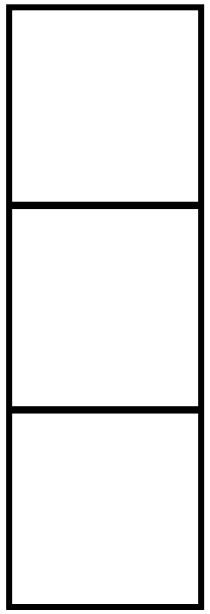
The still class

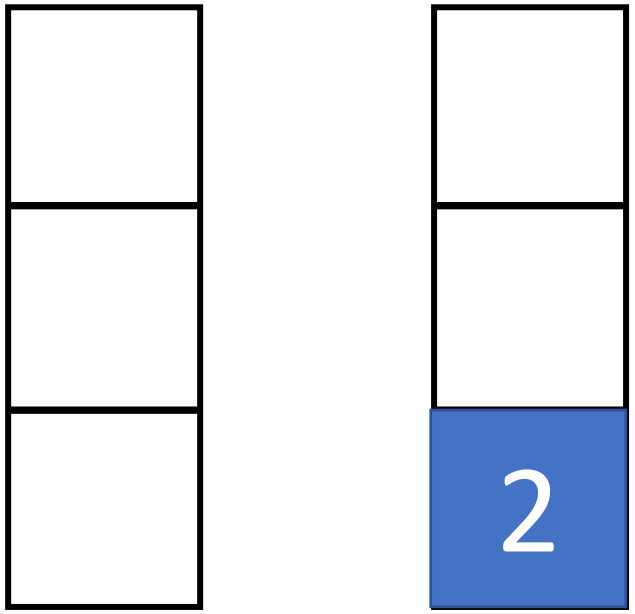
Let’s assume there is a queue named *delay_queue* which size is *delay_time*

Assume delay_time = 3

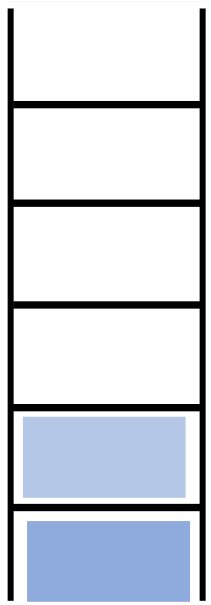


When t=0, the queue is Empty. And t=1, a number put in to the *delay_queue*
The number is the sum of ID captured in t=1 video screenshot
And the Information (ID, coordinate) will be stored in *info_queue*
There is another queue called *data_queue* used to store the screenshot

