  }
```

Data movement (Sorting)

```
printf("After sorting");
for(i=0; i<10; i++)
{
    printf("%s\n", names[i]);
}
```

Bubble sort

13 9 21 15 ~~11 7 29 10~~

Are they inorder?

pair

If not swap

9 13 21

~~15~~ 21

9 13 15 21

11 7 29 10

7 11

11 29

7 11 10 29

one pass

one pass / iteration

Not sorted.

we need (n-1) atmost.

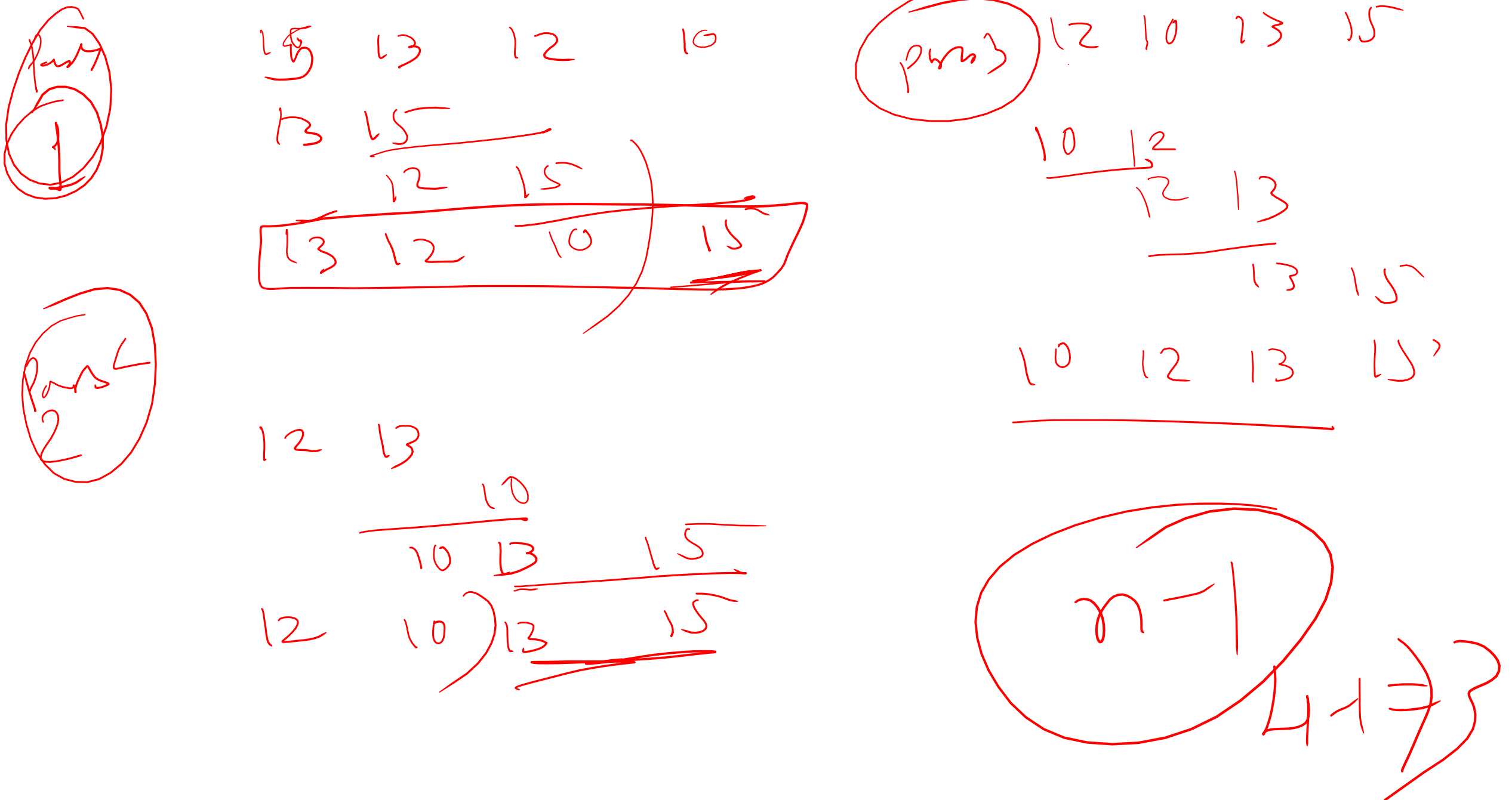

Pass 1
15 13 12 10
13 15
12 15
13 12 10 15
Pass 2
12 13
10
10 13 15
12 10 13 15
pass 3
12 10 13 15
10 12
12 13
13 15
10 12 13 15
n-1
4-1=3

Table of Strings

Compare → strcmp

temp = a;
a = b;
b = temp;

strcasecmp which compares ignoring the case.

It ignores upper lower case

Swap →

char swapping of two strings
temp[i], name1[i], name2[i]

strcpy(,)
strcpy(,)
strcpy(,)