Friends Pairing

Saturday, 31 July 2021 10:10 AM

n peoples ⟶ all possible pairing option.

possibilities ⟶ (*) single

(*) Merge with anyone

n=2 1-2 ⟶ 2-1 Repitition of same selection ⟶ (1)(2)

12 ⟶ 21 X ⟶ (12)

n=2.

n=3

1-2-3 ⟶ 2-1-3, 3-1-2, 2-3-1, 3-2-1

12-3 ⟶ 3-12, 3-21

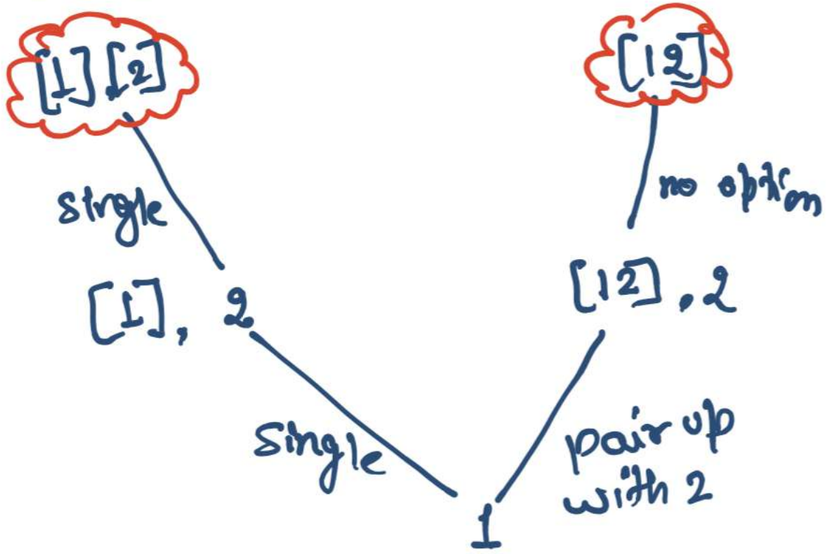
13-2 ⟶ 2-13, 2-31

1-23 ⟶ 23-1, 32-1

same selection with repitition

level → person

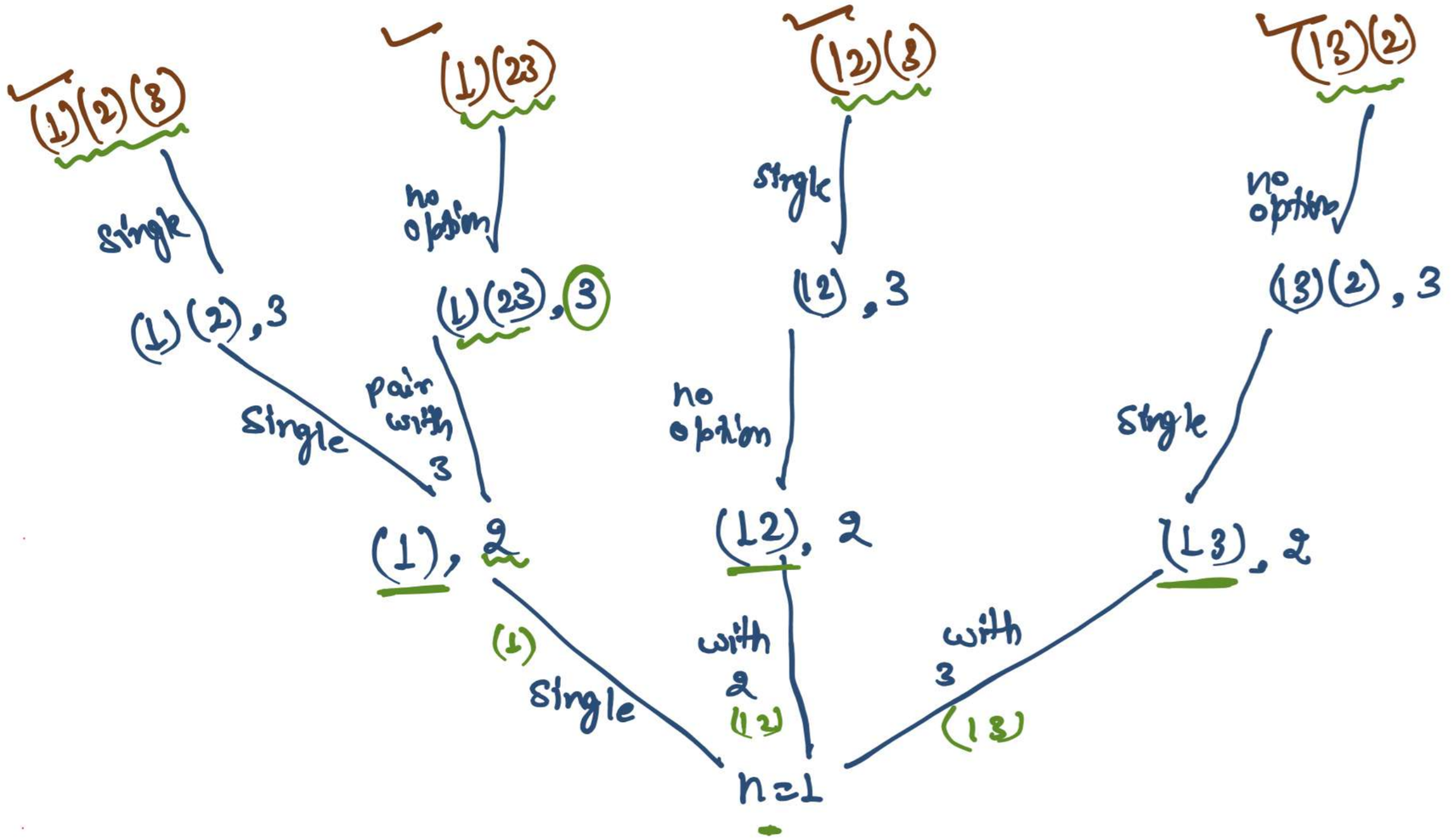
option → choice



n=3

level → person

option → choice



1-2-3

1-23

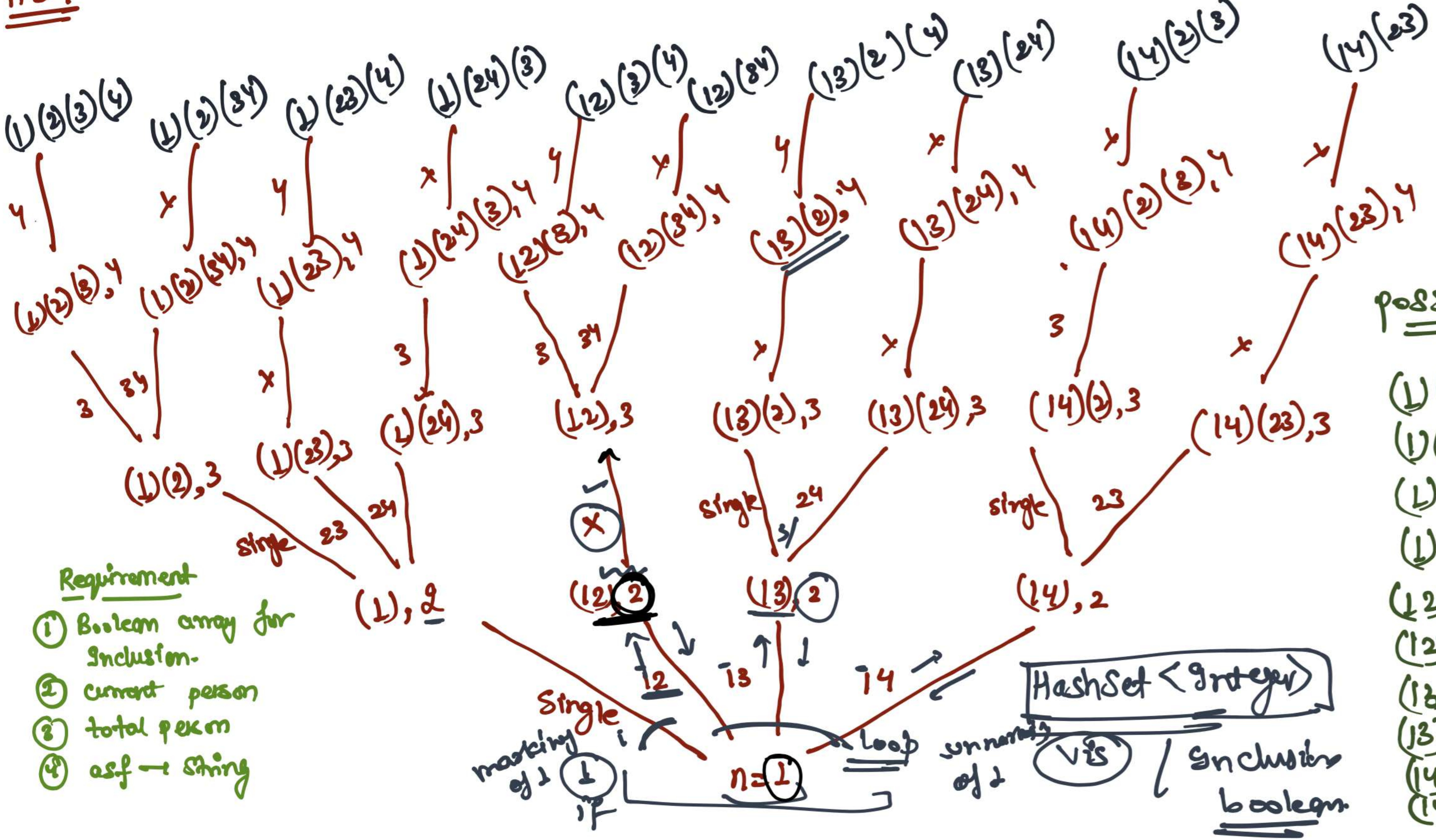
12-3

13-2

Requirement

1. Boolean array for Inclusion.
2. current person
3. total person
4. asf → string

n=4.



Requirement

1. Boolean array for inclusion.
2. current person
3. total person
4. asf → String