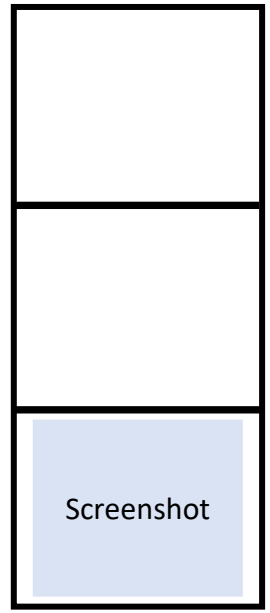
Assume number = 2



delay_queue

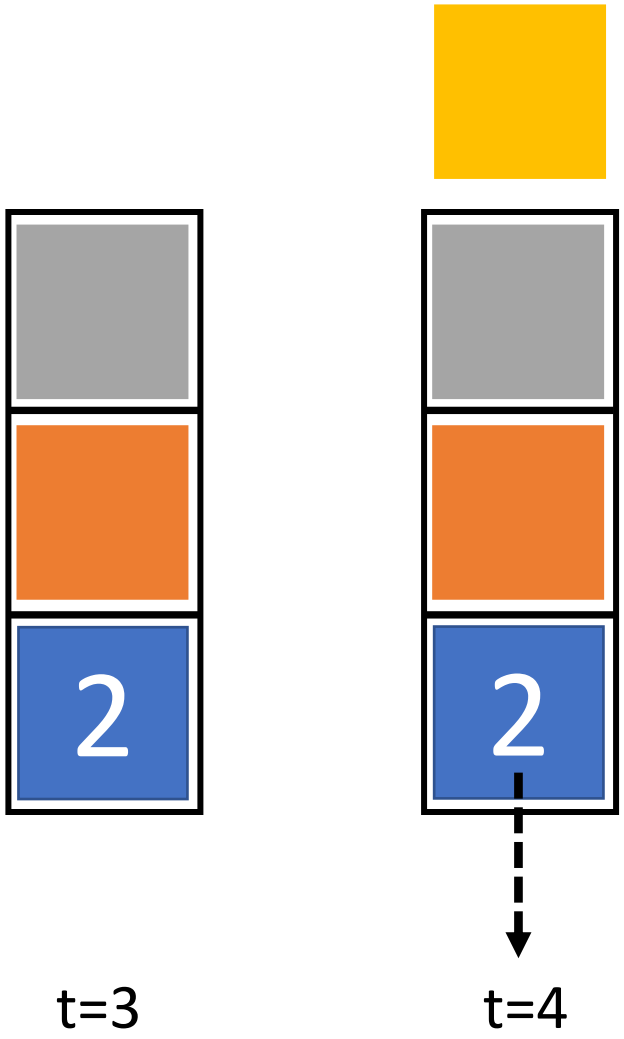


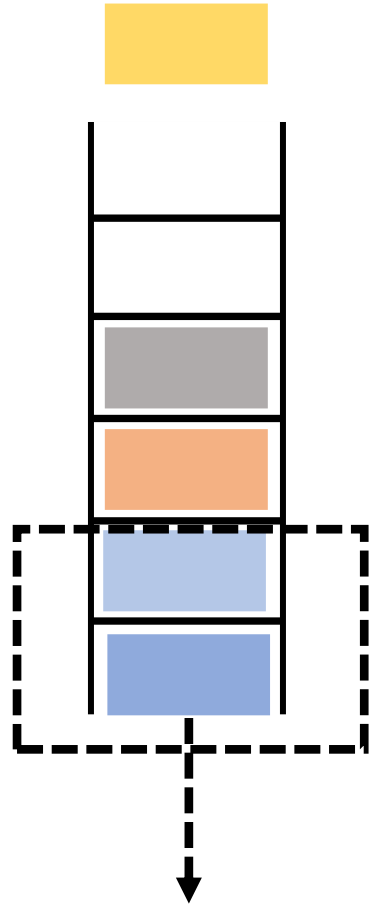
info_queue

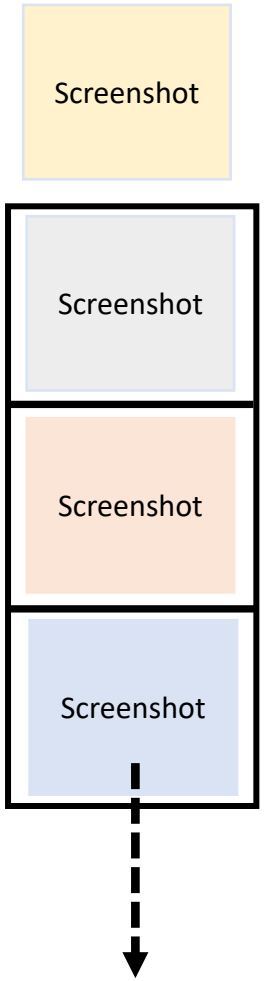


data_queue

When t=4, the *delay_queue* is full, the first element need to be pulled out *(t=1)*
And the *info_queue* first *two* elements as well as *data_queue* first element need to be pulled out





