

1. C
2. C
3. D

1. $O(1)$ $O(n)$

$O(n)$ $O(n)$

~~$O(n^2)$~~ $O(n \log n)$

2. [4] $insert \rightarrow next = new \text{ node } target \rightarrow next$

[5] $target \rightarrow next$

Q1. LIFO

FIFO

Undo 逆式呼叫

緩衝 任務排程

Q2 1. ~~Avoid memory leak~~ 防止 Dangling Pointer

2. 只需要改變指標指向在知道
~~head 情況下~~ \rightarrow 重連 $target$ 前 後節點 (需 0/1)

3. 需要 head 像 prev, next 等額外

~~要 traversing 遍歷所有~~ Sequential Access

1. B

2. C

3. ~~A~~ B

4. B

$O(\sqrt{n})$ $O(1)$

$O(\ln^2)$ $O(n^2)$

$O(1)$

$O(\sqrt{n})$

(5) prev Target \rightarrow next

(6) Target \rightarrow next

$O(1)$ $O(\log n)$ $O(n)$ $O(n \log n)$

$\text{newNode} \rightarrow \text{next} = \text{head}$

$\text{head} = \text{newNode}$

$\text{head} = \text{head} \rightarrow \text{next}$

$\text{insert} \rightarrow \text{next} = \text{target} \rightarrow \text{next}$

$\text{target} \rightarrow \text{next} = \text{insert}$

push pop isem isfull

enqueue dequeue isem isfull

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