possibilities-

(1)(2)(3)(4)
(1)(2)(34)
(1)(23)(4)
(1)(24)(3)
(12)(3)(4)
(12)(34)
(13)(2)(4)
(13)(24)
(14)(2)(3)
(14)(23)

All Palindromic Permutations

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String → abab

→ No. of all possible permutation = $\frac{4!}{2!\,2!} = \frac{2\cancel{4}\times 3\times \cancel{2}\cancel{1}}{\cancel{2}!\,\cancel{2}!} = 6$

abab
abba
baba
baab
aabb
abba
bbaa

} palindromic

abab ⇒ a2b2

↳ take half freq. for every character

↳ a1b1 → ab → print all permutation

↳ ab + reverse(ab) = abba

ba + ab = baab

abacb

↳ a2b2c1

↳ take half

a1b1 → ab

ab + c + ba = abcba

ba + c + ab = bacab

a2b2c1d1

Palindromic permutation is Not possible.

all character occur with even freq. only single character may appear as single freq or no freq.

NOTE: All character haven Even freq. only single character may have. odd freq.

String → aabbaaaaccc → a6b2c3

a3b1c1 → Generate all permutation → half freq → a3b1c1 → single character → c

P_1 +c + $(P_1)'$

P_2 +c + $(P_2)'$

P_3 → c + $(P_3)'$

P_n +c + $(P_n)'$

$\frac{4!}{2!2!}$ = 6

(P_i) + odd character + $(P_i)'$

String → b a bab baa c

a4b4c1 → half freq. → a2b2 → single odd character → c

P_1 aabb, P_2 abab, P_3 abba, P_4 baab, P_5 baba, P_6 bbaa

slot 4 → aab_ aba_ abb_ baa_ bab_ bba_

slot 3 → aa__ ab__ ba__ bb__

slot 2 → a___ b___

slot 1 → ____

aabbcbbaa
ababcbaba
abbacabba
baabcbaab
babacabab
bbaacaabb

(1) CS. (2) total slot,
(2) unique string of Even freq. char
(4) freq. map] half
(5) as of → string (6) odd character

