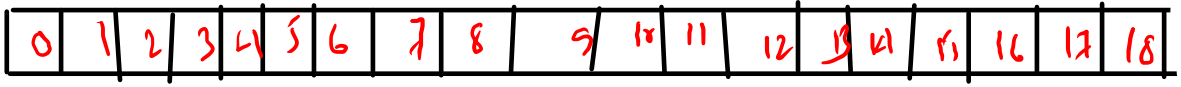
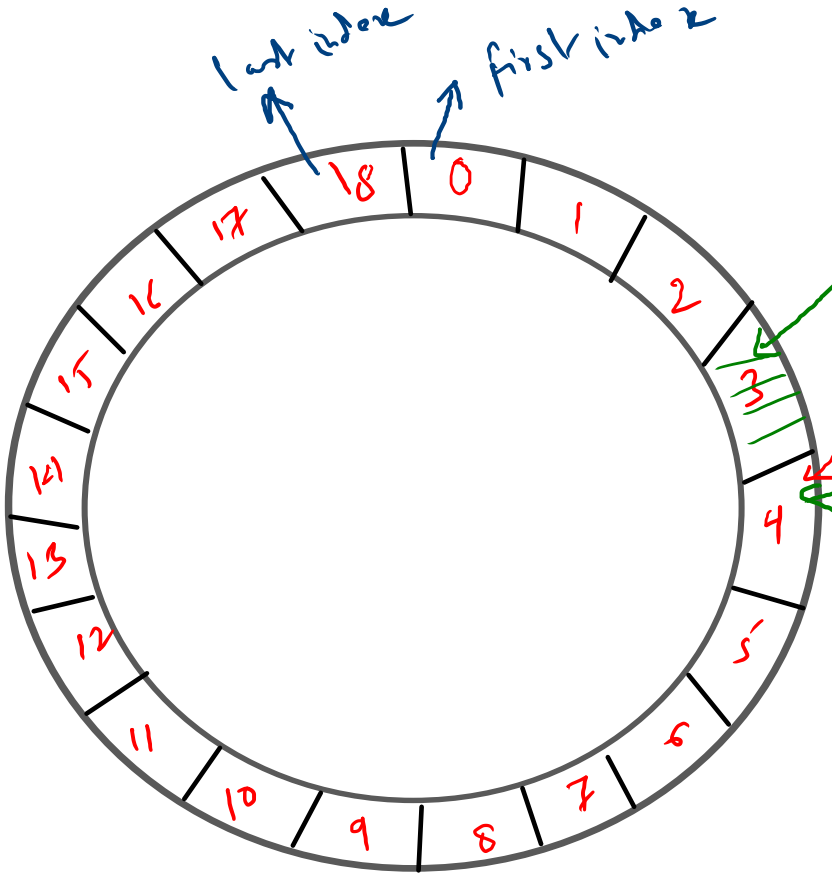
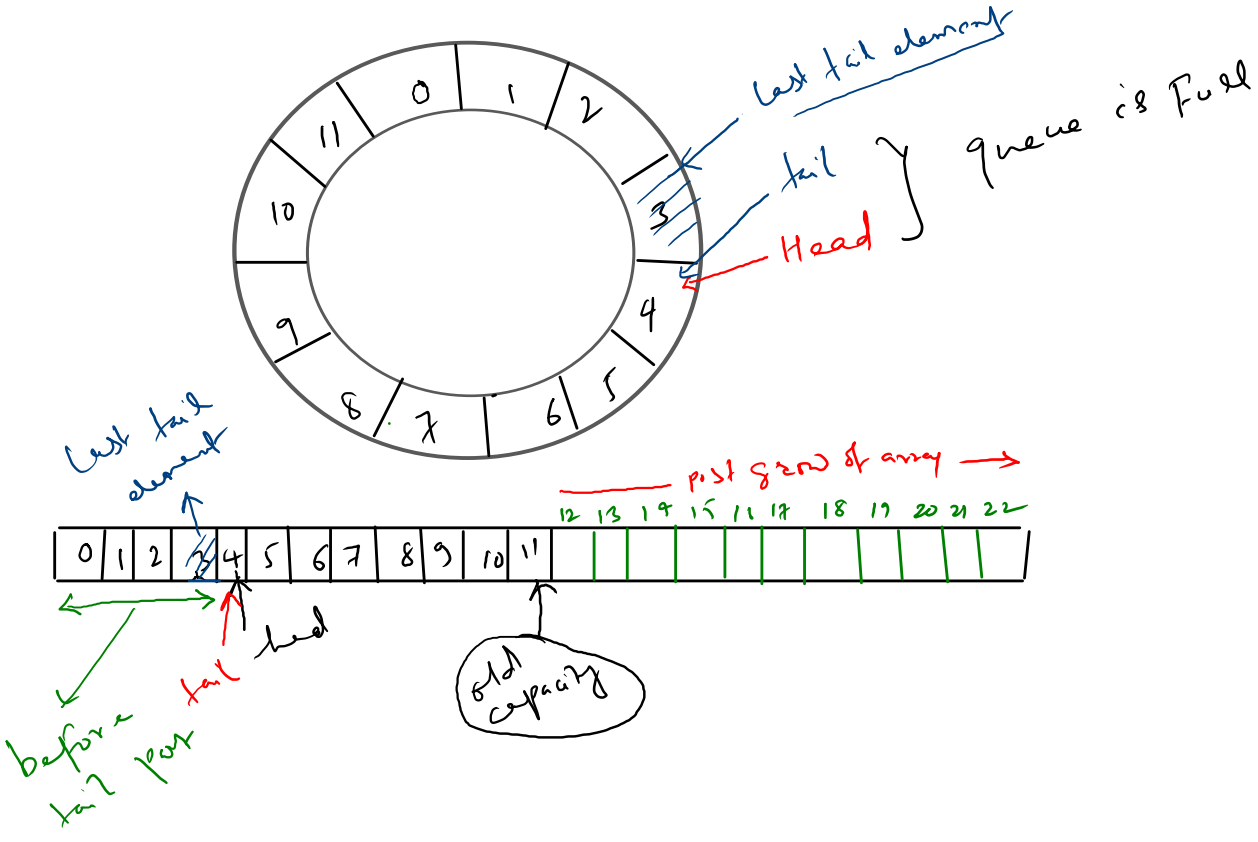