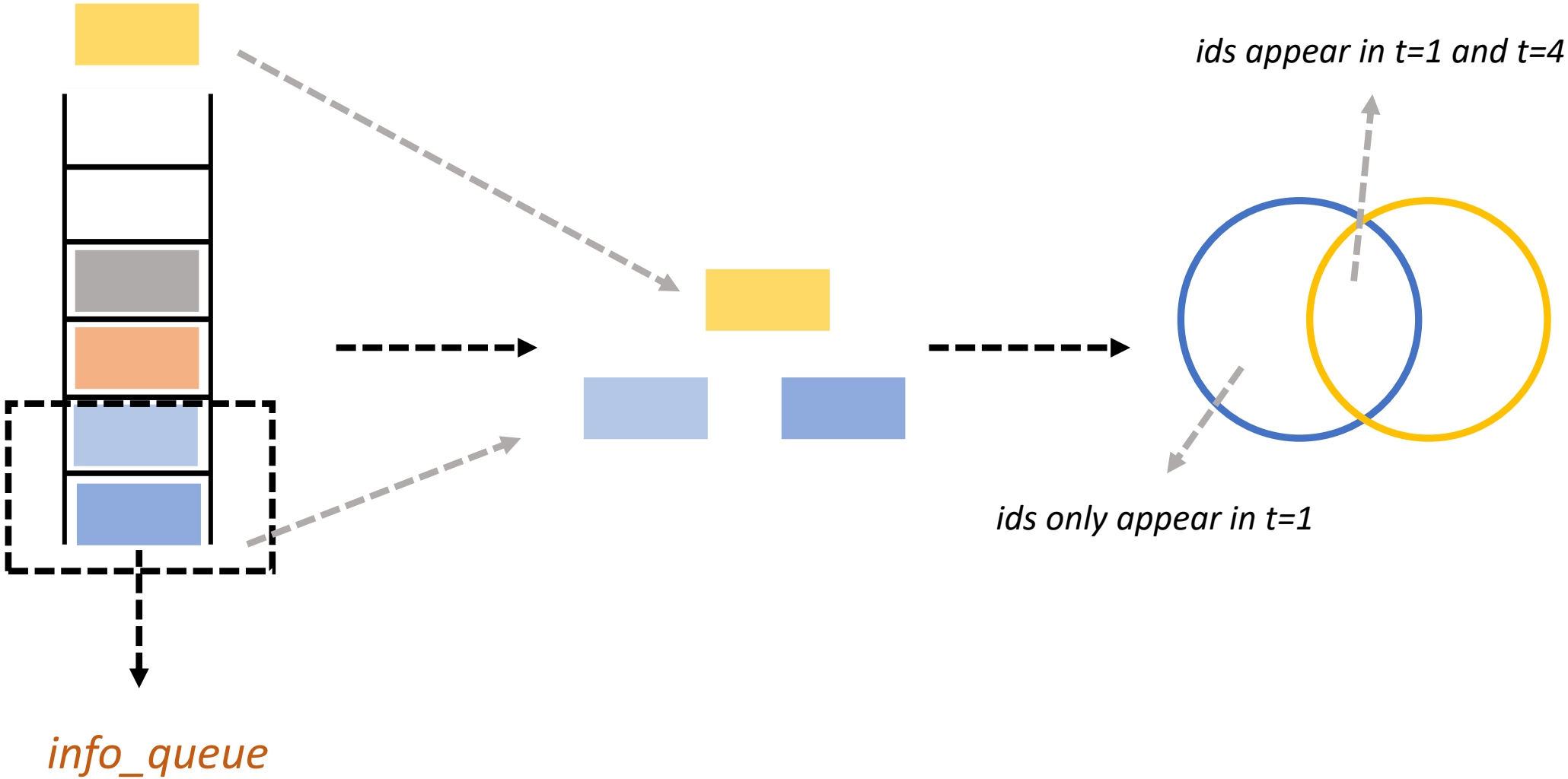


The still class will compare the ids show in t=1 with t=4

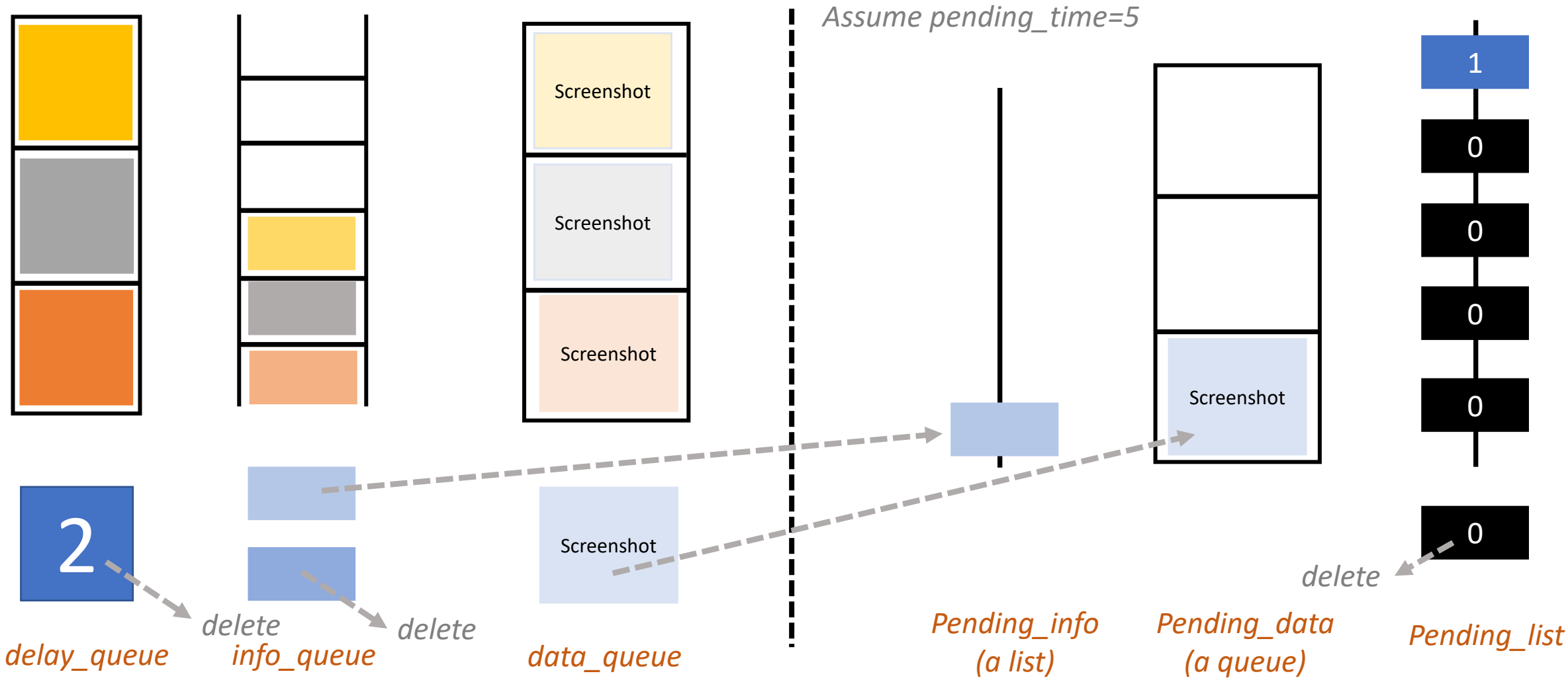
For the ids only appear in t=1, we think it moved

