

Q1 Given a string, find the character with maximum frequency.

[a a b c s s c b a d a d a a a] → a

[a g g b d e] → g

[a d c] → a/d/c

char = a  
freq = 2

key	value
a	4
g	2
b	1
d	1
c	1

Q2 Given two arrays (unsorted), find the intersection.

arr1 = [5, 5, 7, 7, 2, 5]

arr2 = [6, 7, 9, 5, 5, 5]

ans → [5, 5, 7, 5]

Hashmap

5	3
7	2
2	1

Q3 Given an array of integers and a integer k, return the total no. of continuous subarrays whose sum equals to k.

Input → arr = [1, 1, 1] k = 2

output → 3 [1, 1], [1, 1], [1, 1]

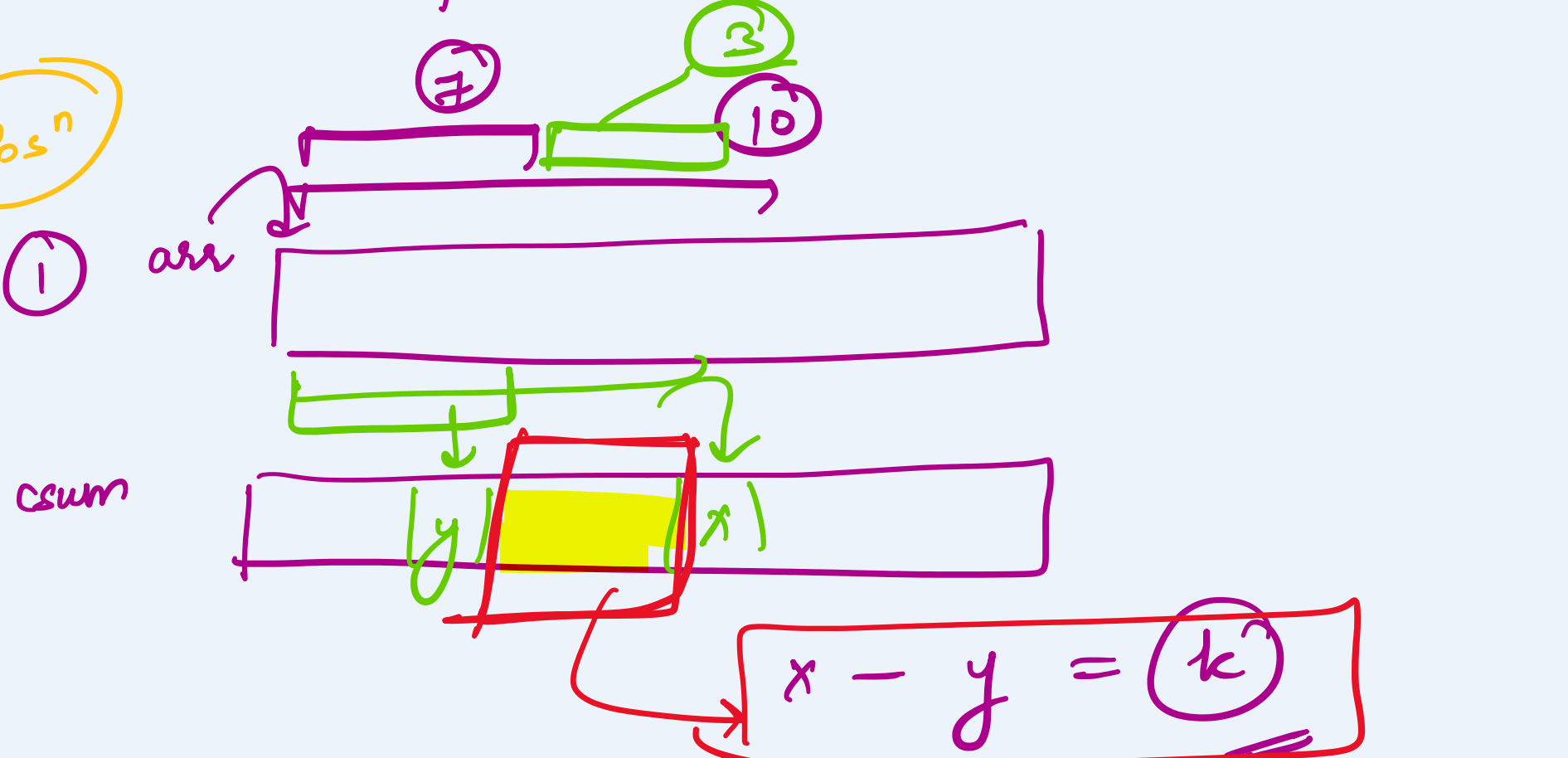
Input → arr → [1, 2, 3] k = 3

output → 2 [1, 2], [3]

