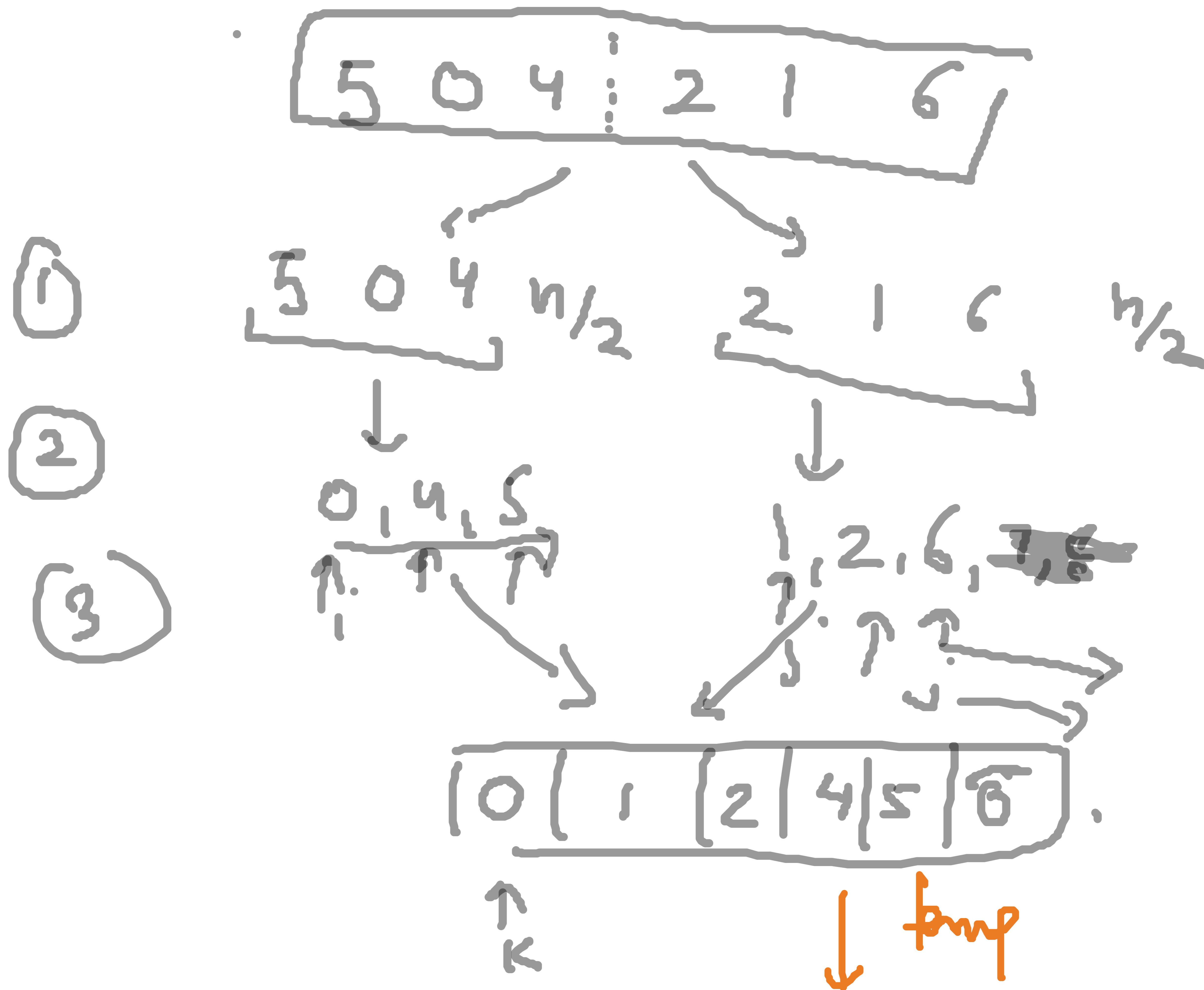


Merge Sort

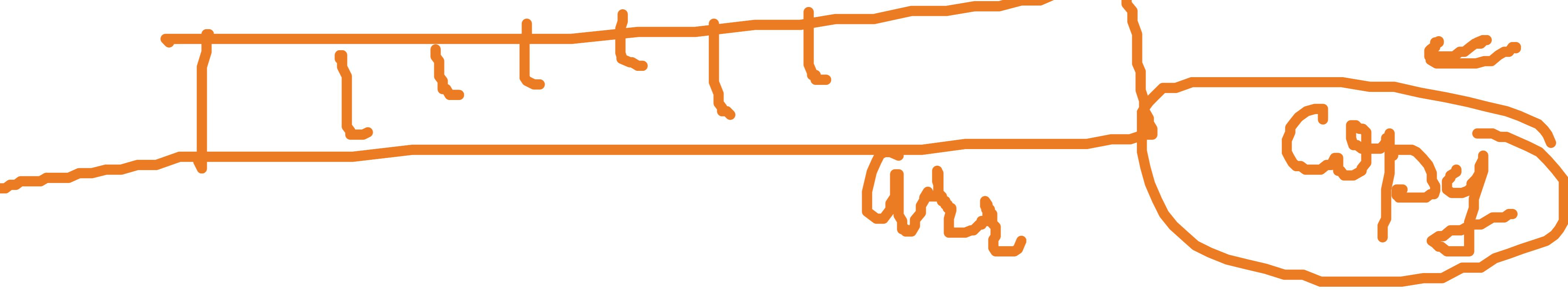
$O(N^2)$
 $O(N \log N)$



Merge

Base Case

Rec Case



Inversion Count

1, 6, 3, 2, 5, 0

Pairs such that $a[i] > a[j]$
where $i < j$

for(i) for(j)

