

Array-1

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Minimum Subarray Sum

$$[2, -1, 2, 3, -9, 5, 1]$$

① Initial \rightarrow Kadane's Algo

$$\text{Cur-Sum} \leftarrow (\text{CS})$$

$$\text{Min-Sum} = \text{INT_MIN} (\text{MS})$$

$$\begin{cases} i=0 \\ \text{CS} = 0 + 2 = 2 \end{cases}$$

$$\begin{cases} i=1 \\ \text{CS} = 2 - 1 = 1 \end{cases}$$

$$\begin{cases} i=2 \\ \text{CS} = 1 + 2 = 3 \end{cases}$$

$$\begin{cases} i=3 \\ \text{CS} = 3 + 3 = 6 \end{cases}$$

$$\begin{cases} i=4 \\ \text{CS} = 6 + (-9) = -3 \end{cases}$$

$$\begin{cases} i=5 \\ \text{CS} = -3 + 5 = 2 \end{cases}$$

$$\begin{cases} i=6 \\ \text{CS} = 2 + 1 = 3 \end{cases}$$

$$\begin{cases} i=7 \\ \text{CS} = 3 + (-9) = -6 \end{cases}$$

$$\begin{cases} i=8 \\ \text{CS} = -6 + 5 = -1 \end{cases}$$

$$\begin{cases} i=9 \\ \text{CS} = -1 + 1 = 0 \end{cases}$$

$$\boxed{\text{So } \text{MS} = 6}$$