

Array Practise

Refer to the sample solutions to the “Array Practise” programs.

See also tutorials at w3schools.com

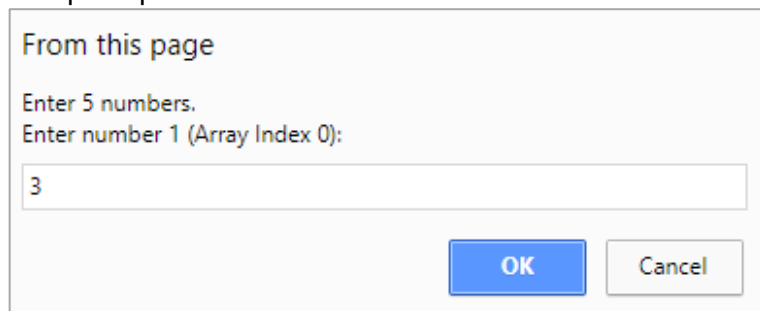
Start with [JavaScript Arrays](#)

1. Reverse

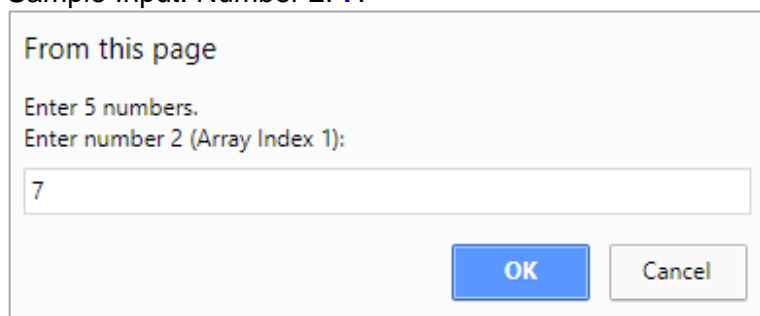
Create a program to ask the user for 5 numbers, store them in an array and display them as they are entered. Then display them in **reverse** order. See screenshots below.

You can write this program without using an “if” or a “switch” statement.

Sample Input: Number 1: **3**.



Sample Input: Number 2: **7**.



Sample Input: Number 3: **13**.

From this page

Enter 5 numbers.
Enter number 3 (Array Index 2):

OK Cancel

Sample Input: Number 4: **5**.

From this page

Enter 5 numbers.
Enter number 4 (Array Index 3):

OK Cancel

Sample Input: Number 5: **21**.

From this page

Enter 5 numbers.
Enter number 5 (Array Index 4):

OK Cancel

Sample Output:

Numbers displayed as entered: -----	
Number 1 (Array Index 0): 3	
Number 2 (Array Index 1): 7	
Number 3 (Array Index 2): 13	
Number 4 (Array Index 3): 5	
Number 5 (Array Index 4): 21	
Numbers displayed in reverse: -----	
Number 5 (Array Index 4): 21	
Number 4 (Array Index 3): 5	
Number 3 (Array Index 2): 13	
Number 2 (Array Index 1): 7	
Number 1 (Array Index 0): 3	

← Done by the first "for" loop

← Done by the second "for" loop

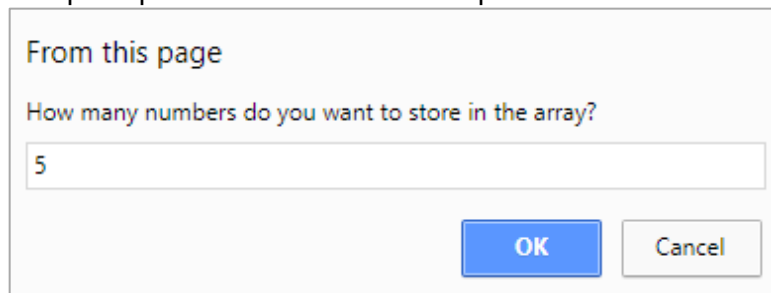
2. Total

Create a program that asks the user how many items they want to store in the array, it then prompts the user to enter each of those items, calculating the sum of those items as they are entered. The program will then display all of the items in the array and the total, as shown below:

