

## Array related problems (total 21 questions)

SL	Problem statement	Difficulty levels						
1.	WAP that will take n integer numbers into an array, and then print all the integers into reverse order (from the last valid index to index 0).	*						
	<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>5 1 2 3 4 5</td><td>5 4 3 2 1</td></tr><tr><td>6 2 8 3 9 0 1</td><td>1 0 9 3 8 2</td></tr></table>		Sample input	Sample output	5 1 2 3 4 5	5 4 3 2 1	6 2 8 3 9 0 1	1 0 9 3 8 2
	Sample input		Sample output					
	5 1 2 3 4 5		5 4 3 2 1					
	6 2 8 3 9 0 1		1 0 9 3 8 2					
2.	WAP that will take n integer numbers into an array, and then sum up all the integers in that array.	*						
	<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>5 1 2 3 4 5</td><td>15</td></tr><tr><td>6 2 8 3 9 0 1</td><td>23</td></tr></table>		Sample input	Sample output	5 1 2 3 4 5	15	6 2 8 3 9 0 1	23
	Sample input		Sample output					
	5 1 2 3 4 5		15					
	6 2 8 3 9 0 1		23					
3.	WAP that will take n integer numbers into an array, and then sum up all the even integers in that array.	*						
	<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>5 1 2 3 4 5</td><td>6</td></tr><tr><td>6 2 8 3 9 0 1</td><td>10</td></tr></table>		Sample input	Sample output	5 1 2 3 4 5	6	6 2 8 3 9 0 1	10
	Sample input		Sample output					
	5 1 2 3 4 5		6					
	6 2 8 3 9 0 1		10					
4.	WAP that will take n floating point numbers into an array, and then find the average of those numbers.	*						
	<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>5 1.2 5.6 10.3 4.5 5.2</td><td>5.36</td></tr><tr><td>8 2.1 8.3 3.7 9.2 0.6 1.5 6.4 10.1</td><td>8.38</td></tr></table>		Sample input	Sample output	5 1.2 5.6 10.3 4.5 5.2	5.36	8 2.1 8.3 3.7 9.2 0.6 1.5 6.4 10.1	8.38
	Sample input		Sample output					
	5 1.2 5.6 10.3 4.5 5.2		5.36					
	8 2.1 8.3 3.7 9.2 0.6 1.5 6.4 10.1		8.38					

5.	WAP that will take n integer numbers into an array, and then sum up all the even indexed integers in that array.	*						
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>5 1 2 3 4 5</td><td>9</td></tr><tr><td>6 2 8 3 9 0 1</td><td>5</td></tr></table>		Sample input	Sample output	5 1 2 3 4 5	9	6 2 8 3 9 0 1	5	
Sample input	Sample output							
5 1 2 3 4 5	9							
6 2 8 3 9 0 1	5							
6.	Wap that will take n integer numbers in an array, n different integer numbers in a second array and put the sum of the same indexed numbers from the two arrays in a third array.							
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>5 1 2 3 4 5 2 8 3 4 8</td><td>3 10 6 8 13</td></tr><tr><td>8 2 8 3 9 0 1 6 10 5 1 4 8 9 3 1 5</td><td>7 9 7 17 9 4 7 15</td></tr></table>		Sample input	Sample output	5 1 2 3 4 5 2 8 3 4 8	3 10 6 8 13	8 2 8 3 9 0 1 6 10 5 1 4 8 9 3 1 5	7 9 7 17 9 4 7 15	
Sample input	Sample output							
5 1 2 3 4 5 2 8 3 4 8	3 10 6 8 13							
8 2 8 3 9 0 1 6 10 5 1 4 8 9 3 1 5	7 9 7 17 9 4 7 15							

7.	WAP that will take n integer numbers into an array, and then reverse all the integers within that array. Finally print them all from 0 index to last valid index.	**						
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>5 1 2 3 4 5</td><td>5 4 3 2 1</td></tr><tr><td>6 2 8 3 9 0 1</td><td>1 0 9 3 8 2</td></tr></table>		Sample input	Sample output	5 1 2 3 4 5	5 4 3 2 1	6 2 8 3 9 0 1	1 0 9 3 8 2	
Sample input	Sample output							
5 1 2 3 4 5	5 4 3 2 1							
6 2 8 3 9 0 1	1 0 9 3 8 2							
8.	WAP that will take n integer numbers into an array, and then find the maximum -minimum among them with its index position.	**						
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>5 1 2 3 4 5</td><td>Max: 5, Index: 4 Min: 1, Index: 0</td></tr><tr><td>6 2 8 3 9 0 1</td><td>Max: 9, Index: 3 Min: 0, Index: 4</td></tr></table>		Sample input	Sample output	5 1 2 3 4 5	Max: 5, Index: 4 Min: 1, Index: 0	6 2 8 3 9 0 1	Max: 9, Index: 3 Min: 0, Index: 4	
Sample input	Sample output							
5 1 2 3 4 5	Max: 5, Index: 4 Min: 1, Index: 0							
6 2 8 3 9 0 1	Max: 9, Index: 3 Min: 0, Index: 4							

