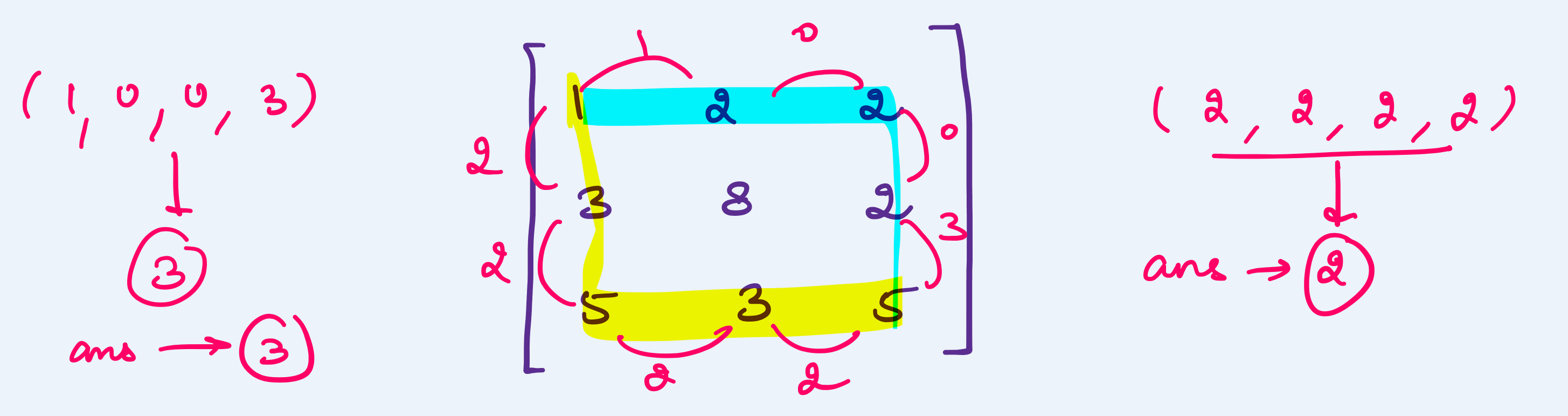
Monday, 6 December 2021 12:40 PM

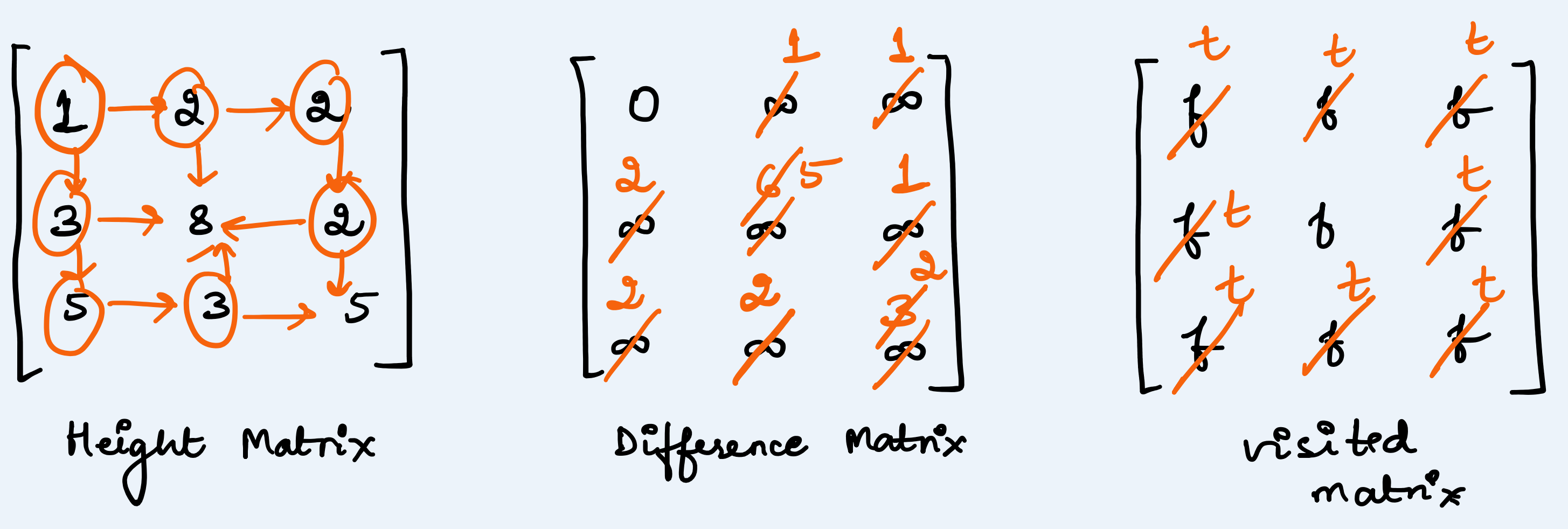
Q Path with min effort



→ Minimize effort

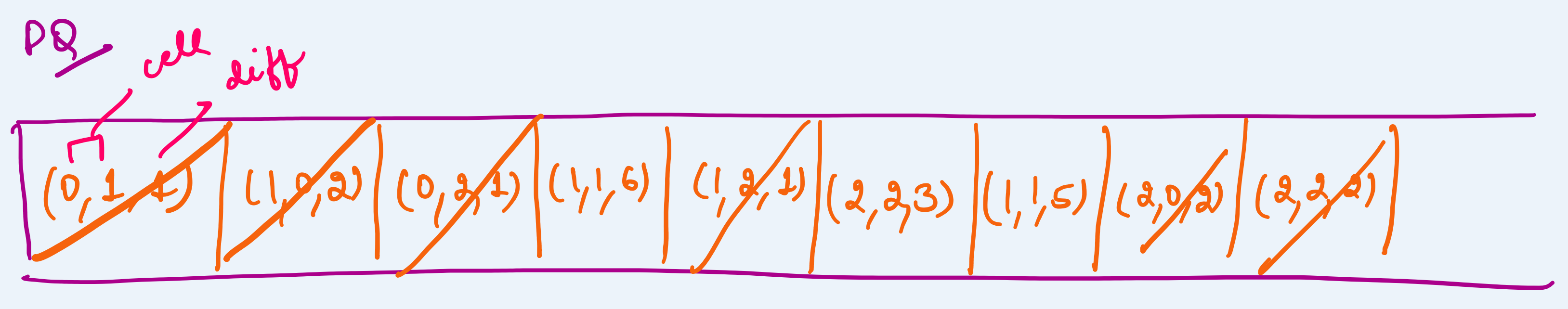
→ effort is the maximum absolute difference in heights b/w two consecutive cells

The absolute difference b/w adjacent cells ⓐ and ⓑ can be perceived as the weight of the edge from cell ⓐ to ⓑ.



Height Matrix Difference Matrix visited matrix

PQ



Q Score after flipping matrix (greedy)

0 1 0 1 0

→ Maximise

1 0 0 0 0 > 01010

0111 < 1000

① Flip all rows whose first column is zero.

② Scan through each column, and check if the numbers of 1's in that column are less than or equal to half the number of rows. If yes, flip the column.

Q given a string (str).

You are required to find the no. of subsequences of form $a^i b^j c^k$.

