Selection Sort

In the previous chapter, we explored a sorting algorithm known as Bubble Sort, which had an efficiency of O(N²). We're now going to dig into another sorting algorithm called *Selection Sort*, and see how it measures up to Bubble Sort.

The steps of Selection Sort are as follows:

1. We check each cell of the array from left to right to determine which value is least. As we move from cell to cell, we keep track of the lowest value we've encountered so far. (We'll do this by storing its index in a variable.) If we encounter a cell that contains a value that is even lower than the one in our variable, we replace it so that the variable now points to the new index. See the following diagram:

lowest value
so far is 2

| 2 | 6 | 1 | 3 |

↑

lowest value so
far is still 2

| 2 | 6 | 1 | 3 |

↑

lowest value so
far is now 1

| 2 | 6 | 1 | 3 |

↑

lowest value so
far is still 1

| 2 | 6 | 1 | 3 |

↑