Problem: Subset

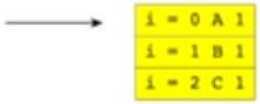
By-Shobhit

Overview:

Input: ABC

Output: [], [A], [B], [C], [A,B], [A,C], [B,C], [A,B,C] i.e. return power set

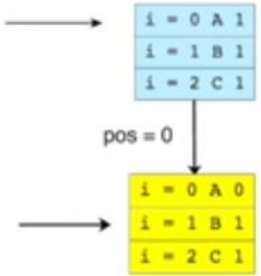
Similar to permutation problem except the for loop will not starting from 0 because order matter.



Subsets

output

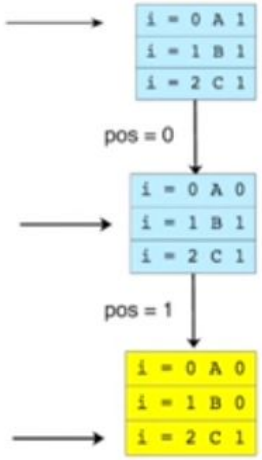
len = 0



Subsets
A

output

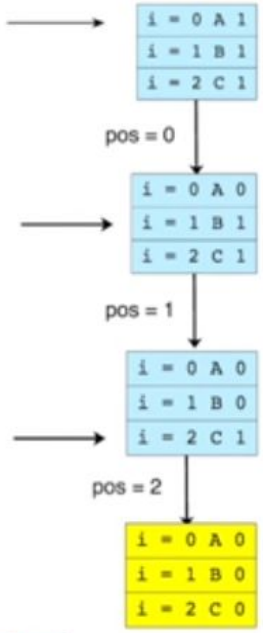
len = 1



Subsets
A
AB

output

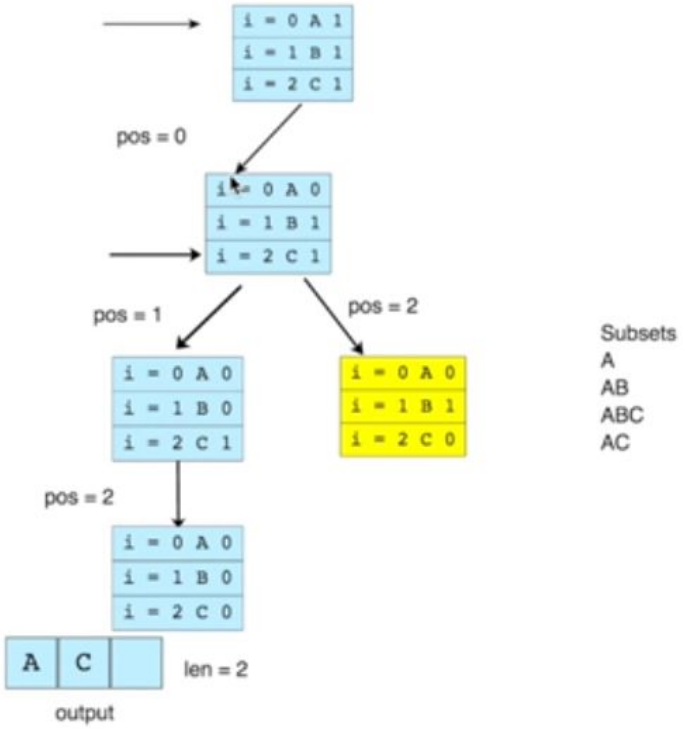
len = 2

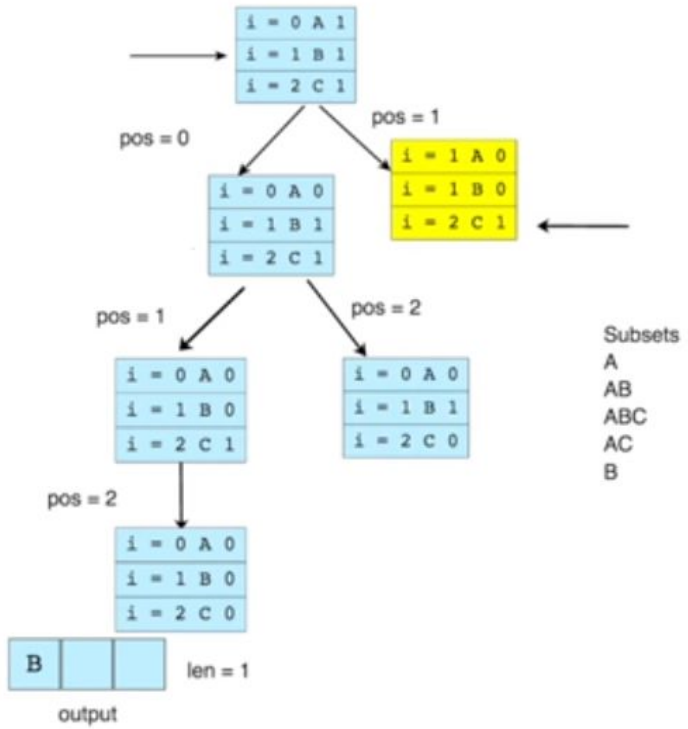


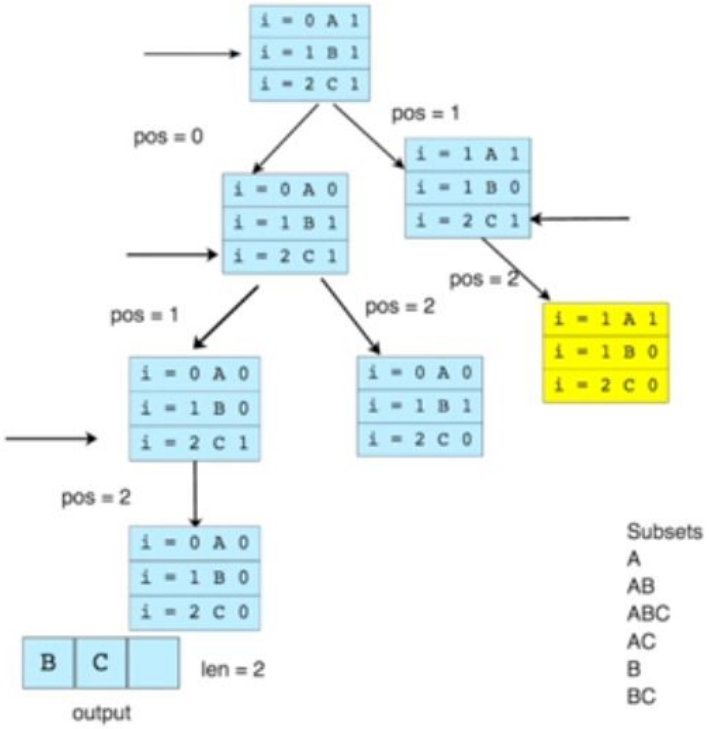
Subsets
A
AB
ABC

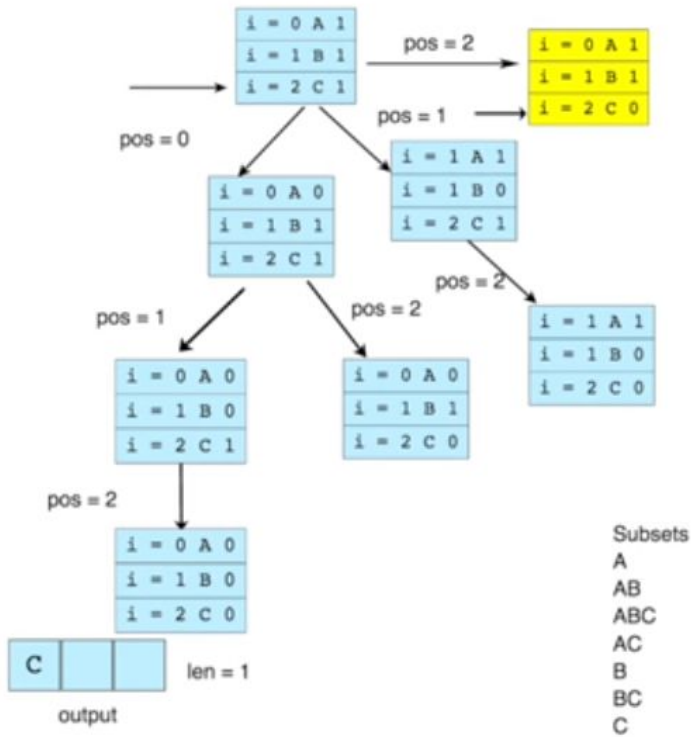
output

len = 3


i = 0 A 1
i = 1 B 1
i = 2 C 1
pos = 0
i = 0 A 0
i = 1 B 1
i = 2 C 1
pos = 1
pos = 2
i = 0 A 0
i = 1 B 0
i = 2 C 1
i = 0 A 0
i = 1 B 1
i = 2 C 0
pos = 2
i = 0 A 0
i = 1 B 0
i = 2 C 0
A
C
len = 2
output
Subsets
A
AB
ABC
AC