\rightarrow i++

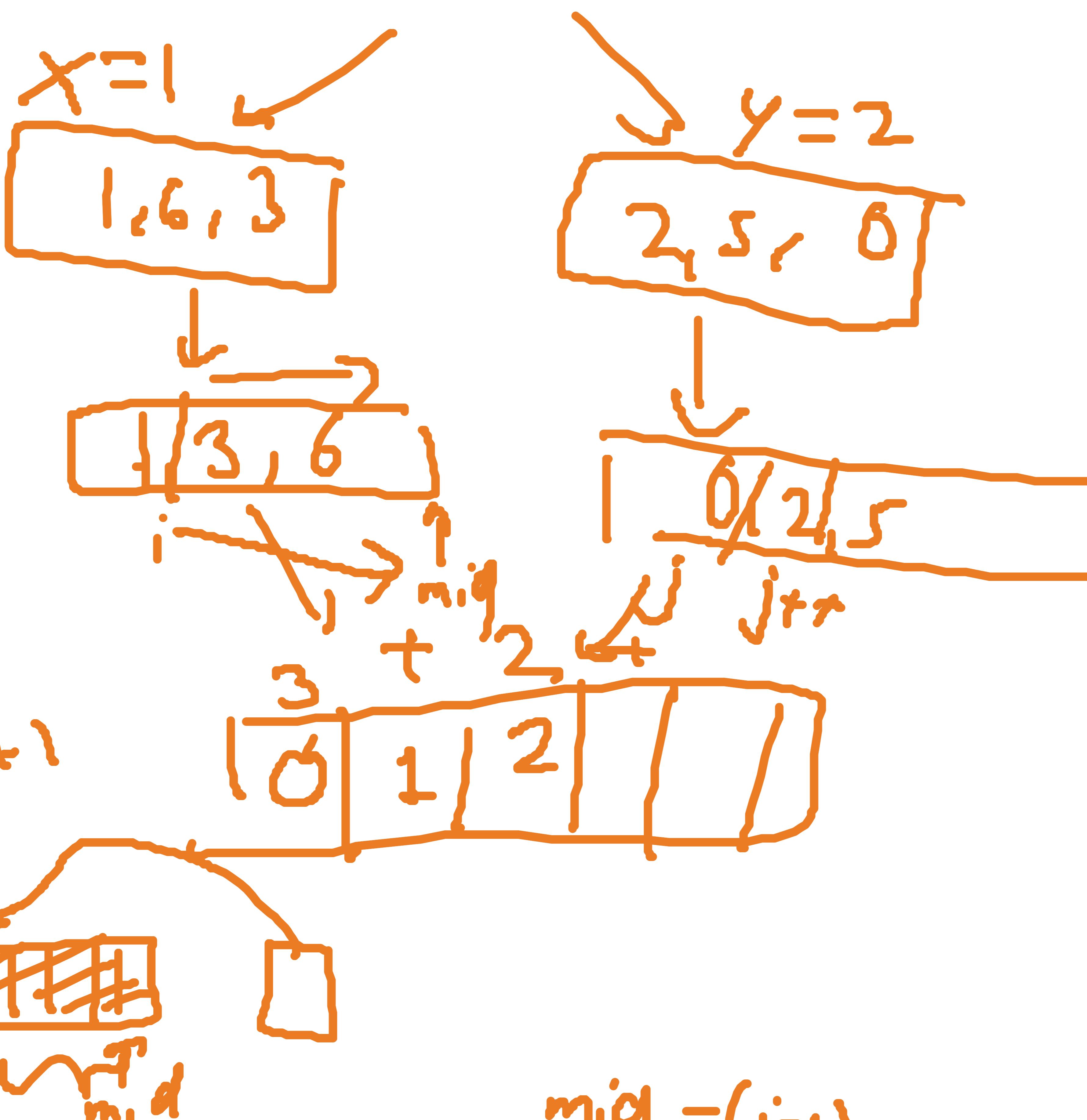
$O(n^2) \checkmark$

(6,3) (3,0) (5,0)