For ids appear in both t=1 and t=4, we compare the IOU between each id, when it less than a Constant , we think it moved

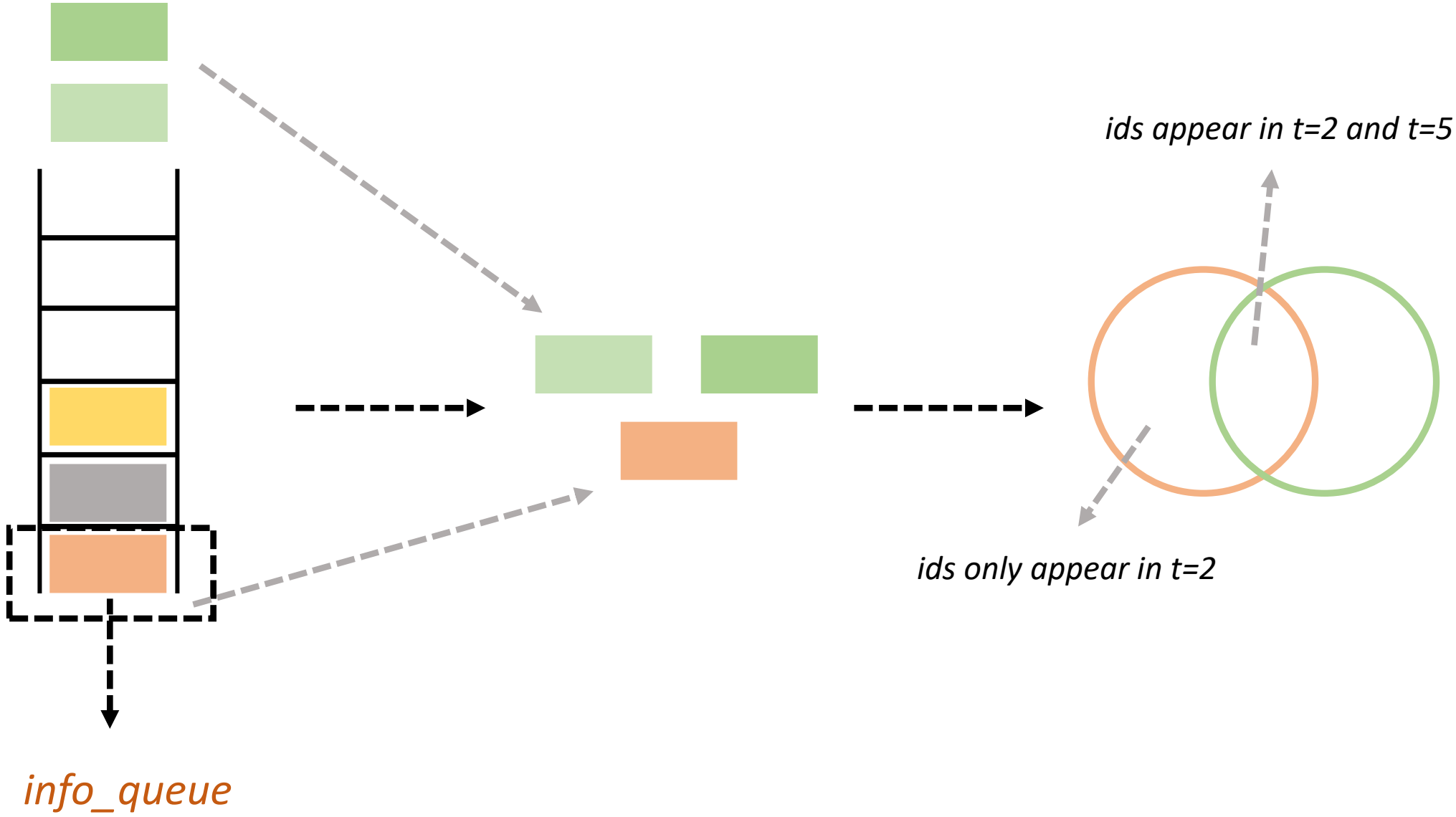
We store the coordinate information for each id in info_queue, do you still remember?



