## PROGRAMMING BEGINNER TO ADVANCED PBA INSTITUTE

## ARRAY

- 1. Write a program to find the **sum and average** of the numbers of the given **Single Dimensional array.** int  $m[] = \{25,38,49,50,70,59\};$
- 2. Write a program to find the **greatest number** of the given Single Dimensional Array. int  $m[]=\{68,35,19,55,91,29\};$
- 3. Write a program to store 10 different country names and their capitals in two different S.D.A. Display the names along with the capitals.
- 4. Write a program to store 20 different names in SDA. Now enter a name and search whether the name is present or not using **Linear Search technique**. If the name is present then display the message "Search successful" otherwise display "Search unsuccessful".
- 5. Write a program to store 10 different names and telephone numbers of your friends in two different SDA. Now arrange all the names in alphabetical order and display all the names along with their respective telephone numbers.
- 6. Write a program to store 10 temperatures °F in **S.D.A** and display all the temperatures after converting them into °C.
- 7. Write a program to store runs scored by 11 Indian Cricket players of an innings along with their names. Now display the name of the cricketer who has made the highest score in that innings along with runs.
  - 8. Write a program to store 10 numbers in S.D.A and display only those which are **prime**.
- 9. Write a program to accept 20 different numbers in a **Single Dimensional Array** and display the **maximum and minimum** number of the array elements.
- 10. Write a program to accept 10 different numbers in S.D.A and search whether a given **numbers** is **present or not** and display the relevant message.
- 11. Write a program to accept 20 different numbers in a S.D.A. Enter a number and using **Binary Search technique**, check whether the number is present or not in the array. If the number is present then display the message "Search Successful" otherwise "Search Unsuccessful".
- 12. Write a program to accept 20 different numbers in S.D.A. Arrange the numbers in **ascending order** using **Selection Sort** method and display them.
- 13. Write a program to enter a set of 10 Integers. Sort the numbers in **ascending order** by using **Bubble sort technique**. Display the sorted array.
- 14. Write a program to enter a set of 10 Integers. Sort the numbers in **descending order** by using **Bubble sort technique**. Display the sorted array.
- 15. Write a program to accept 20 different numbers in S.D.A. Arrange the numbers in **descending order** using **Selection Sort** method and display them.

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## PROGRAMMING BEGINNER TO ADVANCED PBA INSTITUTE

#### ARRAY

- 16. Write a program to store 10 numbers and find the **greatest and smallest number** of the given Single Dimensional Array.
- 17. Write a program to store 10 numbers in S.D.A and find the **Max, Min and Sum of numbers**.
- 18. Write a program to store the given numbers of **S.D.A into another S.D.A in reverse order** of the location.
- 19. Write a program to store 20 numbers in array and display only those which are **palindrome**.
- 20. Write a program to store 10 numbers in array and display even and odd numbers.
- 21. Write a program to store 30 numbers in array and sum of all even numbers and product of all odd numbers.
- 22. Write a program to store 10 numbers in S.D.A. Now display only those numbers **having** complete square root.
- 23. Write a Program to store random numbers in an array and print the smallest, largest, average.
- 24. Write a program to store random numbers in array and check the number is **special number or not.** 145 = 1! + 4! + 5! = 1 + 24 + 120 = 145
- 25. Write a program to store 40 numbers in S.D.A and display all the **Armstrong numbers**.
- 26. Write a program to store 50 numbers and check whether it is Magic number or Not.
- 27. Write a program to store 20 numbers and display the sum of first and last digit of the numbers. Example: 487 = 11, 1785=6
- 28. Write a program to store 100 numbers in S.D.A and check **Flappy number or not.** A five digit number is called Flappy if product of its last two digits is 32 and sum of all five digits is 36. E.g. 79848. (7+9+8+4+8)=36. (4\*8)=32
- 29. Write a program to store 20 different numbers in SDA. Now enter a no and search whether the name is present or not using **Linear Search technique**.
- 30. Write a program to store 20 different numbers in SDA. Sort the numbers in **ascending order** by using **Bubble sort technique**. Now enter a no and search whether the name is present or not using **Linear Search technique**.
- 31. Write a program to store 20 different numbers in SDA. Sort the numbers in **ascending order** by using **Selection Sort technique**. Now enter a no and search whether the name is present or not using **Linear Search technique**.
- 32. Write a program to store 20 different numbers in SDA and check whether the number is **Happy** Number or not.