Brute force

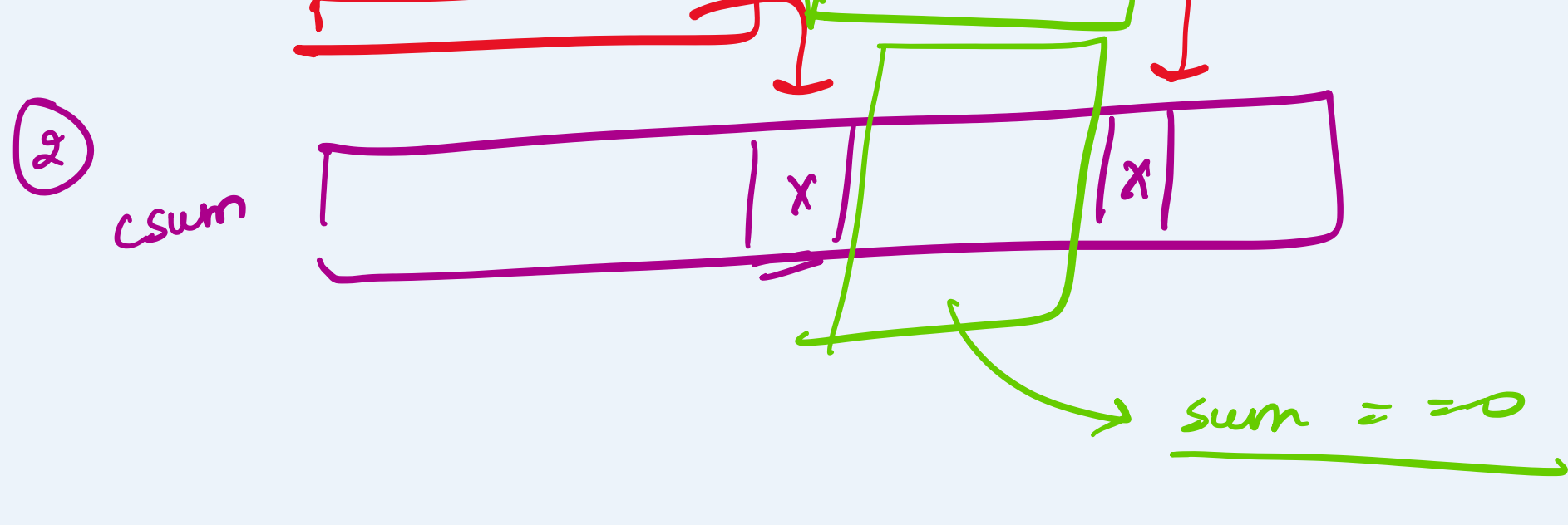
[x, y, z, m, n, w]  $O(n^2)$

obs^n



if (sum[i] - sum[j] = k, +) sum[j]

sum of ele from i to j is k.



Hashmap

(Sum, occurrences)

3 4 7 2 -3 1 4 3 7

map

(0, 1)

(3, 1)

(7, 1)

(14, 2)

(16, 1)

(13, 1)

(18, 1)

(21, 1)

(24, 1)

(27, 1)

(30, 1)

(33, 1)

(36, 1)

(39, 1)

(42, 1)

(45, 1)

(48, 1)

(51, 1)

(54, 1)

(57, 1)

(60, 1)

(63, 1)

(66, 1)

(69, 1)

(72, 1)

(75, 1)

(78, 1)

(81, 1)

(84, 1)

(87, 1)

(90, 1)

(93, 1)

(96, 1)

(99, 1)

(102, 1)

(105, 1)

(108, 1)

(111, 1)

(114, 1)

(117, 1)

(120, 1)

(123, 1)

(126, 1)

(129, 1)

