Arrays

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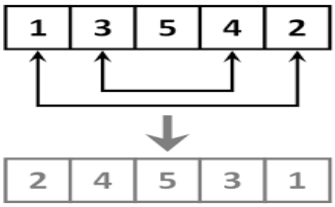
1) Write a C program to input 10 numbers through the keyboard into an array and display the results of addition of even numbers and product of odd numbers.

2) Write a C program to input 10 numbers through the keyboard into an array and find the biggest and smallest number in an Unsorted array without using any Sorting Technique.

3) Write a C program to input 10 numbers through the keyboard and find the number of prime numbers count, store them into a seperate array and display it.

4) Write a C program to findout second largest and second smallest elements of an unsorted array without using any Sorting Technique.

5) Write a C program to reverse the elements of a given array.



6) Write a C program to delete an element at desired position from an array.

1	14
2	50
3	73
4	9
5	24
6	3
7	92
8	-3

Original Array

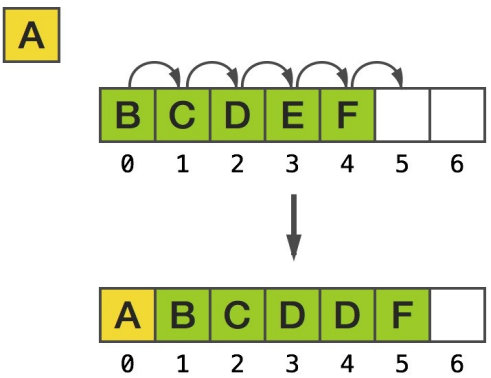
1	14
2	50
3	73
4	9
5	
6	3
7	92
8	-3

5th Element deleted – leaving an empty location

1	14
2	50
3	73
4	9
5	3
6	92
7	-3
8	

Array after Deletion

7) Write a C program to insert an element at desired position in an array.



For Example if 'A' is to be stored at '0' position then,

8) Write a C program which deletes the duplicate elements of an array.

Original: [A, C, B, D, A, B, E, D, B, C]
Remove duplicate result: D, E, A, B, C,

9) Write a C program to find the duplicate elements of a given array and find the count of duplicated elements.

Ex: if int a[] = {0,3,1,0,5,1,2,0,4,5}

output : -

The duplicate elements are existed in an array
0 -- 3 times
1 -- 2 times
5 -- 2 times

10) Write a program to print the non repeted numbers of a given array.
Ex : if int a[] = {0,3,1,0,5,1,2,0,4,5}

Output : 3, 2, 4

11) Write a program to copy the elements of one array into another array without duplicate items as a first slot, and store duplicate elements as a second slot.

Ex: source array {10,2,4,5,2,1,3,4,6,5,8,9,2}

destination arrays {10,2,4,5,1,3,6,8,9} , { 2,2,4,5}
first slot second slot

Take two different arrays for first and second slots.

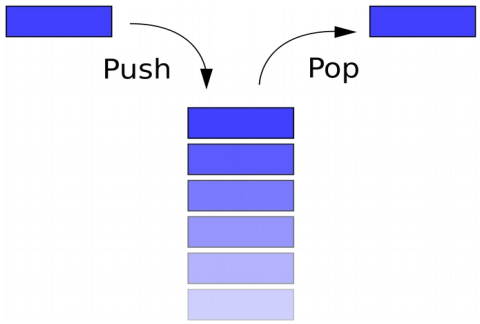
12) Write a C program to evaluate the following series. The series contains sum of square of numbers from 1 to 'n'. Strore result of each term in an array. Calculate value of ' S ' using array.

S = 1^2 + 2^2 + 3^2 + 4^2 + ------ n^2
= [1, 4, 9, 16, -------- n^2]

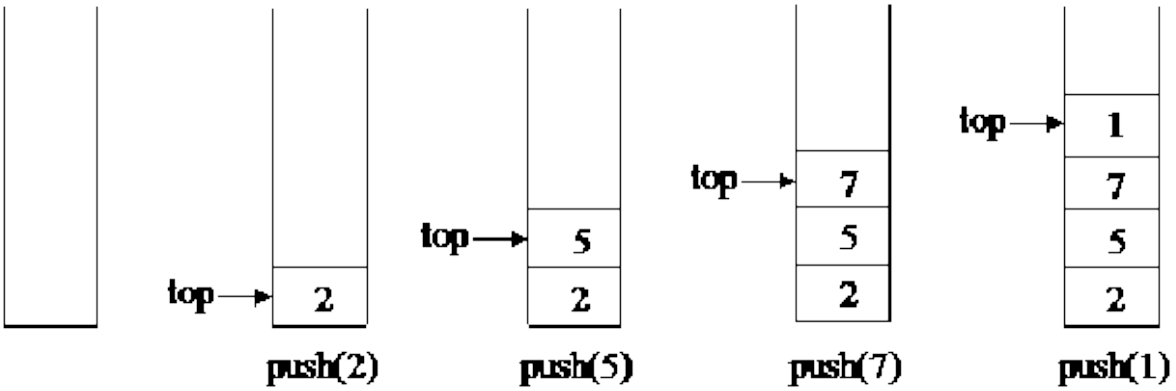
Suppose n = 4,

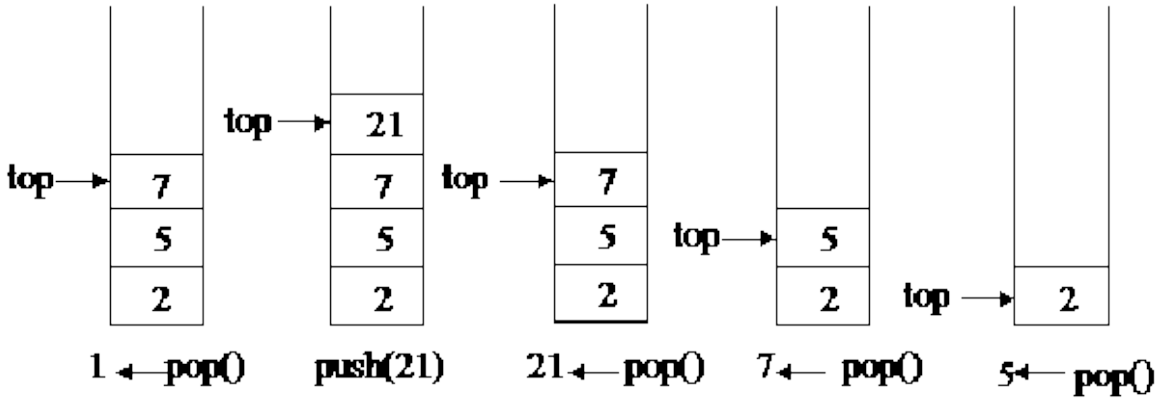
then S = 1^2+2^2+3^2+4^2;
S = 1+4+9+16;
S = 30.

13) Write a C program to implement the stack using arrays.


Push
Pop

STACK


top
2
push(2)
top
5
2
push(5)
top
7
5
2
push(7)
top
1
7
5
2
push(1)


top
7
5
2
1 ← pop()
top
21
7
5
2
push(21)
top
7
5
2
21 ← pop()
top
5
2
7 ← pop()
top
2
5 ← pop()

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