(6,5) (1,0) :
(6,0) (2,0)
(6,2) (3,2)

Count
Pairs ?

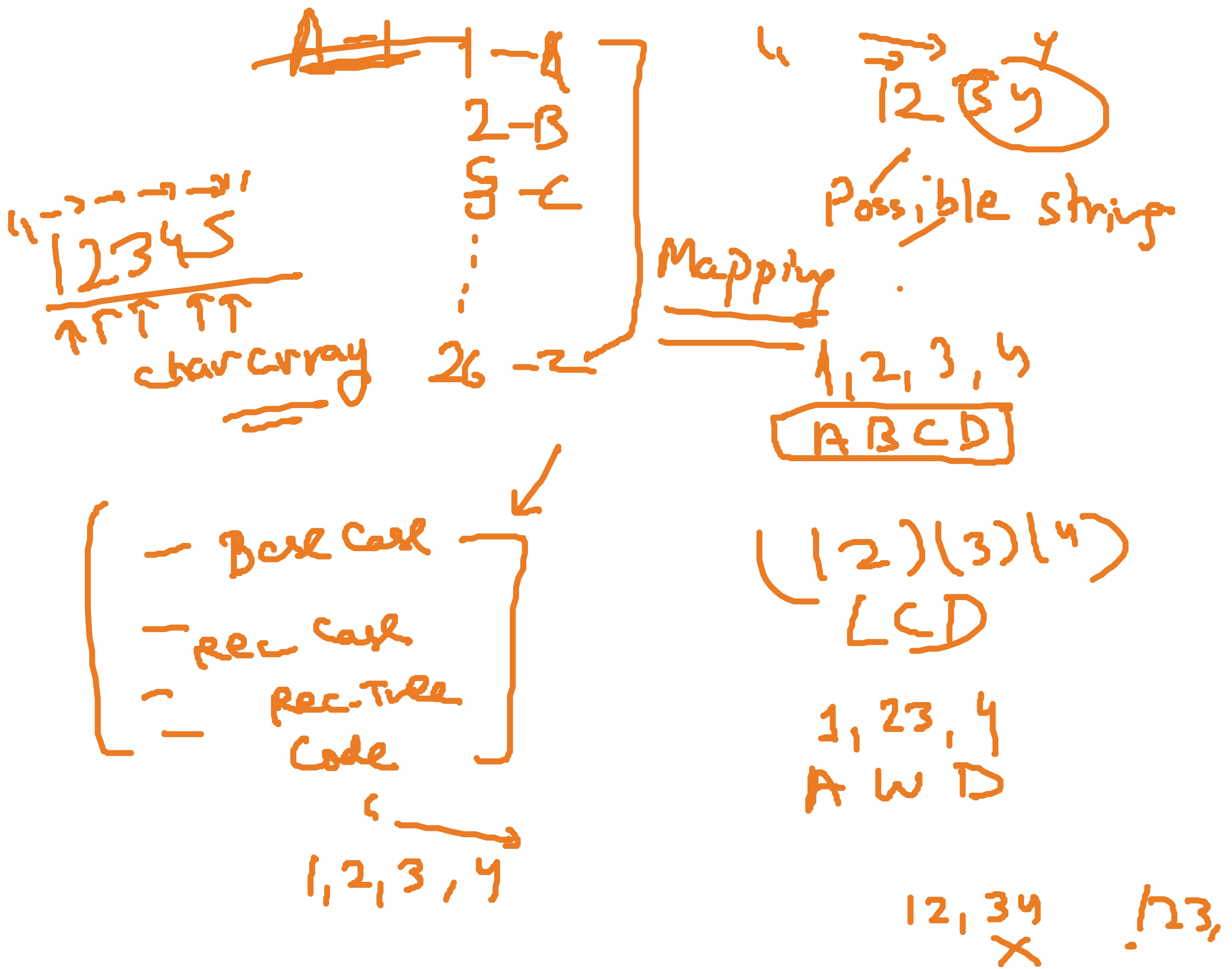
improve?