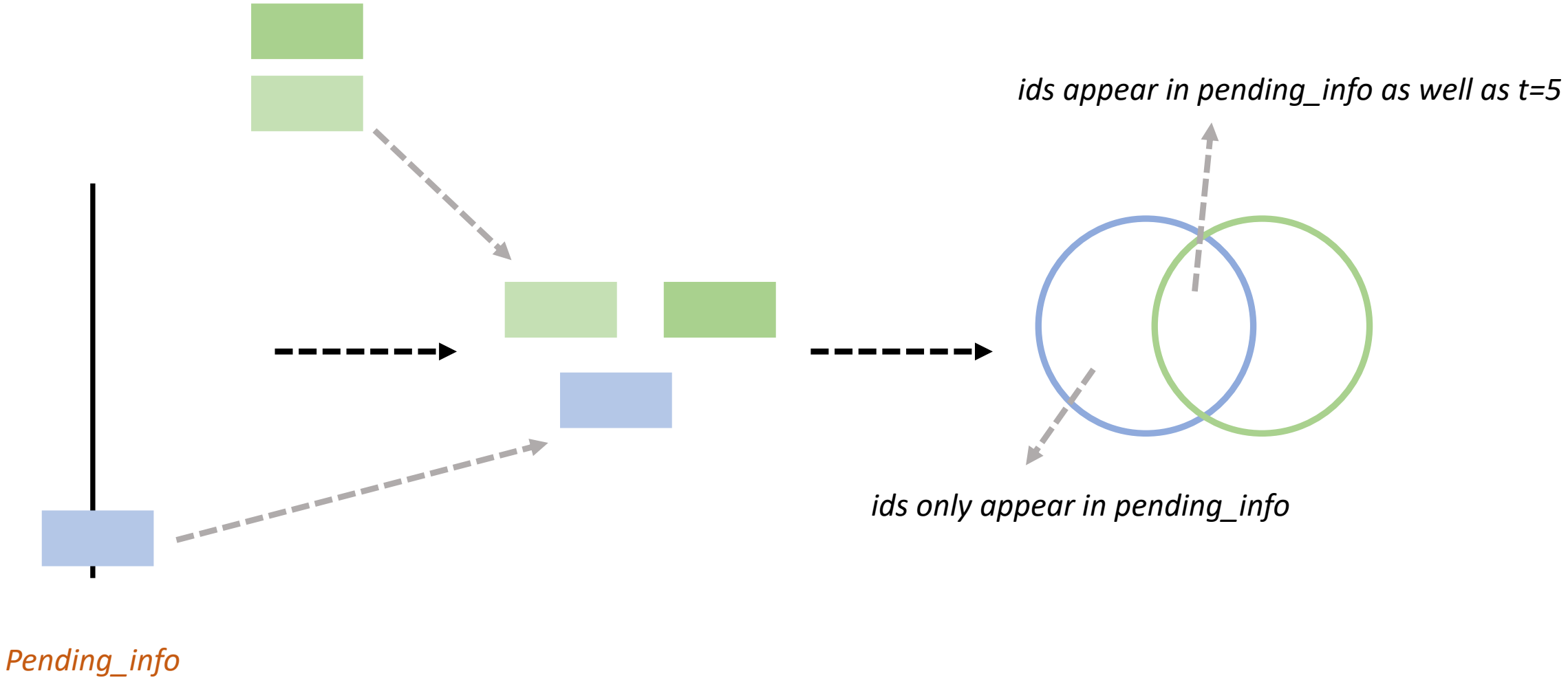
Then the ids which we think is moved will be stored in a list called *pending_info,*
pending_info will also stores the coordinate of these ids
pending_data will store the screenshot when there is id we think is moved
Pending_list will store the sum of id which we think is move in a second. It was initialized by a series of zero. The sum of zeros is *pending_time*