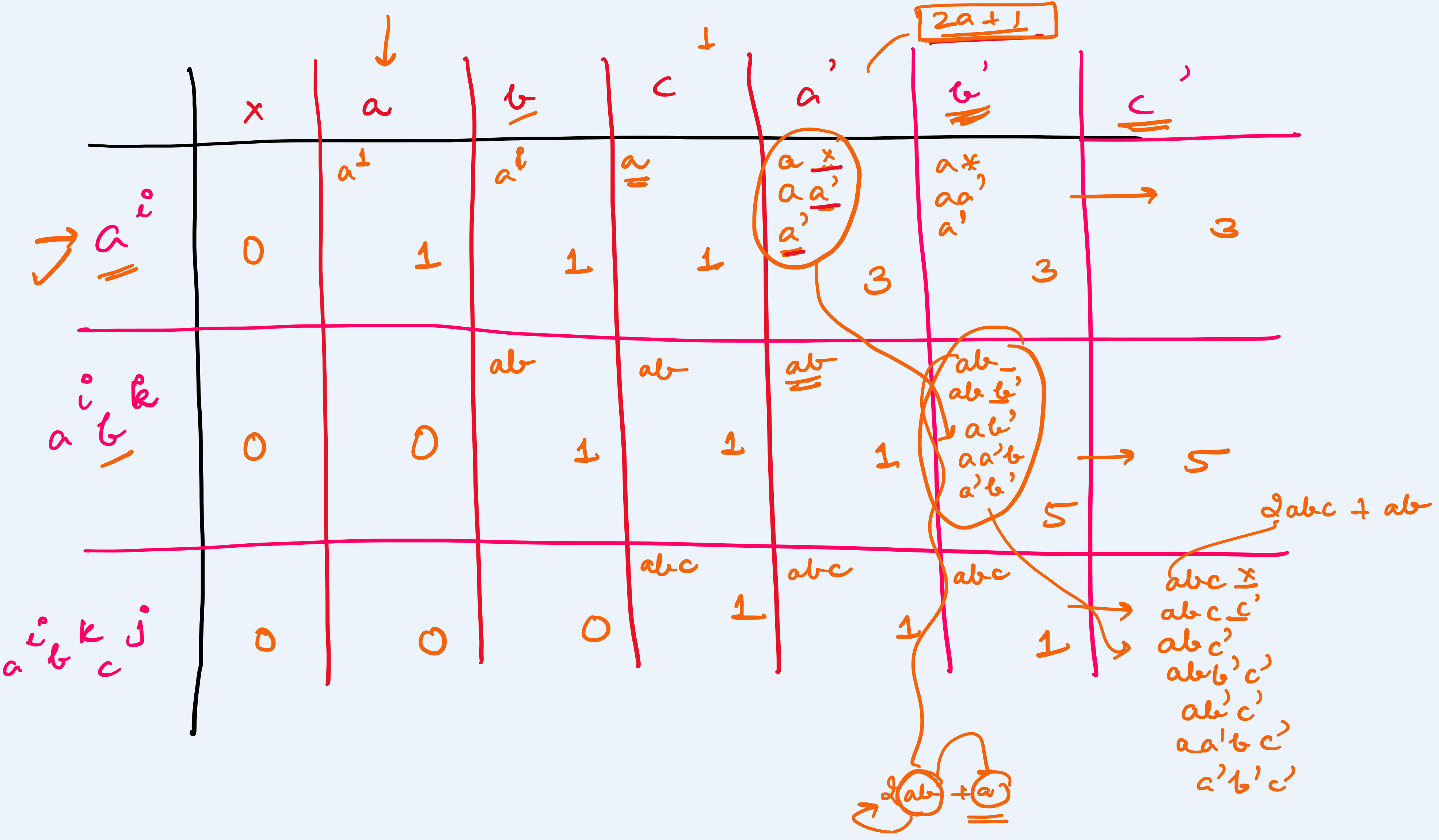
Eg: abbc
ans → ③

abc
abc
abbc

Eg: abcabc
ans → 7

abc
abc
abbc
aabc

abcc
abc
abc



	x	a	b	c	a'	b'	c'
a^i	0	a^1 1	a^1 1	a 1	a x a a' a' 3	a* aa' a' 3	3
$a^i b^k$	0	0	ab 1	ab 1	ab 1	ab ab b' ab' aa'b' a'b' 5	5
$a^i b^k c^j$	0	0	0	abc 1	abc 1	abc 1	

```
String str = "abcabc"
   int a = 0;
   int ab = 0;
   int abc = 0;

   for ( i=0; i < str.length; i++) {
                  char ch = str.charAt(i);

                  if (ch == 'a') {
                        a = 2a + 1;
                  } else if (ch == 'b') {
                        ab = 2 * ab + a;
                  } else if (ch == 'c') {
                        abc = 2 * abc + ab;

                  }
}
   print (abc);
```

Q First Missing positive

[1, 2, 0]
ans → ③

[3, 4, -1, 1]
ans → ②

[7, 8, 9, 10, 11] ans → ①

Data clean up

-ve no.
→ 0.
→ greater than n no.
1
1
1

n = 8

[1, 2, 3, 4, 5, 6, 7, 8] ans → 9
[1, 2, 48, 14, 15, 16, 17, 18] ans → 3
[1, 2, 3, 4, 5, 6, 7, 18] ans → 8

max possible first missing number

n + 1 = 9 ⑧