- 33. Write a program to perform **Addition & Subtraction of Two Matrices** using double dimensional array. [4x4 Matrix by default]
- 34. Write a program to perform the **multiplication of two 3\*3 matrices** and display result.
- 35. Write a program to interchange row and column elements of matrix i.e. transpose.
- 36. Write code for function oddEven(int S[],int N) to add 5 in all the odd values and add 10 in all the even values of the array s.

#### If the original content of the array is:

S[0]	S[1]	S[2]	S[3]	S[4]
50	11	19	24	28

#### The modified content will be:

S[0]	S[1]	S[2]	S[3]	S[4]
60	16	24	34	38

37. Write code for a function void Convert(int T[], int Num), which repositions all the elements of the array by shifting each of them one to one position before and by shifting the first elements to the last position.

# If the original content of the array is:

[0]	[1]	[2]	[3]	[4]
50	11	19	24	28

#### The modified content will be:

[0]	[1]	[2]	[3]	[4]
11	19	24	28	50

38. Write a function SWAP2CHANGE(int p[], int N) to modify the content of the array in such a way that the elements, which are multiples of 10 swap with the value present in the very next position in the array.

#### If the original content of the array is:

[0]	[1]	[2]	[3]	[4]	[5]
91	50	54	22	30	54

#### The modified content will be:

[0]	[1]	[2]	[3]	[4]	[5]
91	54	50	22	54	30

39. Write a Get1From2() function to transfer the content from two arrays FIRST[] and SECOND[] to array ALL[]. The even places(0,2,4,...) of array ALL[] should get the content from the array First[] and odd places (1,3,5...) of array ALL[] should get the content from the array SECOND[].

e.g. if the FIRST[] array contains:

[0]	[1]	[2]
10	20	30

if the SECOND[] array contains:

[0]	[1]	[2]
50	80	90

The ALL[] array should contain

[0]	[1]	[2]	[3]	[4]	[5]
10	50	20	80	30	90

40. Write a Get2From1() function to transfer the content from one array ALL[] to two different arrays Odd[] and Even[].

The Odd[] array should contain the values from odd position (1,3,5...) of ALL[] and Even[] array should contain the values from places (0,2,4...) Of ALL[].

e.g. The ALL[] array should contain:

The Odd[] array contains 34, 67, 90.

The Even[] array contains 12, 56, 89

[0]	[1]	[2]	[3]	[4]	[5]
12	34	56	67	89	90

41. Write a function CHANGE(), which accept an array of integer and its size as parameters and divide all those array elements by 7 which are divisible by 7 and multiply other array elements by 3. **OUTPUT:** 

INPUT:

	1				
[	<b>d</b> ]	[1]	[2]	[3]	[4]
1	21	12	35	42	18

[0]	[1]	[2]	[3]	[4]
3	36	5	6	54

42. Write a function SORTPOINTS() to sort an array of structure Game in descending order of points using bubble sort.

Assume the following definition of structure Game.

truct Game

Long PNo; //Player Number

Char PName[20];

Long Points;

Sample content of array (before sorting):

PNo	PName	Points
103	Ritika Kapur	3001
104	John Philip	2819
101	Razia Abbas	3451
105	Tarun Kumar	2971

Sample content of array (After sorting):

PNo	PName	Points
101	Razia Abbas	3451
103	Ritika Kapur	3001
105	Tarun Kumar	2971
104	John Philip	2819

