SP 2024 HOMEWORK-2B CS2500

Prob. 1

$$A = \{3, 1, 2, 4, 5, 8, 7, 6, 9\}$$

A pivot p is such that all $A[i] < p$ are to the left of p and all $A[i] > p$ are to the right of p, after the array is partitioned.

Therefore, we have the following three candidates for pivot.

$$A = \{\underbrace{3, 1, 2}_{<4}, \underbrace{\boxed{4}}_{p}, \underbrace{5, 8, 7, 6, 9}_{>4}\}$$

$$A = \{\underbrace{3, 1, 2, 4}_{<5}, \underbrace{\boxed{5}}_{p}, \underbrace{8, 7, 6, 9}_{>5}\}$$

$$A = \{\underbrace{3, 1, 2, 4, 5, 8, 7, 6}_{<9}, \underbrace{\boxed{9}}_{p.}\}$$

Prob. 2 and Prob 3

Programming exercises.