post poll
empty condition
head == tail

post offer full
condition;
tail == head



Strategy 1 Re-aligning Tail post grow:

copy the before tail part to post old-capacity index.

or

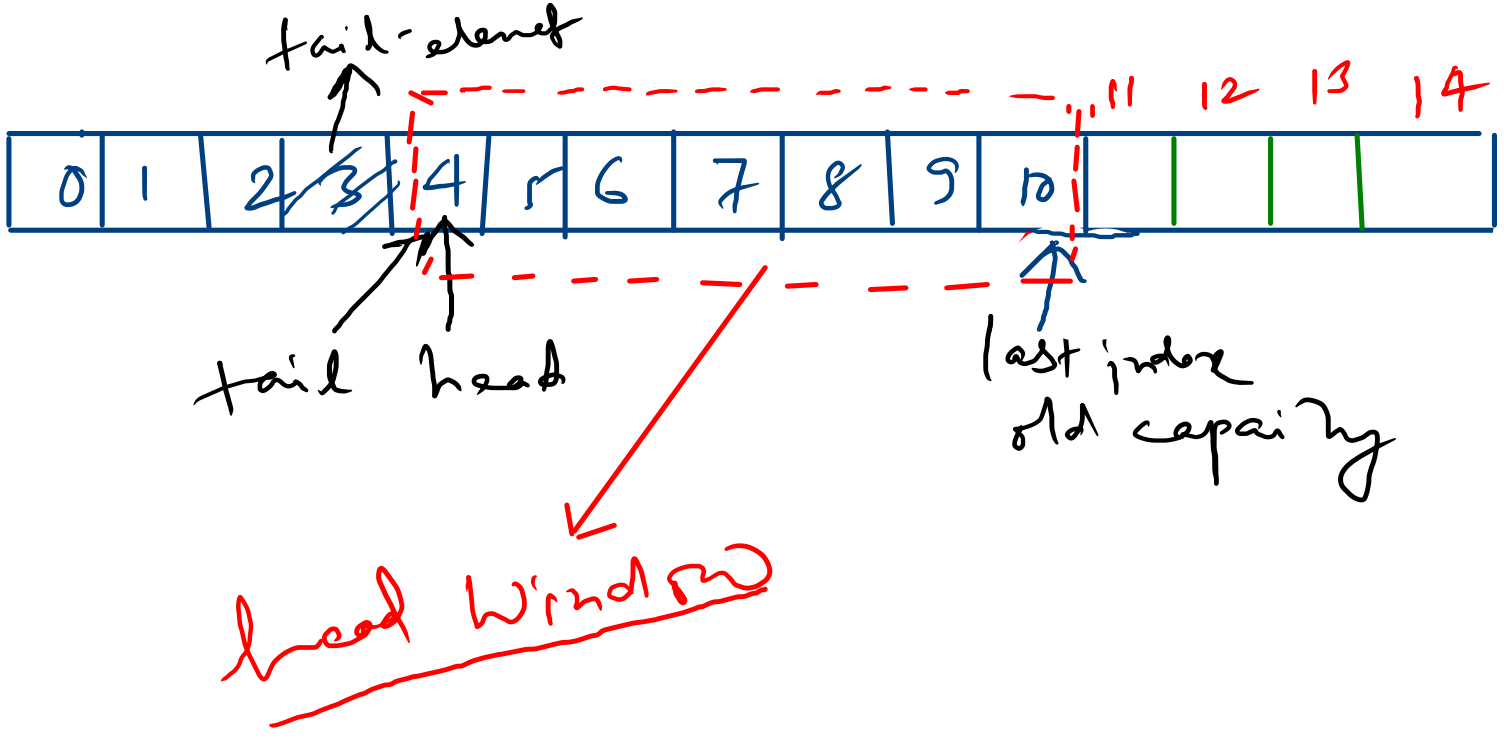
strategy 2: Re-aligning head post grow:

copy elements laying between head to old-capacity to end of new array.