43. Write a program with accept an integer array and its size as parameters and swap the elements of every even location with its following odd location.

e.g. if an array contains the elements as : 2, 4, 1, 6, 5, 7, 9, 23, 10

After rearrange the array as: 4, 2, 6, 1, 7, 5, 23, 9, 10

44. Write a function which accept an integer array and its size as parameter's and rearrange the array in reverse order.

e.g. if an array contains the elements as: 4, 2, 5, 1, 6, 7, 8, 12, 10

Rearrange the array as: 10, 12, 8, 7, 6, 1, 5, 2, 4

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## ARRAY

45. Write a program take 20 integer inputs from user and print the following: number of positive numbers, number of negative numbers, number of odd numbers, number of even numbers, number of 0.

46. Write a progr	ram to check if e	lements of an arr	ay are same or no	ot it read from fro	ont or back. E.g	
2	3	15	15	3	2	

47. Take an array of 10 elements. Split it into middle and store the elements in two different arrays.

E.g. - INITIAL array:

	•	<u>,                                      </u>							
58	24	13	15	63	9	8	81	1	78
After splitting:									
58	8	2	4	1	3	1	5	$\epsilon$	53
9		8	3	8	1	1	1	7	78

48. Write a program to shift every element of an array to circularly right. E.g.-

INPUT: 1 2 3 4 5 OUTPUT: 5 1 2 3 4

49. Write a function which accepts an integer array and its size as parameters and replaces the elements having odd values with the thrice its value and the elements having even values with twice its values.

e.g. if an array contains the elements as 3,4,5,16,9.

Then, the function should rearrange the array as 9, 8, 15, 32, 27

- 50. Write a function which accepts an integer array and its size as arguments and exchanges the values of first half side elements with the second half side elements of the array.
- e.g. if an array of eight elements has initial content as: 2, 4, 1, 6, 7, 9, 23, 10

The function should rearrange the array 7, 9, 23, 10, 2, 4, 1, 6

- 51. Suppose X, Y, Z are arrays of integers of sizes M, N and M+N respectively. The numbers in array X and Y appear in descending order. Write a user defined function to produce third array Z by merging arrays X and Y in descending order.
- 52. Write a program to store 100 numbers and check whether it is Niven number or Not.
- 53. Write a program to store 5 numbers and check whether it is ISBN number or Not.

- 54. Given two arrays of integers A and B of sizes m and n, respectively. Write a function named MIX(), which will produce a third array named C, such that the following sequence is followed.
- 1. All even numbers of A from left to right are copied into C from left to right.
- 2. All odd numbers of A from left to right are copied into C from right to left.
- 3. All even numbers Of B from left to right are copied into C from left to right.
- 4. All odd numbers of B from left to right are copied into C from right to left.
- A, B, C are passed as arguments to MIX().
- e.g. A is  $\{3,2,1,7,6,3\}$  and B is  $\{9,3,5,6,2,8,10\}$  the resultant array C is  $\{2,6,6,2,8,10,5,3,9,3,7,1,3\}$
- 55. Write a function check() to check if the passed array of 10 integers is sorted or not. The function should return 1 if arranged in ascending order, -1 if arranged in descending order, 0 if it is not sorted.
- 56. Write the definition for a function void Transfer (int A[6], int B[6]), which takes two integer arrays, each containing 6 elements as parameters. The function should exchange all odd places (is 1<sup>st</sup>, 3rd and 5<sup>th</sup>) of the two arrays.

e.g. if the array A contains

o.g. if the thirty is contained									
0	1	2	3	4	5				
15	10	12	21	52	76				
And if the array	And if the array B contains								
0	1	2	3	4	5				
23	41	67	83	13	53				
Then, the function	on should make th	ne contents of the	e array A as						
0	1	2	3	4	5				
15	41	12	83	52	53				
And the contents of array B as									
0	1	2	3	4	5				
23	10	67	21	13	76				