i = 0 A 1
i = 1 B 1
i = 2 C 1
pos = 0
pos = 1
i = 1 A 0
i = 1 B 0
i = 2 C 1
i = 0 A 0
i = 1 B 1
i = 2 C 1
pos = 1
pos = 2
i = 0 A 0
i = 1 B 0
i = 2 C 1
i = 0 A 0
i = 1 B 1
i = 2 C 0
pos = 2
i = 0 A 0
i = 1 B 0
i = 2 C 0
B
len = 1
output
Subsets
A
AB
ABC
AC
B


i = 0 A 1
i = 1 B 1
i = 2 C 1
pos = 0
pos = 1
i = 0 A 0
i = 1 B 1
i = 2 C 1
i = 1 A 1
i = 1 B 0
i = 2 C 1
pos = 2
pos = 1
pos = 2
i = 1 A 1
i = 1 B 0
i = 2 C 0
i = 0 A 0
i = 1 B 0
i = 2 C 1
i = 0 A 0
i = 1 B 1
i = 2 C 0
pos = 2
i = 0 A 0
i = 1 B 0
i = 2 C 0
B
C
len = 2
output
Subsets
A
AB
ABC
AC
B
BC


i = 0 A 1
i = 1 B 1
i = 2 C 1
pos = 2
i = 0 A 1
i = 1 B 1
i = 2 C 0
pos = 1
pos = 0
i = 0 A 0
i = 1 B 1
i = 2 C 1
i = 1 A 1
i = 1 B 0
i = 2 C 1
pos = 2
pos = 1
pos = 2
i = 1 A 1
i = 1 B 0
i = 2 C 0
i = 0 A 0
i = 1 B 0
i = 2 C 1
i = 0 A 0
i = 1 B 1
i = 2 C 0
pos = 2
i = 0 A 0
i = 1 B 0
i = 2 C 0
C
len = 1
output
Subsets
A
AB
ABC
AC
B
BC
C

Thank You