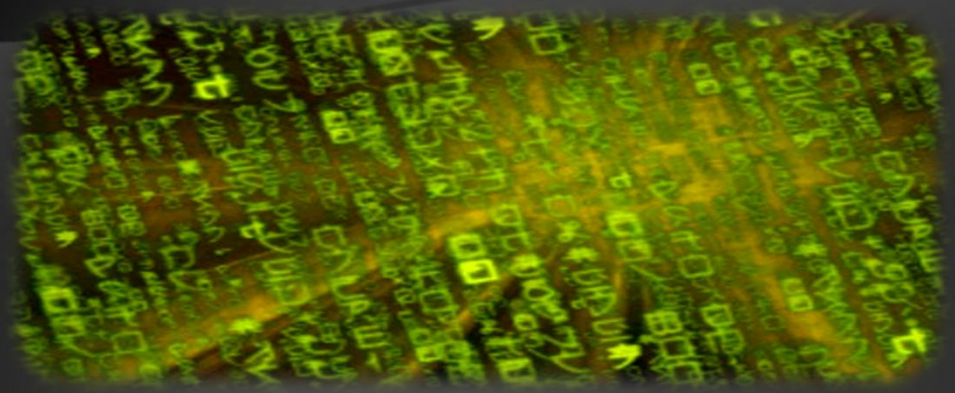
Telerik Academy



Arrays

Processing Sequences of Elements

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Exercises

1. Write a script that allocates array of 20 integers and initializes each element by its index multiplied by 5. Print the obtained array on the console.
2. Write a script that compares two char arrays lexicographically (letter by letter).
3. Write a script that finds the maximal sequence of equal elements in an array.

   Example: {2, 1, 1, 2, 3, 3, 2, 2, 2, 1} → {2, 2, 2}.

Exercises (2)

4. Write a script that finds the maximal increasing sequence in an array. Example:
   {3, 2, 3, 4, 2, 2, 4} → {2, 3, 4}.
5. Sorting an array means to arrange its elements in increasing order. Write a script to sort an array. Use the "selection sort" algorithm: Find the smallest element, move it at the first position, find the smallest from the rest, move it at the second position, etc.
   Hint: Use a second array
6. Write a program that finds the most frequent number in an array. Example:

   {4, 1, 1, 4, 2, 3, 4, 4, 1, 2, 4, 9, 3} → 4 (5 times)

Exercises (3)

7. Write a program that finds the index of given element in a sorted array of integers by using the binary search algorithm (find it in Wikipedia)