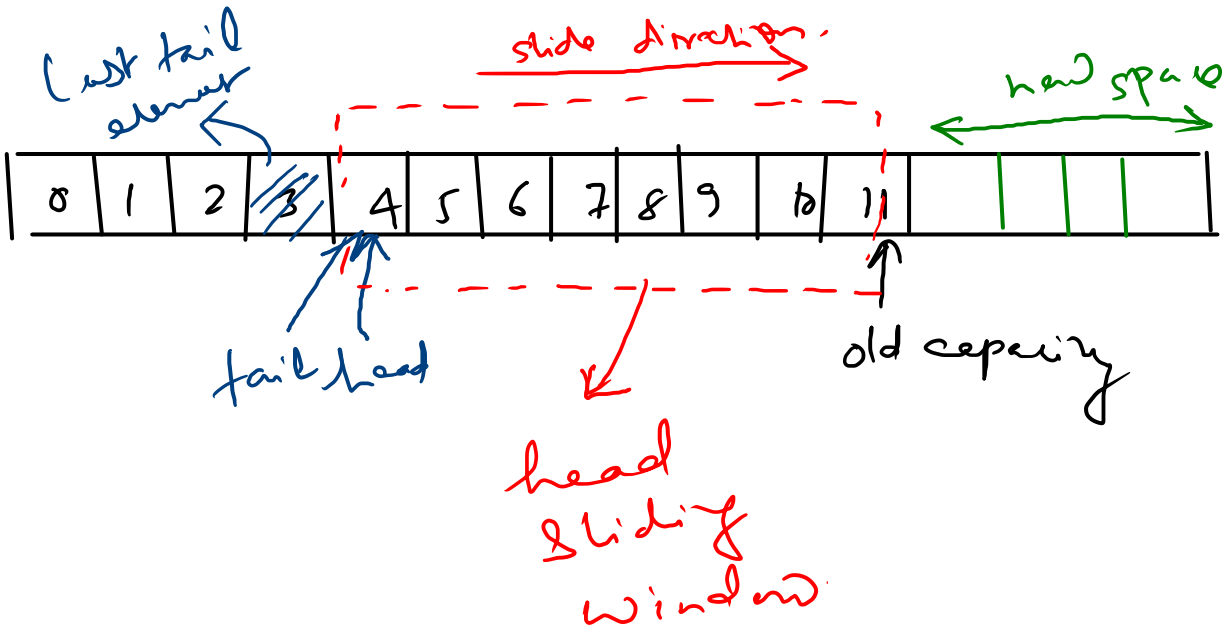
Head & tail realignment strategy when growth is less than double.

→ The best suitable strategy is sliding-window strategy.

eg: Head realignment strategy



1. Head realignment Sliding Window Strategy



→ Move the window by newSpace.

old start of window = head

old end of window = last_index (old capacity)

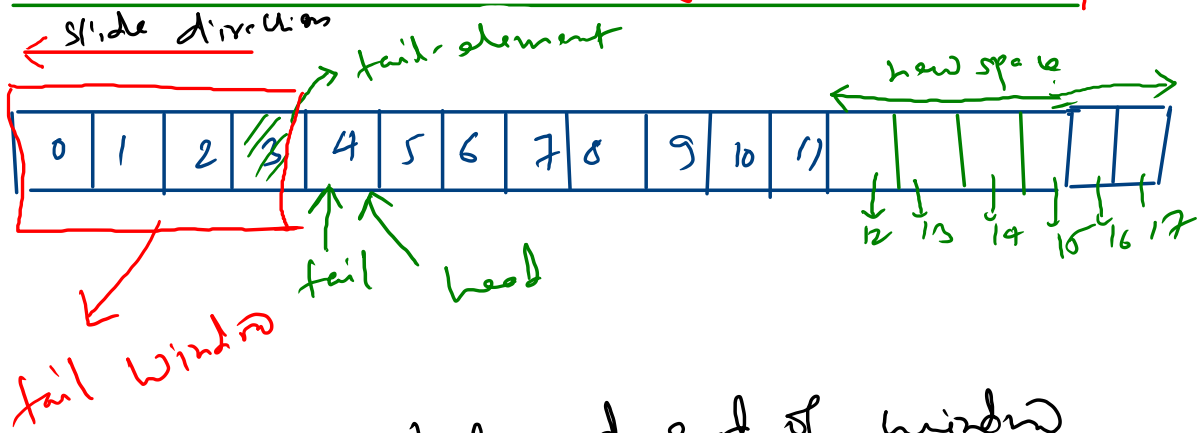
post shift window locations:

start of window = head + newSpace

end of window = last_index + newSpace.

old capacity

2. Tail realignment Sliding Window Strategy



current start and end of window

start = tail

end = 0th index

post shift start and end of window

end of window = old capacity
indep

Start of window: ⟶

If tail - newspace is true:

start = tail - newspace

ELSE tail - newspace is -ve:

start = old capacity + window size