**W1D2**

1. **Question 1**
2. Algorithm1

**Algorithm** *findThirdLargest(A, n)*

**Input** array **A** of **n** Integers

**Output** thirdLargestElement of **A**

firstMax 🡨 MIN\_VALUE

secondMax 🡨 MIN\_VALUE

thirdMax 🡨 MIN\_VALUE

firstMaxIndex 🡨 0

secondMaxIndex 🡨 0

**for** i 🡨 0 **to** n **do**

currentElement 🡨 A[0]

**if** firstMax < currentElement **then**

firstMax 🡨 currentElement

firstMaxIndex 🡨 i

**for** i 🡨 0 **to** n **do**

currentElement 🡨 A[0]

**if** i != firstMaxIndex **then**

**if** secondMax < currentElement **then**

secondMax 🡨 currentElement

secondMaxIndex 🡨 i

**for** i 🡨 0 **to** n **do**

currentElement 🡨 A[0]

**if** i != secondMaxIndex **then**

**if** thirdMax < currentElement **then**

thirdMax 🡨 currentElement

**return** thirdMax

1. **Algorithm2**

thirdLargest(A,n

max 🡨 MIN\_INTEGER, preMax 🡨 MIN\_INTEGER, prePreMax 🡨 MIN\_INTEGER

for I 🡨 0 to n – 1 do

cur 🡨 A[0]

**if** cur > max **then**

prePreMax 🡨 preMax

preMax 🡨 max

max 🡨 cur

**else if** cur > preMax **then**

prePreMax 🡨 preMax

preMax = cur

**else if** cur > prePreMax **then**

prePreMax 🡨 cur

**return** prePreMax