$1, 6, 3, 2, 5, 0$



61]

$x + y + \text{cross_ings}$



Digit + 'A'-1

1 → A

'1' → '1' + 'A' - 1

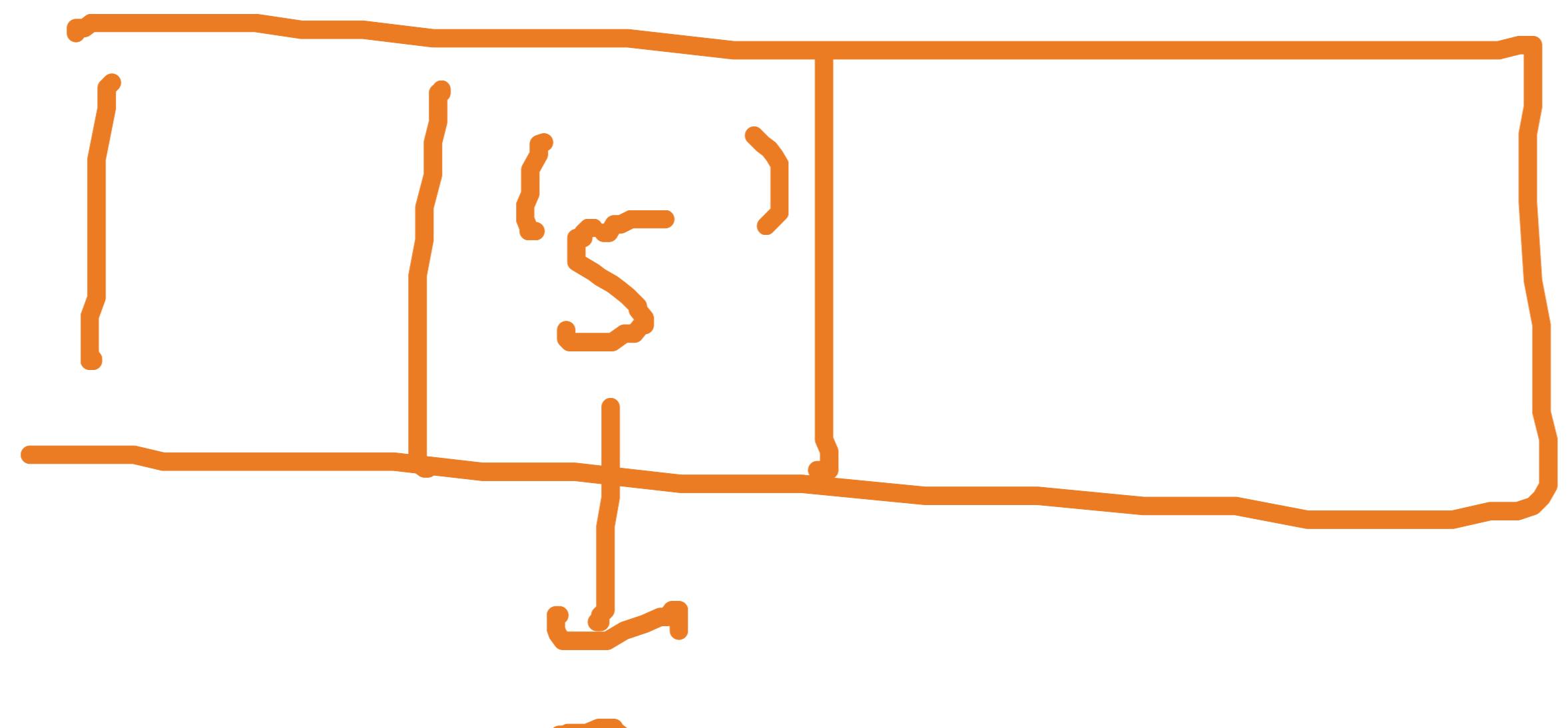
3 → 3 + 'A' - 1

= C

char c
= digit + 64

char to digit

ch - '0'



'5' - '0'

$$s_1 - 48 = \boxed{5}$$

The image features a prominent, abstract orange graphic element in the center-right. This element consists of several thick, rounded, and slightly irregular lines that form a complex, flowing shape. It appears to be composed of multiple segments, some of which are open at one end, creating a sense of depth and movement. The overall effect is reminiscent of a stylized flame, a ribbon, or a series of interconnected loops. The background is plain white, making the orange color stand out sharply.

Asciinema

A B C

1

A hand-drawn diagram in orange ink on a white background. The diagram consists of several orange lines. At the top left, there are three vertical strokes labeled '1, 2, 3' from left to right. A horizontal line extends from the bottom of the third stroke to the right, ending in a small loop. Below this, a thick horizontal line extends further to the right, with a wavy line at its end.

ink \times = 65

A stylized orange line drawing of a river or path winding through a landscape. The river flows from the bottom left towards the top right, with several small tributaries and loops along its course. The surrounding area is filled with various abstract symbols and shapes, including what look like stylized trees, clouds, and geometric patterns. The overall style is organic and minimalist.

The image consists of a 3x3 grid of nine separate letters, all rendered in a thick, orange, hand-drawn style font. The letters are arranged as follows: Row 1 contains 'G', 'G', and 'G'; Row 2 contains 'M', 'M', and 'M'; Row 3 contains 'P', 'O', and 'R'. Each letter is a single, continuous stroke with some internal detail, such as the bowl of the 'G' or the loops of the 'M'.