57. Write a function Transfer (int A[], int B[], int Size) to copy the elements of array A into array B in such a way that all the negative elements of A appear in the beginning of B, followed by all the positive elements, followed by all the zeros maintaining their respective orders in array A.

e.g. if the content of array A are:

0	1	2	3	4	5	6	7
7	-23	3	0	-8	-3	4	0

The contents of array B should be -23, -8, -3, 7, 3, 4, 0, 0

58. Write a program to interchange the matrix middle row. For Example: 4 by 4 Matrix

Input:

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

Output:

1	2	3	4
9	10	11	12
5	6	7	8
13	14	15	16

59. Write a Program to print Boundary Elements of a 2D Array. To input a 2-D array of size 'm\*n' and print its boundary (border) elements.

	_		
N	.,		
111	_		
		•	

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

#### OUTPUT

1	2	3	4	5
6				10
11				15
16	17	18	19	20

60. Write a program to interchange the matrix first row & last row.

Input:

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

Output:

13	14	15	16
5	6	7	8
9	10	11	12
1	2	3	4

61. Write a program to shifting the matrix elements.

Input:

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

Output:

5	6	7	8
9	10	11	12
13	14	15	16
1	2	3	4

62. Write a program to perform Addition, Subtraction & multiplication of Two Matrices using 2D array. [Using functions & switch case. Function names: ADD (), SUB (), MUL ()]

63. Write a program to store 20 different numbers in SDA. Sort the numbers in ascending order by using Bubble sort technique. Now enter a no and search whether the name is present or not using Binary Search technique. [USING FUNCTIONS: BSEARCH () & BSORT ()]

64. Write a program to accept integer values in 2d array of size N x M, where N represents number of Rows, M represents number of Columns. Calculate and display the sum of the values present in the topmost row and sum of the values present in the bottommost row. For example, if the content of array M having N as 4 and M as 5 is as follows:

10	20	30	40	50
12	15	32	4	15
38	4	11	24	15
5	10	15	20	25

The function should find the sum and display the same as:

Sum of Top Row: 150 Sum of Bottom Row: 75

- 65. Write a program to input marks of 50 students in an integer array. Arrange the marks in descending order using selection sort technique and also display the highest and the lowest marks of the students.
- 66. Write a program to declare a matrix a[][] of order  $(m \times n)$  where 'm' is the number of rows and 'n' is the number of columns such that the values of both 'm' and 'n' must be greater than 2 and less than 10. Allow the user to input integers into this matrix. Perform the following tasks on the matrix: 1. Display the original matrix.
- 2. Sort each row of the matrix in ascending order using any standard sorting technique.
- 3. Display the changed matrix after sorting each row.

<b>INPUT:</b> $m = 4 n = 3$	<b>INPUT:</b> m = 3 n = 3	INPUT:
Enter elements of matrix:	Enter elements of matrix:	m = 11
11 -2 3	22 5 19	n=5
5 16 7	7 36 12	OUTPUT:
9 0 4	9 13 6	Matrix size out of range
3 1 8	<b>OUTPUT:</b>	
OUTPUT:	Original matrix:	
Original Matrix:	22 5 19	
11 -2 3	7 36 12	
5 16 7	9 13 6	
9 0 4	Matrix after sorting rows:	
3 1 8	5 19 22	
Matrix after sorting rows:	7 12 36	
-2 3 11	6 9 13	
5 7 16		
0 4 9		
1 3 8		

67. A company manufactures packing cartons in four sizes, i.e. cartons to accommodate 6 boxes, 12 boxes, 24 boxes and 48 boxes. Design a program to accept the number of boxes to be packed (N) by the user (maximum up to 1000 boxes) and display the break-up of the cartons used in descending order of capacity (i.e. preference should be given to the highest capacity available, and if boxes left are less than 6, an extra carton of capacity 6 should be used.)