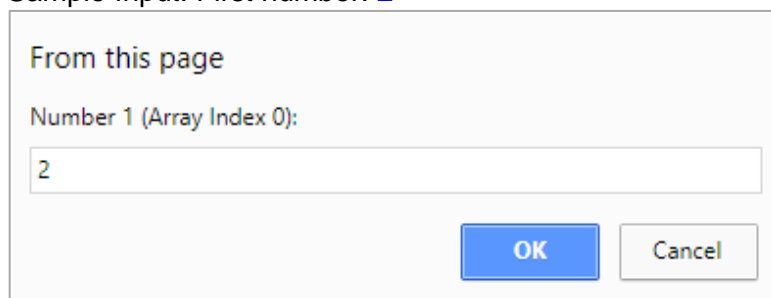
- a. Do this first **WITHOUT** using the “for...of” statement.
Although it can be done with just one “for” loop, use two “**for**” loops:
 - One “**for**” loop for input (iterate getting user input and storing it in the array)
 - One “**for**” loop for output (iterate through the array, calculating the total and building an output string of array items).
- b. Then rewrite the previous program **WITH** using one “for...of” statement.
 - One “**for**” loop for input (iterate getting user input and storing it in the array).
 - One “**for...of**” loop for output (iterate through the array, calculating the total and building an output string of array items).

The following input/output is common to BOTH scenarios “a” and “b”.

Sample Input: The user elected to input **5** numbers



Sample Input: First number: **2**



..... 4, 6 & 8 entered in between.

Sample Input: Fifth number: **10**

From this page

Number 5 (Array Index 4):

Sample output: Total is **30**

Numbers displayed as entered: -----	
Number 1 (Array Index 0): 2	
Number 2 (Array Index 1): 4	← Done by the first loop
Number 3 (Array Index 2): 6	
Number 4 (Array Index 3): 8	
Number 5 (Array Index 4): 10	
Array items entered : 2, 4, 6, 8, 10,	
Total of these array items = 30	

← Done by the second loop

3. Two Arrays

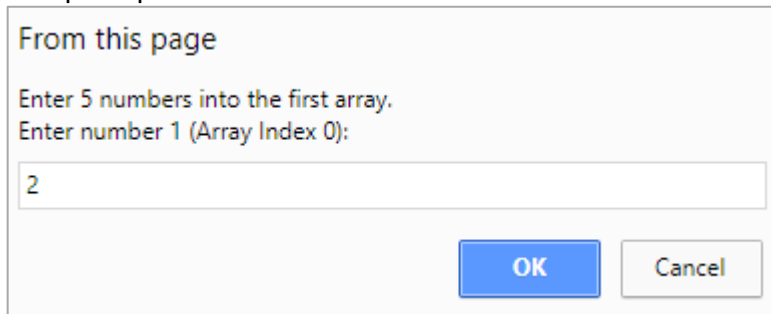
Create a program containing two arrays. Both arrays should contain 5 numbers (eg. integers). The first array should be populated by the user and items displayed as they are entered. This array should then be copied into the second array and then the contents of the second array displayed on the screen, as shown below:

You can use 3 loops:

- Loop 1: get input from user into first array and display items as they are entered.
- Loop 2: copy items from the first array into the second array.
- Loop 3: produce an output string to display items in the second array.

INPUT Phase: Enter data items into first array (Loop 1):

Sample Input: First number: 2



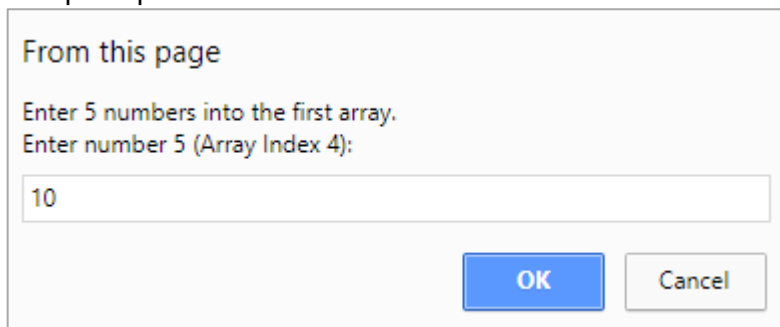
From this page

Enter 5 numbers into the first array.
Enter number 1 (Array Index 0):

OK Cancel

..... 4, 6 & 8 entered in between.