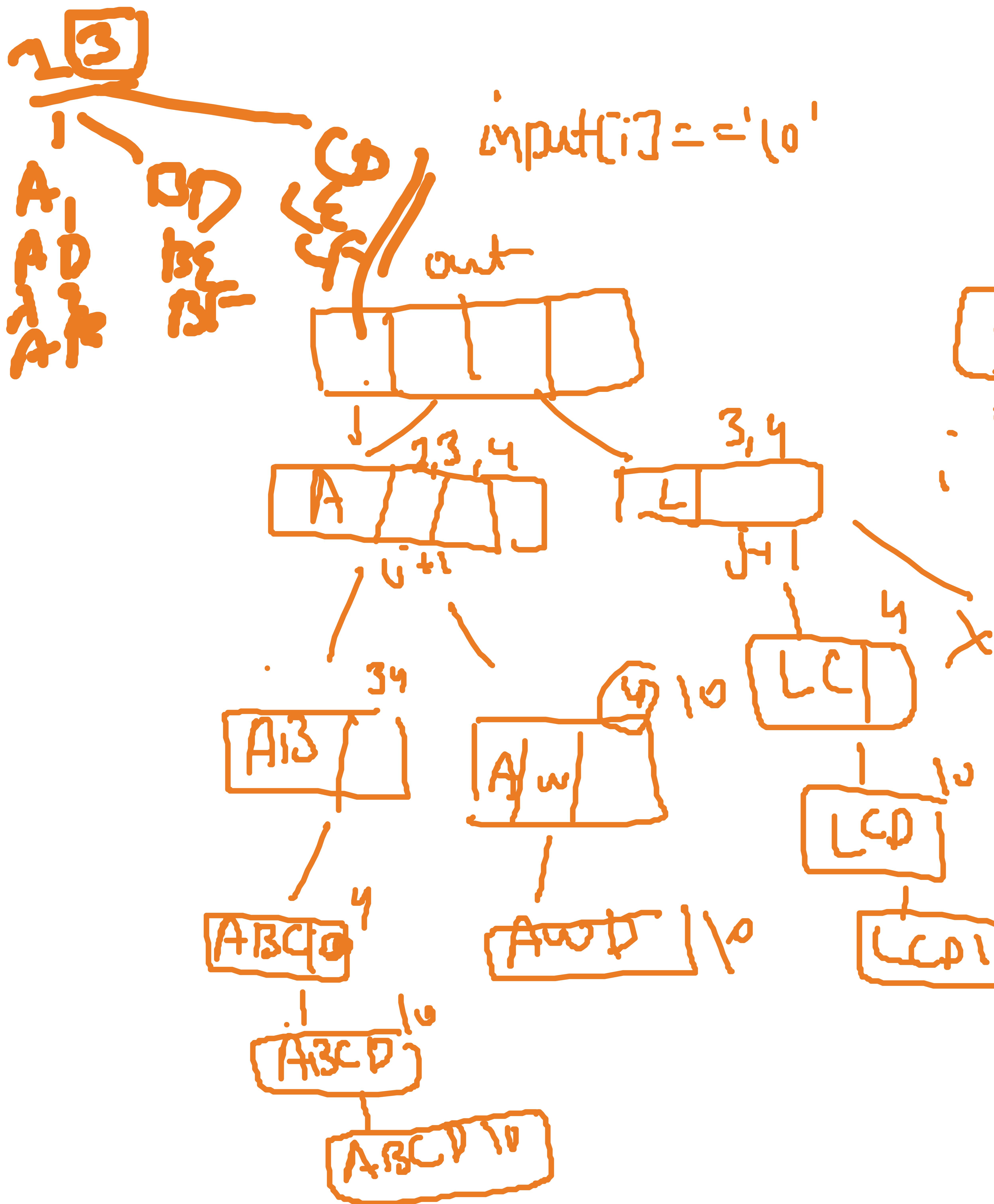
0 - 0
1 -
32 - -
. .
255 -
65 - 'AI
V

The image features a large, stylized orange logo. It consists of several words formed by thick, hand-drawn lines. The top word, 'GIGANTIC', is written in a bold, blocky font. Below it, 'TOKYO' is enclosed within a rectangular outline. To the right of 'TOKYO', the word 'LOHI' is written in a more fluid, lowercase font. Further down, the word 'chav' is written in a cursive, lowercase script. At the bottom, the word 'GO!' is written in a bold, blocky font, similar to 'GIGANTIC'. The entire logo is rendered in a vibrant orange color against a white background.

Count <<num>>; 65
Count <<uh>>; 'uh'

nickel

```
input[i] = 10
```



The image consists of a single, continuous orange line that forms a series of abstract shapes. On the left side, there is a large, open loop that resembles a stylized letter 'K'. To its right, a vertical line segment with a small horizontal stroke at the top is followed by a wavy, zigzagging line. Further to the right, a short vertical line is topped with a small, rounded blob. The bottom right corner features a long, thick horizontal line that tapers off at the end. The overall style is minimalist and organic.

