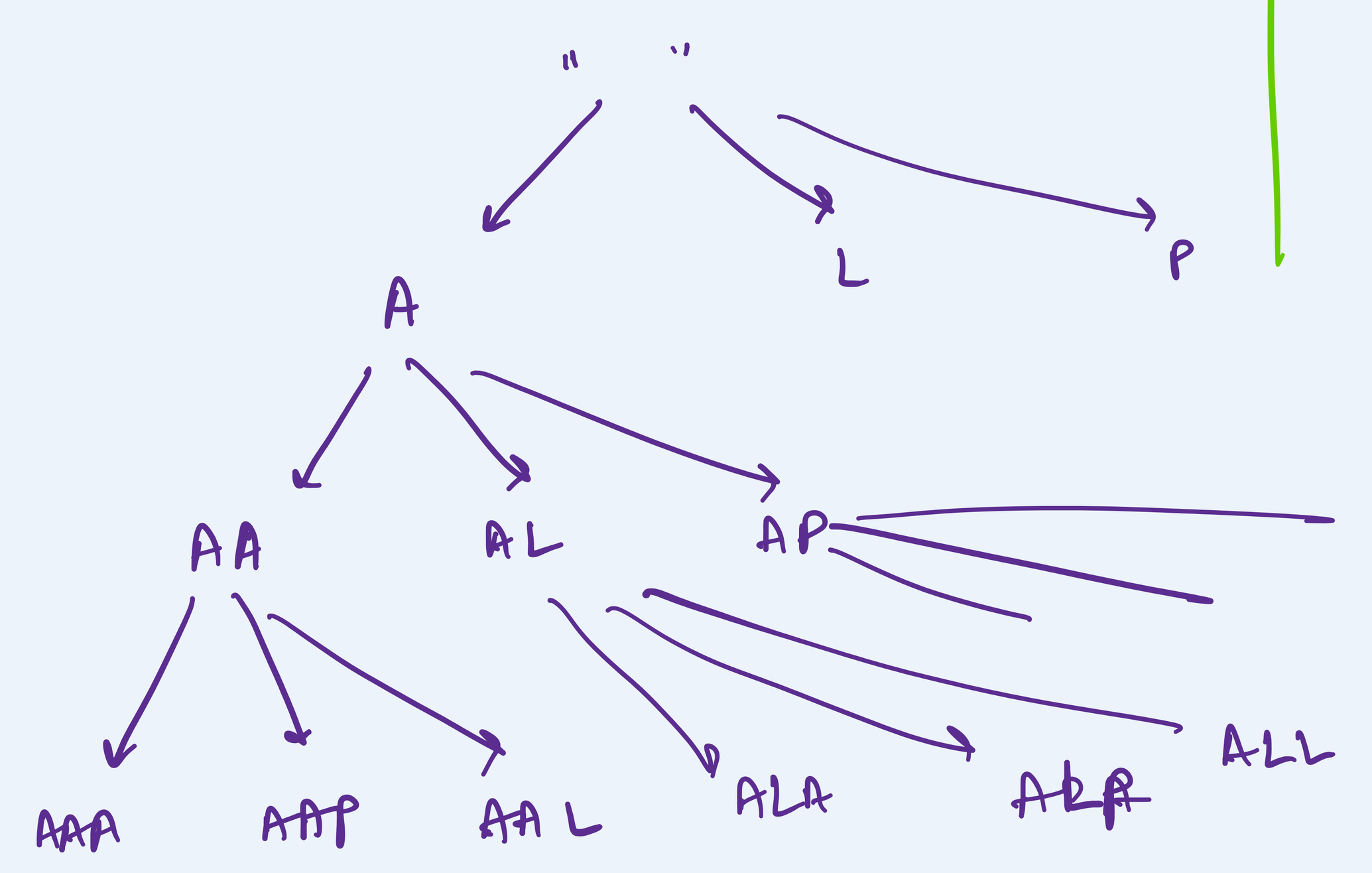
Sunday, 14 November 2021 8:33 PM

Any doubts??

