

Top K most Frequent elements



Define Dictionary:

$$A \left[x \right] = \underbrace{f_x}_x$$

$$B \left[f \right] = \left[x \quad y \quad \dots \quad z \right]$$

Where f is the frequency of any elements x,y,\dots,z in input array



For each x_i

if key x_i in A

else add key-value pair $(x_i, 1)$

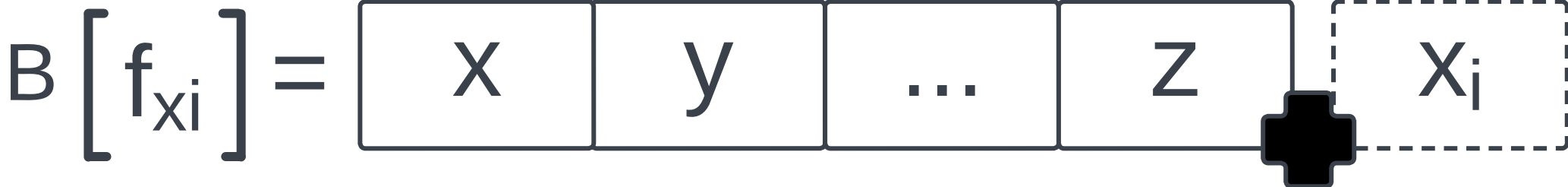


increment value f_{x_i} at key x_i in A by 1

we essentially map each unique element from input array to its frequency in input array

For each key-value pair (x_i, f_{x_i})

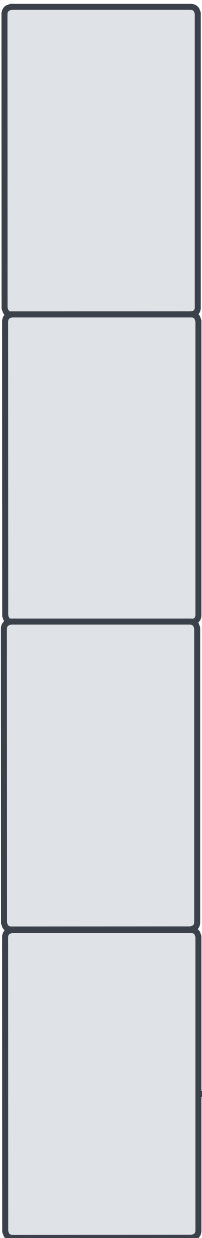
append value x_i to array stored at index f_{x_i} in B



B =



Then....



Keep Popping

To get the top K most frequent elements begin **popping** the arrays of values from the end of dictionary B until K values have been **popped** from it

Keep Popping

Pop