

(5)

Date. _____

$$A = [3, 2, 3] \quad n = 3 \quad \text{majority } n/2 = \underline{\underline{\text{floor}(1.5) = 1}}$$

1, if we do count sort approach

$$\begin{array}{cccc} [0, 0, 1, 2] & & & 2 > 1 \\ 0 & 1 & 2 & 3 \end{array}$$

so 3 majority

$$A = [2, 2, 1, 1, 1, 2, 2] \quad n = 7 \quad \text{majority} = 3$$

$$\begin{array}{ccc} [0, 3, 4] & & \text{so } 4 > 3 \\ 0 & 1 & 2 \end{array} \quad \text{so 2 majority}$$

Linear $O(n)$

but $O(n)$ Space