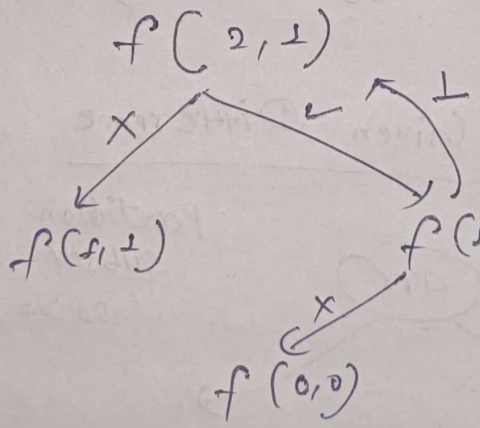
Partition with Given Difference

In previous question count subset with sum equal to K one eadge case is {0, 0, 1} & the o/p of this should be 4 but our code gives o/p - 1 bcz constrain given that $1 \leq arr[i]$ so we not considring this case

arr = {0, 0, 1} sum = 1

ans = 4 → {0,1}
→ {0,1}
→ {0,0,1}
→ {1}

{0, 0, 1}



→ {0, 0, 1}

that means these couple of zeros i.e. idx 0,1 zeros not considers so we have to modify our code so instead of returning from here we need to go deep.

if (idx == 0)
{

(i) Base case

arr[0] = 0 & sum = 0 so we have two choice either take arr[0] or not take arr[0]

so

if (arr[0] == 0 && sum == 0) return 2;

(ii) Base case

arr[0] = 5 & sum = 0 so we don't need to take arr[0]

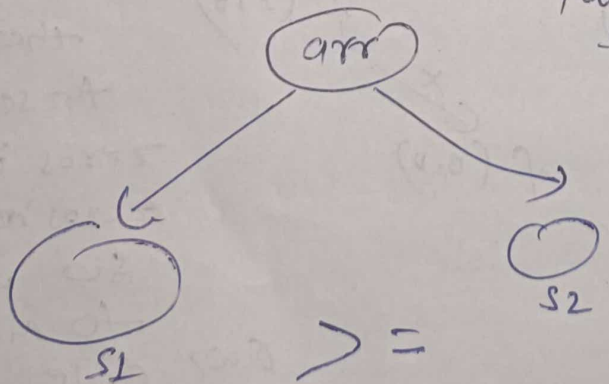
if (arr[0] != 0 && sum = 0) return 1;

(iii) Base case

arr[0] == sum so we have to take arr[0] so return 1;

Partition with Given Difference

Partition arr into two subset S1 & S2 and S1 >= S2 but S1 - S2 = D



S1 >=

S1 - S2 = D

$S1 + S2 = Total\_Sum$

$S1 = Total\_Sum - S2$

$D + S2 = Total\_Sum - S2$

$$S2 = \frac{Total\_Sum - D}{2}$$

→ i.e. we are looking for a subset with sum equal to S2

$S1 - S2 = D$

$S1 = D + S2$

~~So Question boils out to~~

edge case →(i) $Total\_Sum >= D$

→(ii) S2 ~~should~~ should be even

i.e. $Total\_Sum - D$ should be even

So this question same as previous question