When t=5, the second element in *delay_queue* need to be pulled out (t=2), the process just like t=1 which shown above



Now, as the length of *pending_info* isn't equal to 0. The data in *pending_info* also need to compared with t=5 ids.

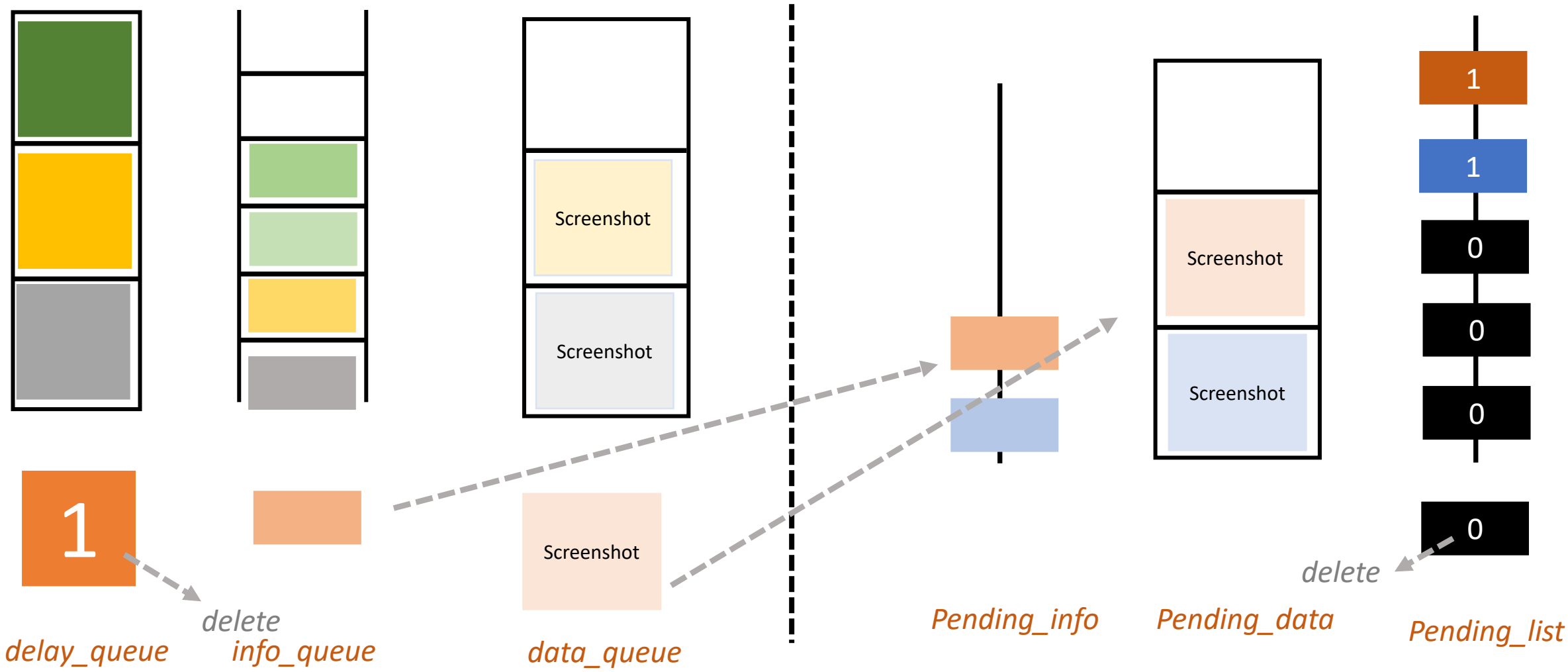


Then ids in the *pending_info* needed to be compared ***pending_time*** **times**

For t=1 ids need to be compared from t=5 to t=9

After each comparation, the ids doesn't meet the principle*(shown in Page5)* will be deleted

Set to None in real implementation



The ids survived after *pending_time* times comparation are the ids we think really moved