Q Student attendence record

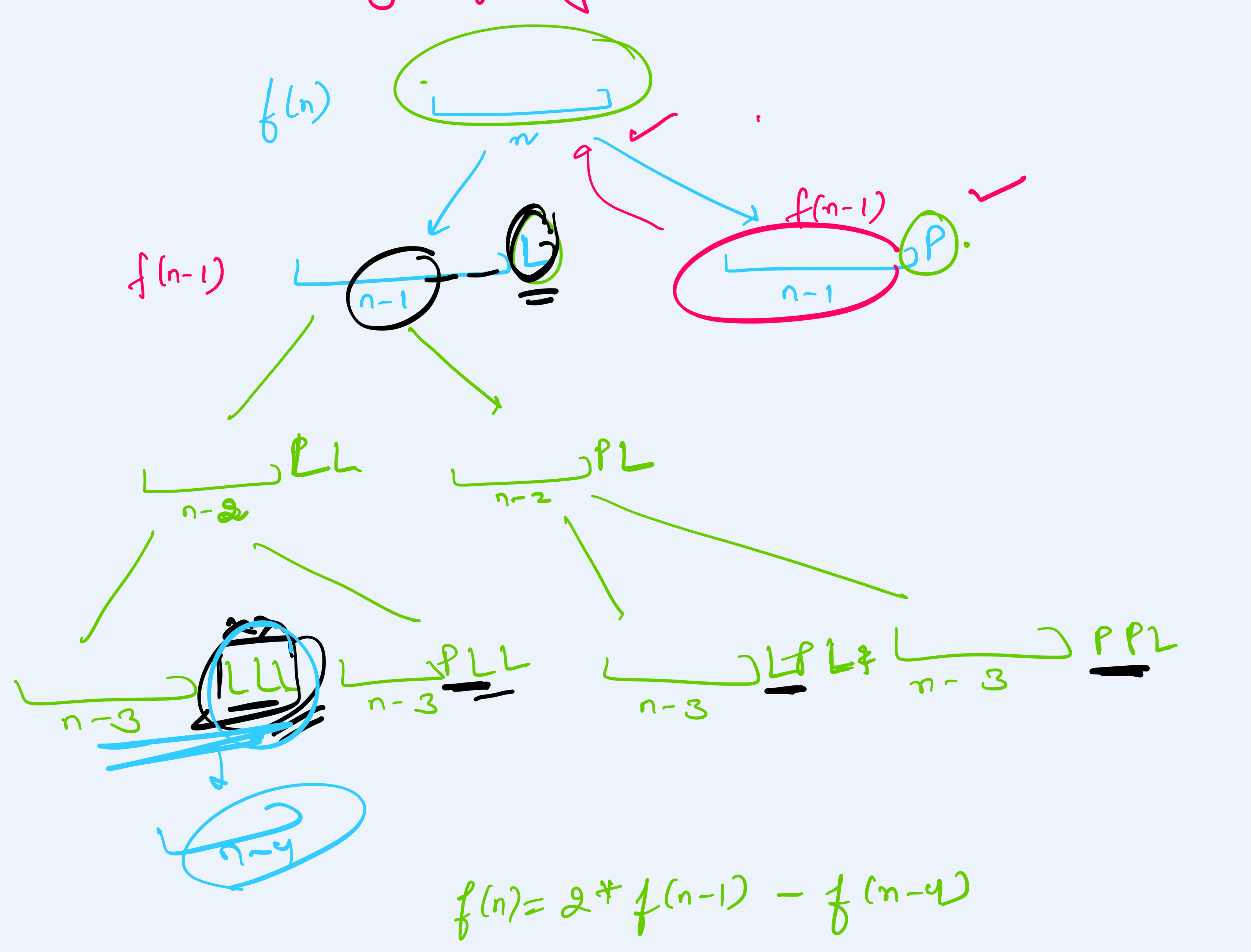
n = 2
ans → 8

{ PP, AP, PA, LP, AL, LA, LL }



LP

f(n) = no. of possible rewardable strings of length (n).



$f(n) = 2 * f(n-1) - f(n-4)$

2 cases
→ No A is present
→ single A is present

$\sum_{i=1}^{n} \left(f(i-1) * f[n-i] \right)$

```
checkrecord ( n) {
    long[] f = new long [n <= 5 ? 6 : n + 1];
    f[0] = 1
    f[1] = 2
    f[2] = 4
    f[3] = 7
    for (int i = 4; i <= n; i++)
        f[i] = ((2 * f[i-1]) % M + (M - f[i-4])) % M;

    long sum = f[n];
    for (int i = 1; i <= n; i++)
        sum += (f[i-1] * f[n-i]) % M;

    }
    return (int) (sum % M)}
```

Q Maximum subarray

arr → [-2, 1, -3, 4, -1, 2, 1, -5, 4]

[-2, 10000000, -3, 4 - - -]

[-2, 1, -3, 4, -1, 2, 1, -5, 4]

currentSubArray = 0 -2 1 -2 4 3 5 6 1 5

maxSubArray = 0 -2 1 4 5 6

Q Maximum Product subarray

① Zero
② Negative numbers

2, -5, 3, 1, -4, 0, -10, 2, 8

current → 2 -5 3 1 -4 0 -10 2 8

max so far → 2 -5 3 -120 2 16

min so far → 2 -10 -30 -30 -12 0 -10 -20 -160

(-5, 2 × -5, 2 × -5)
-5, -10, -10

3, -5 × 3, -10 × 3

-4, -4 × 3, -4 × -30, 120