All Palindromic Partitions

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String → abaaba

(a)(b)(a)(a)(b)(a) → all partitions are palindromic

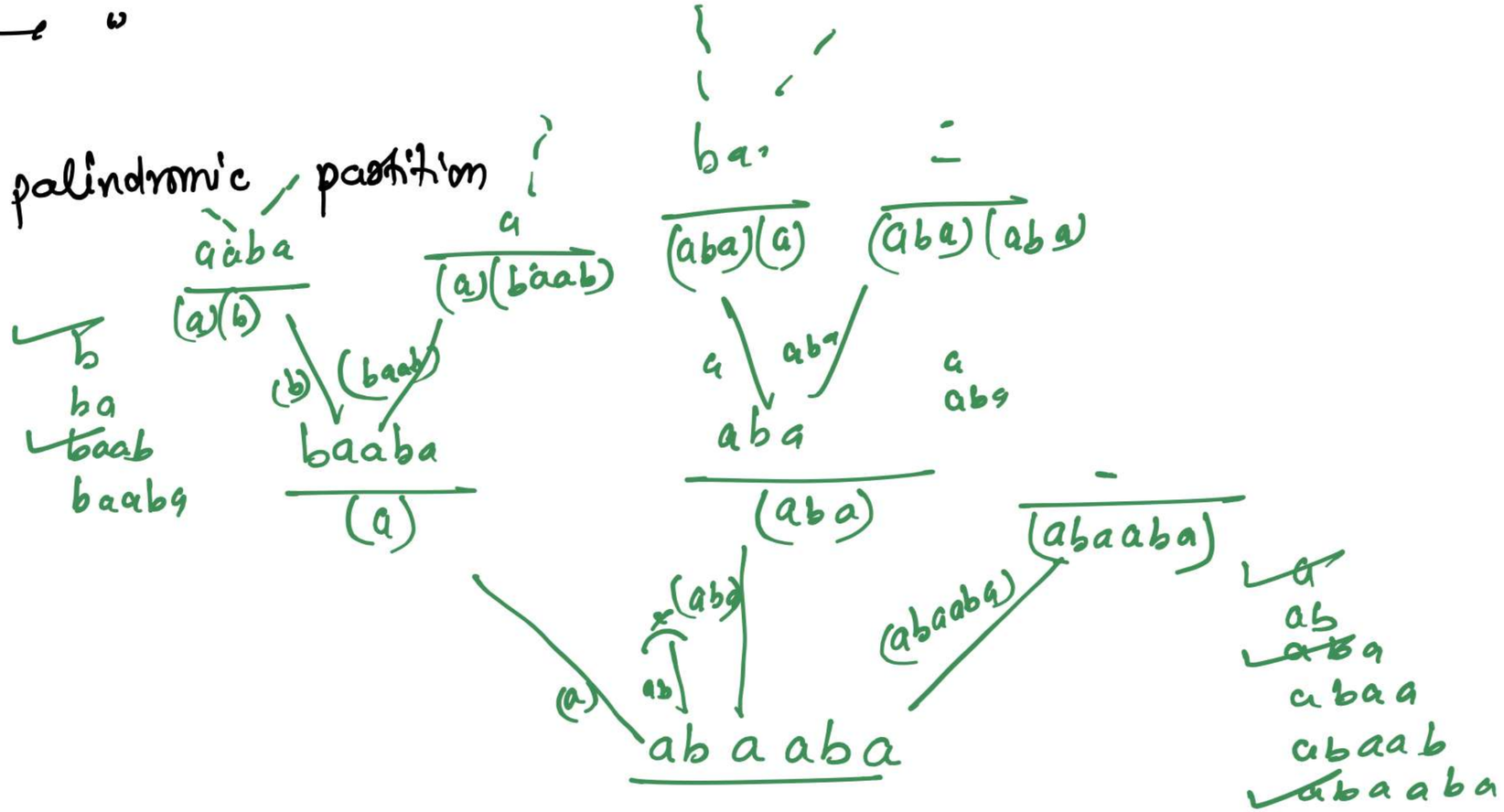
(aba)(aba) → "