9.	WAP that will take n alphabets into an array, and then count number of vowels in that array.	*						
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>7 AKIOUEH</td><td>Count: 5</td></tr><tr><td>29 UNITEDINTERNATIONALUNIVERSITY</td><td>Count: 13</td></tr></table>		Sample input	Sample output	7 AKIOUEH	Count: 5	29 UNITEDINTERNATIONALUNIVERSITY	Count: 13	
Sample input	Sample output							
7 AKIOUEH	Count: 5							
29 UNITEDINTERNATIONALUNIVERSITY	Count: 13							
10.	WAP that will take n integers into an array, and then search a number into that array. If found then print its index. If not found then print “NOT FOUND”.	*						
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>8 7 8 1 3 2 6 4 3 3</td><td>FOUND at index position: 3, 7</td></tr><tr><td>8 7 8 1 3 2 6 4 3 5</td><td>NOT FOUND</td></tr></table>		Sample input	Sample output	8 7 8 1 3 2 6 4 3 3	FOUND at index position: 3, 7	8 7 8 1 3 2 6 4 3 5	NOT FOUND	
Sample input	Sample output							
8 7 8 1 3 2 6 4 3 3	FOUND at index position: 3, 7							
8 7 8 1 3 2 6 4 3 5	NOT FOUND							

11.	WAP that will take n integers into an array A, and then copy all numbers in reverse order from array A to another array B. Finally show all elements of both array A and B.	*						
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>8 7 8 1 3 2 6 4 3</td><td>Array A : 7 8 1 3 2 6 4 3 Array B : 3 4 6 2 3 1 8 7</td></tr><tr><td>3 3 2 1</td><td>Array A : 3 2 1 Array B : 1 2 3</td></tr></table>		Sample input	Sample output	8 7 8 1 3 2 6 4 3	Array A : 7 8 1 3 2 6 4 3 Array B : 3 4 6 2 3 1 8 7	3 3 2 1	Array A : 3 2 1 Array B : 1 2 3	
Sample input	Sample output							
8 7 8 1 3 2 6 4 3	Array A : 7 8 1 3 2 6 4 3 Array B : 3 4 6 2 3 1 8 7							
3 3 2 1	Array A : 3 2 1 Array B : 1 2 3							
12.	WAP that will take n integer numbers as input in an array and then insert a number in a position specified by the user in the array.	**						
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>10 9 11 34 23 16 15 2 37 89 54 number: 78 position: 4</td><td>9 11 34 23 78 16 15 2 37 89 54</td></tr><tr><td>5 32 14 9 48 6 number: 16 position: 0</td><td>16 32 14 9 48 6</td></tr></table>		Sample input	Sample output	10 9 11 34 23 16 15 2 37 89 54 number: 78 position: 4	9 11 34 23 78 16 15 2 37 89 54	5 32 14 9 48 6 number: 16 position: 0	16 32 14 9 48 6	
Sample input	Sample output							
10 9 11 34 23 16 15 2 37 89 54 number: 78 position: 4	9 11 34 23 78 16 15 2 37 89 54							
5 32 14 9 48 6 number: 16 position: 0	16 32 14 9 48 6							
13.	WAP that will take n integer numbers as input in an array and then delete a number from a position specified by the user in the array.	*						
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>10 9 11 34 23 16 15 2 37 89 54 position: 4</td><td>9 11 34 23 15 2 37 89 54</td></tr><tr><td>5 32 14 9 48 6 position: 0</td><td>14 9 48 6</td></tr></table>		Sample input	Sample output	10 9 11 34 23 16 15 2 37 89 54 position: 4	9 11 34 23 15 2 37 89 54	5 32 14 9 48 6 position: 0	14 9 48 6	
Sample input	Sample output							
10 9 11 34 23 16 15 2 37 89 54 position: 4	9 11 34 23 15 2 37 89 54							
5 32 14 9 48 6 position: 0	14 9 48 6							
14.	WAP that will first take n integers into an array A and then m integers into array B. Now swap all elements between array A and B. Finally show all elements of both array A and B.	**						
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>8 7 8 1 3 2 6 4 3 3 3 2 1</td><td>Array A : 3 2 1 Array B : 7 8 1 3 2 6 4 3</td></tr></table>		Sample input	Sample output	8 7 8 1 3 2 6 4 3 3 3 2 1	Array A : 3 2 1 Array B : 7 8 1 3 2 6 4 3			
Sample input	Sample output							
8 7 8 1 3 2 6 4 3 3 3 2 1	Array A : 3 2 1 Array B : 7 8 1 3 2 6 4 3							