Sample Input: First number: 10



From this page

Enter 5 numbers into the first array.
Enter number 5 (Array Index 4):

OK Cancel

Transfer Phase: Data items copied from first array to second array (Loop 2):

Nothing displayed in this phase.

OUTPUT: Data items from the second array are displayed on one line (Loop 3):

Sample Output:

```
Numbers displayed when input and entered into the first array:
-----
Number 1 (Array Index 0): 2
Number 2 (Array Index 1): 4
Number 3 (Array Index 2): 6
Number 4 (Array Index 3): 8
Number 5 (Array Index 4): 10

Items have been copied from the first array to the second array.

Second array items      : 2  4  6  8  10
```

← Done by the first loop

← Done after the second loop

← Done by the third loop

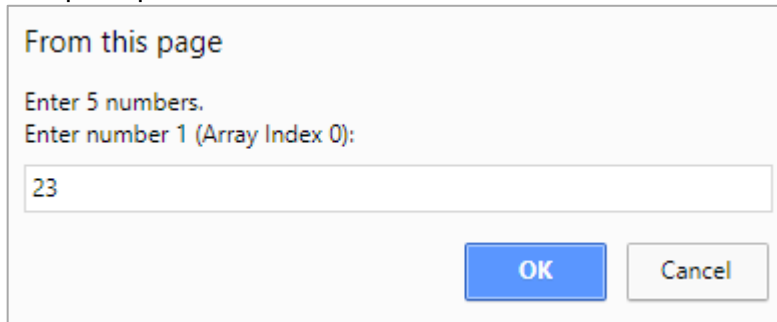
4. Min and Max

Create a program that uses an array to store 5 numbers (eg. integers). Get the user to populate the array, and then display the minimum and maximum element in the array, as shown in the screenshots below.

Even though you could do this within one loop, use two loops.

INPUT Phase: Enter data items into the array (Loop 1):

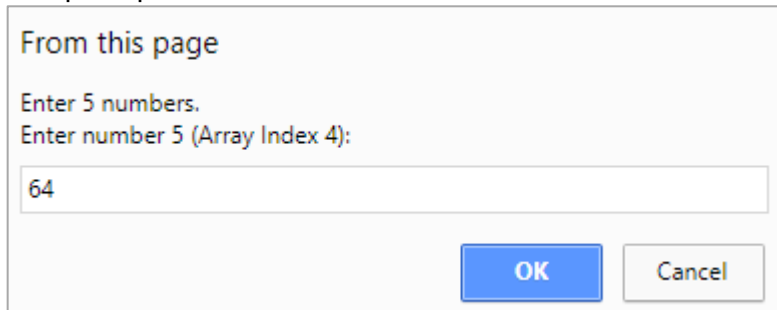
Sample Input: First number: 23



A screenshot of a Windows-style dialog box. The title bar is not visible. The text inside the box reads: "From this page" followed by "Enter 5 numbers." and "Enter number 1 (Array Index 0):". Below the text is a text input field containing the number "23". At the bottom right of the dialog are two buttons: "OK" (highlighted in blue) and "Cancel".

..... 42, 12, 75 entered in between.

Sample Input: First number: 64



A screenshot of a Windows-style dialog box. The text inside the box reads: "From this page" followed by "Enter 5 numbers." and "Enter number 5 (Array Index 4):". Below the text is a text input field containing the number "64". At the bottom right of the dialog are two buttons: "OK" (highlighted in blue) and "Cancel".

Processing Phase: Determine the max and min (Loop 2):

Nothing displayed in this phase.

OUTPUT: The min and max are displayed (Loop 3):

Sample Output:

Numbers displayed as entered: -----
Number 1 (Array Index 0): 23
Number 2 (Array Index 1): 42
Number 3 (Array Index 2): 12
Number 4 (Array Index 3): 75
Number 5 (Array Index 4): 64
The minimum number is: 12
The maximum number is: 75

← Done by the first loop

← Done after the second loop