(132, 1)

sum = 14

count = 2

k = 7

21 - 7 = 14

20 - 7 = 13

sum - k

14 - 7 = 7

18 - 7 = 11

21 - 7 = 14

24 - 7 = 17

27 - 7 = 20

30 - 7 = 23

33 - 7 = 26

36 - 7 = 29

39 - 7 = 32

42 - 7 = 35

45 - 7 = 38

48 - 7 = 41

51 - 7 = 44

54 - 7 = 47

57 - 7 = 50

60 - 7 = 53

63 - 7 = 56

66 - 7 = 59

69 - 7 = 62

72 - 7 = 65

75 - 7 = 68

78 - 7 = 71

81 - 7 = 74

84 - 7 = 77

87 - 7 = 80

90 - 7 = 83

93 - 7 = 86

96 - 7 = 89

99 - 7 = 92

102 - 7 = 95

105 - 7 = 98

108 - 7 = 101

111 - 7 = 104

114 - 7 = 107

117 - 7 = 110

120 - 7 = 113

123 - 7 = 116

126 - 7 = 119

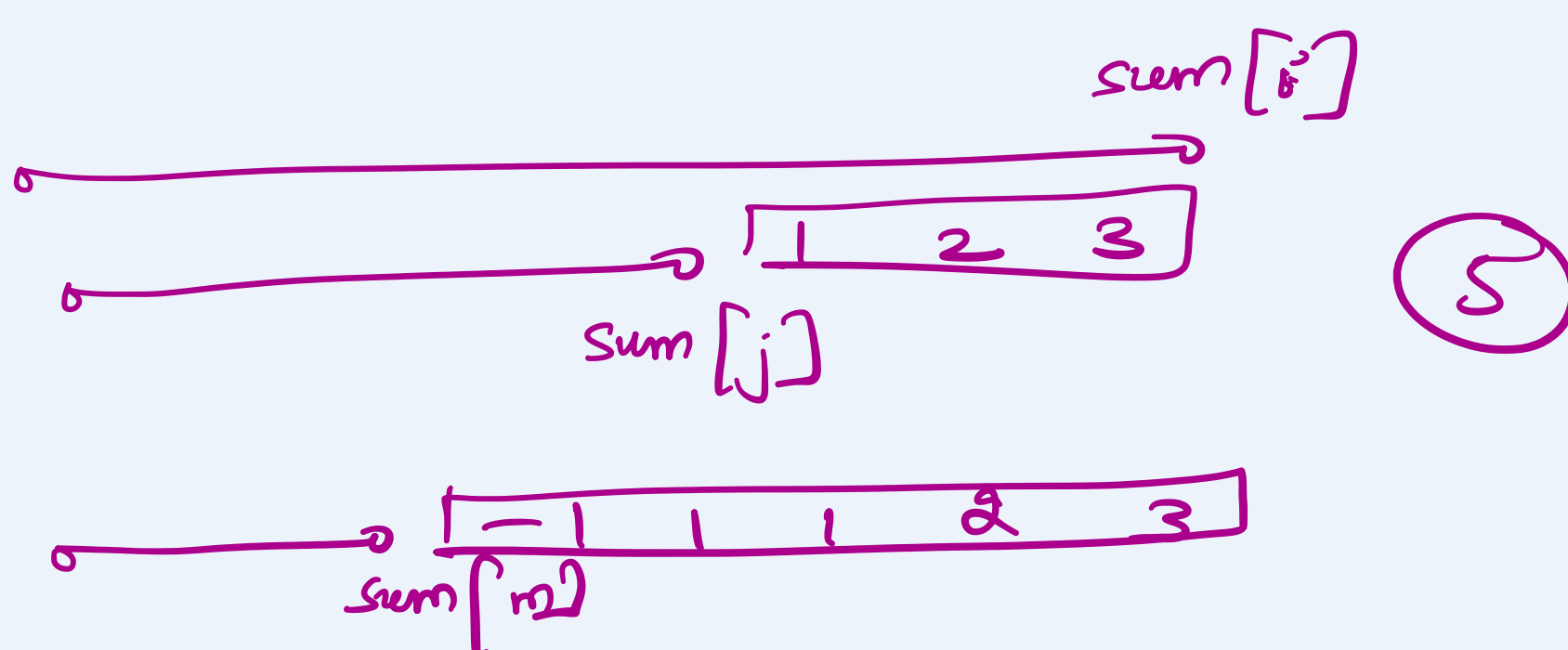
129 - 7 = 122

132 - 7 = 125

135 - 7 = 128

138 - 7 = 131

141 - 7 = 134



Q4 Given an array of integers, find the length of longest consecutive subsequence.

Eg: {1, 9, 3, 10, 4, 20, 2}

ans → 4

[1, 2, 3, 4]

[9, 10]

[20]

Eg: [2, 12, 9, 16, 10, 5, 3, 20, 25, 14, 1, 8, 6]

ans → 5