15.	WAP that will take n positive integers into an array A. Now find all the integers that are divisible by 3 and replace them by -1 in array A. Finally show all elements of array A.	*						
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>8 7 8 1 3 2 6 4 3</td><td>7 8 1 -1 2 -1 4 -1</td></tr><tr><td>3 3 2 1</td><td>-1 2 1</td></tr></table>		Sample input	Sample output	8 7 8 1 3 2 6 4 3	7 8 1 -1 2 -1 4 -1	3 3 2 1	-1 2 1	
Sample input	Sample output							
8 7 8 1 3 2 6 4 3	7 8 1 -1 2 -1 4 -1							
3 3 2 1	-1 2 1							
16.	WAP that will take n positive integers into an array A. Now find all the integers that have an odd index and replace them by 0 in array A. Finally show all elements of array A.							
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>8 7 8 1 3 2 6 4 3</td><td>7 0 1 0 2 0 4 0</td></tr><tr><td>3 3 2 1</td><td>3 0 1</td></tr></table>		Sample input	Sample output	8 7 8 1 3 2 6 4 3	7 0 1 0 2 0 4 0	3 3 2 1	3 0 1	
Sample input	Sample output							
8 7 8 1 3 2 6 4 3	7 0 1 0 2 0 4 0							
3 3 2 1	3 0 1							
17.	WAP that will take n integers into an array A. Now sort them in ascending order within that array. Finally show all elements of array A. Reference: <a href="http://en.wikipedia.org/wiki/Bubble_sort">http://en.wikipedia.org/wiki/Bubble_sort</a>	***						
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>8 7 8 1 3 2 6 4 3</td><td>1 2 3 3 4 6 7 8</td></tr><tr><td>3 3 2 1</td><td>1 2 3</td></tr></table>		Sample input	Sample output	8 7 8 1 3 2 6 4 3	1 2 3 3 4 6 7 8	3 3 2 1	1 2 3	
Sample input	Sample output							
8 7 8 1 3 2 6 4 3	1 2 3 3 4 6 7 8							
3 3 2 1	1 2 3							

18.	WAP that will take n integers into an array A. Now remove all duplicates numbers from that array. Finally print all elements from that array.	**								
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>8 2 8 1 3 2 6 4 3</td><td>2 8 1 3 6 4</td></tr><tr><td>3 3 3 3</td><td>3</td></tr><tr><td>4 6 7 8 9</td><td>6 7 8 9</td></tr></table>		Sample input	Sample output	8 2 8 1 3 2 6 4 3	2 8 1 3 6 4	3 3 3 3	3	4 6 7 8 9	6 7 8 9	
Sample input	Sample output									
8 2 8 1 3 2 6 4 3	2 8 1 3 6 4									
3 3 3 3	3									
4 6 7 8 9	6 7 8 9									
19.	WAP that will take n integers into array A and m positive integers into array B. Now find the intersection (set operation) of array A and B.	**								
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>8 7 8 1 5 2 6 4 3 6 1 3 6 0 9 2</td><td>1 2 6 3</td></tr><tr><td>3 1 2 3 2 4 5</td><td>Empty set</td></tr></table>		Sample input	Sample output	8 7 8 1 5 2 6 4 3 6 1 3 6 0 9 2	1 2 6 3	3 1 2 3 2 4 5	Empty set			
Sample input	Sample output									
8 7 8 1 5 2 6 4 3 6 1 3 6 0 9 2	1 2 6 3									
3 1 2 3 2 4 5	Empty set									
20.	WAP that will take n integers into an array A and m positive integers into array B. Now find the union (set operation) of array A and B.	**								
<table><tr><th>Sample input</th><th>Sample output</th></tr><tr><td>8 7 8 1 5 2 6 4 3 6 1 3 6 0 9 2</td><td>7 8 1 5 2 6 4 3 0 9</td></tr><tr><td>3 1 2 3 2 4 5</td><td>1 2 3 4 5</td></tr></table>		Sample input	Sample output	8 7 8 1 5 2 6 4 3 6 1 3 6 0 9 2	7 8 1 5 2 6 4 3 0 9	3 1 2 3 2 4 5	1 2 3 4 5			
Sample input	Sample output									
8 7 8 1 5 2 6 4 3 6 1 3 6 0 9 2	7 8 1 5 2 6 4 3 0 9									
3 1 2 3 2 4 5	1 2 3 4 5									

**21.** WAP that will take n integers into an array A and m positive integers into array B. Now find the difference (set operation) of array A and B or (A-B).

**\*\***

Sample input	Sample output
8 7 8 1 5 2 6 4 3 6 1 3 6 0 9 2	7 8 5 4
3 1 2 3 2 4 5	1 2 3