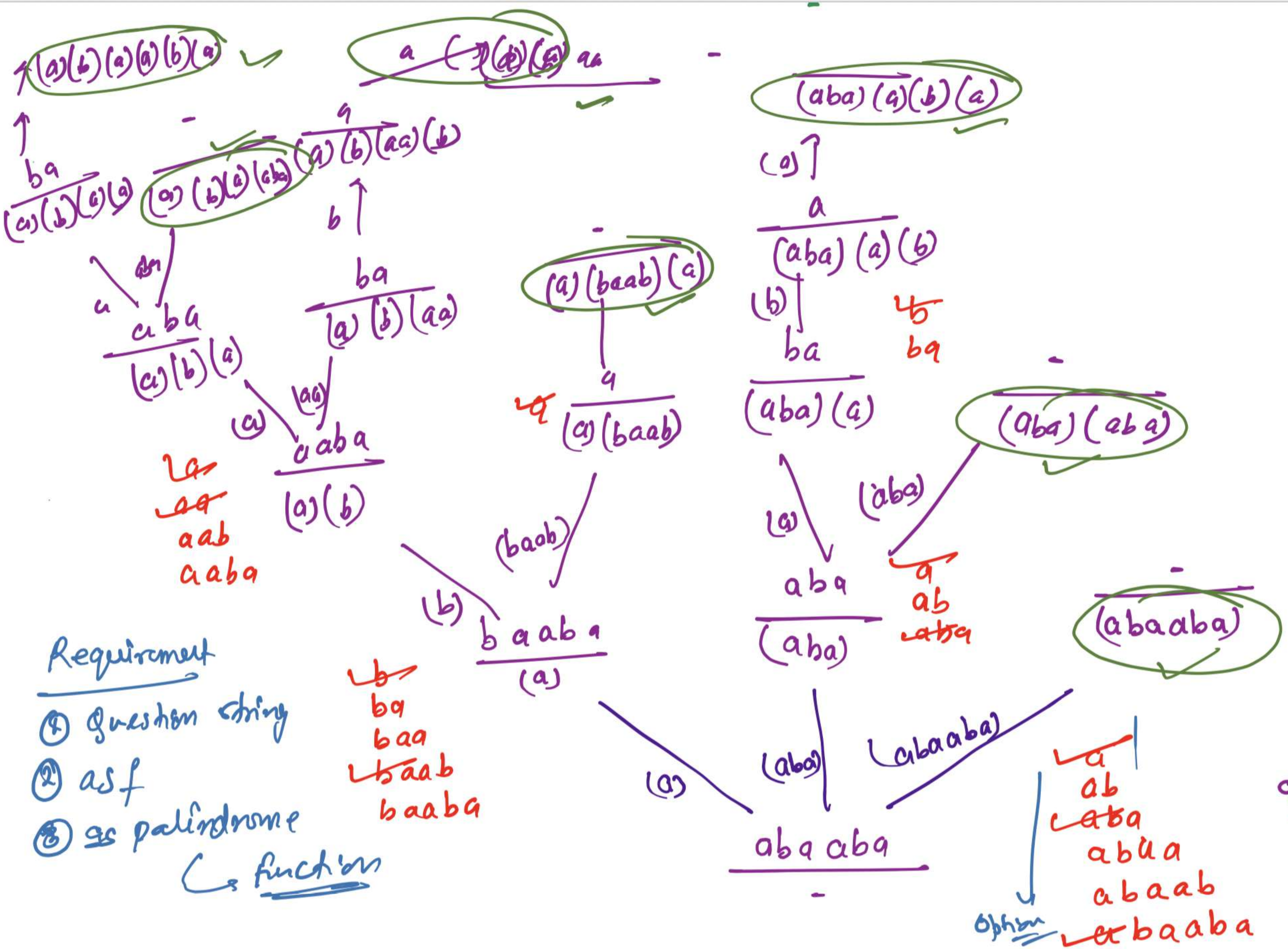
(a)(baab)a → "

(a)(b)(aa)(b)(a) → "

⋮

→ print all possible palindromic partition





(a)(b)(a)(a)(b)(a)
(a)(b)(a) (aba)
(a)(b)(aa)(b)(a)
(a)(baab)(a)
(aba)(a)(b)(a)
(aba)(aba)
(abaaba)

Requirement

1. question string
2. asf
3. is palindrome
   ↳ function

question string
answer so fa

K Subsets With Equal Sum

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{a, b, c, d} , set(k) = 3

sum = a+b+c+d