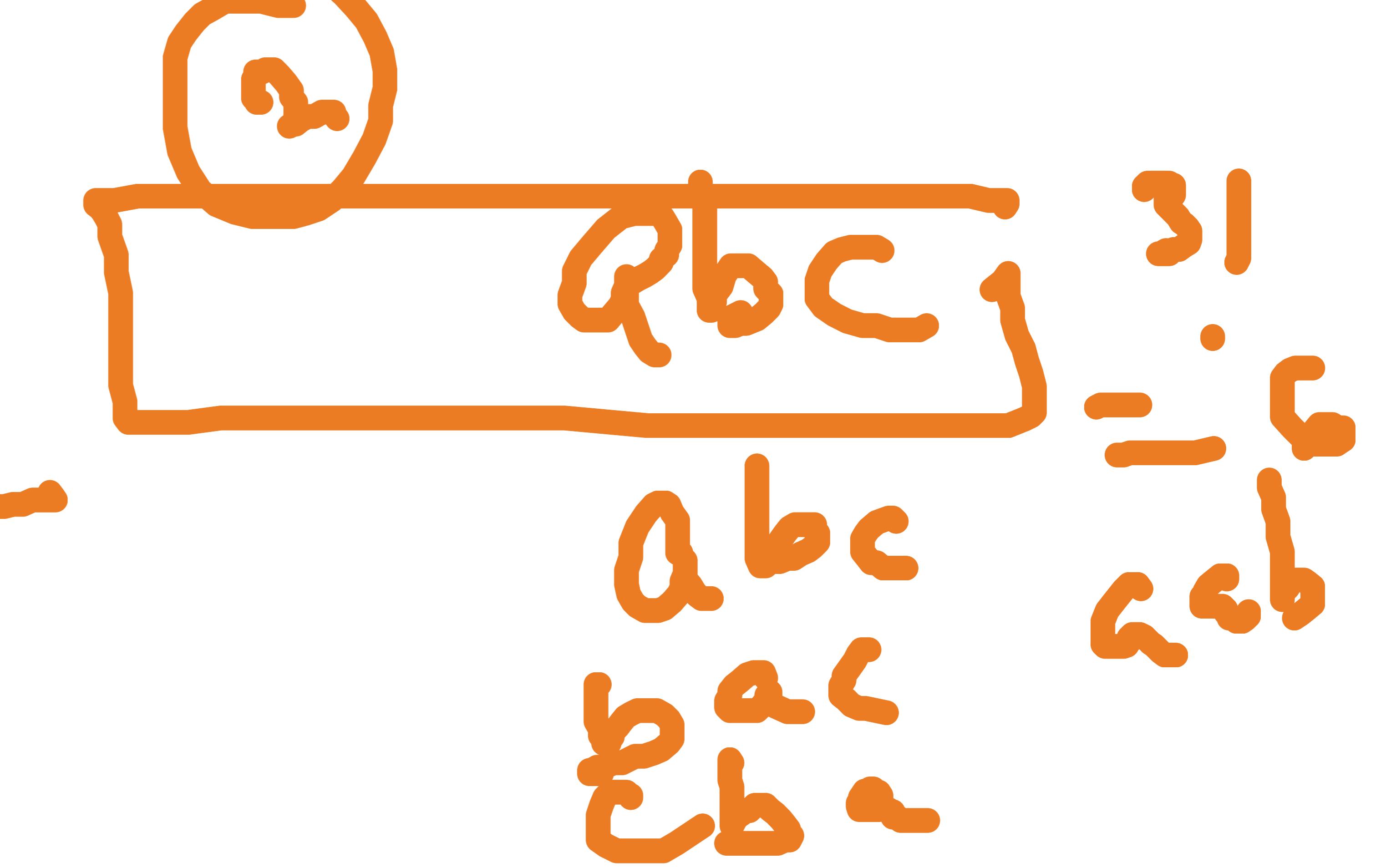
Homework

Handwritten

Code + Diagrams

Generate Balanced

Parantheses



$n=2$

())

(())

$n=3$

(())

(())

(())

(())

(())

Print
all possible

next
2 less [

Backtracking
Binary
comparator, set