Test your program with the sample data and some random data:

Example 1	Example 2	Example 3
INPUT: N = 726	INPUT: N = 140	INPUT : $N = 4296$
OUTPUT:	OUTPUT:	OUTPUT:
$48 \times 15 = 720$	48 X 2 = 96	INVALID LENGTH
$6 \times 1 = 6$	$24 \times 1 = 24$	
Remaining boxes = 0	$12 \times 1 = 12$	
Total number of boxes = $726$	6 x 1 = 6	
Total number of cartons $= 16$	Remaining boxes $2 \times 1 = 2$	
	Total number of boxes $= 140$	
	Total number of cartons = 6	

68. The result of a quiz competition is to be prepared as follows:

The quiz has five questions with four multiple choices (A, B, C, D), with each question carrying 1 mark for the correct answer. Design a program to accept the number of participants N such that N must be greater than 3 and less than 11. Create a double dimensional array of size (Nx5) to store the answers of each participant row-wise.

Calculate the marks for each participant by matching the correct answer stored in a single dimensional array of size 5. Display the scores for each participant and also the participant(s) having the highest score.

Example: If the value of N = 4, then the array would be:

	Q.1	Q.2	Q.3	Q.4	Q.5
Participant 1	A	В	В	C	A
Participant 2	D	Α	D	С	В
Participant 3	A	Α	В	A	С
Participant 4	D	С	С	A	В
Key to the question:	D	С	C	A	В

Note: Array entries are line fed (i.e. one entry per line)

Test your program with the sample data and some random data:

Example 1:	Example 2	Example 3
INPUT: $N = 5$	INPUT: N = 4	
Participant 1 D A B C C	Participant 1 A C C B D	INPUT: N = 12
Participant 2 A A D C B	Participant 2 B C A A C	
Participant 3 B A C D B	Participant 3 B C B A A	OUTPUT : INPUT SIZE OUT
Participant 4 D A D C B	Participant 4 C C D D B	OF RANGE.
Participant 5 B C A D D	Key: A C D B B	
Key: B C D A A	OUTPUT : Scores :	
OUTPUT : Scores :	Participant 1 = 3	
Participant 1 D A B C C	Participant 2 = 1	
Participant $1 = 0$	Participant 3 = 1	
Participant $2 = 1$	Participant 4 = 3	
Participant $3 = 1$	Highest score:	
Participant 4 = 1	Participant 1	
Participant $5 = 2$	Participant 4	
Highest score: Participant 5		

- 69. Create an array of size 10. Automatically fill the array with the factorial of number between 1 to 10 and then display the content of array.
- 70. Create two arrays A and B of size 5 and C of size 10. Accept numbers in two arrays A and B. Fill the array C in such a way that the all odd positions occupy the numbers present in array A and all even positions occupy the numbers present in array B.

Example:  $a=\{1,2,3,4,5\}$  and  $b=\{6,7,8,9,10\}$  then  $c=\{1,6,2,7,3,8,4,9,5,10,\}$ 

71. Accept numbers in array A[10] & create another array B[5]. The array B first location fills with sum of first & second location of array A. The array B second location fills with sum of third & forth location of array A. Similarly fill all the position of array B & display it.

Input: {1,2,3,4,5,6,7,8,9,10} Output: 3,7,11,15,19

72. Accept data into two integers array A & B of size 5 elements each. The program should create another array T that finds the intersection of the two arrays.

For e.g. if  $A = \{1,3,5,7,8\} \& B = \{7,4,2,8,9\}$  Then  $T = \{7,8\}$ 

73. Accept numbers into an integer array A of size 4, create another string array B of size 3. Accept any three mathematical symbols like (+, -, \*, /) in array B. Then according to mathematical symbol calculate the answer.

For e.g. if A = [8, 6, 4, 2] & B = [+, -, \*], then answer will be (((8 + 6) - 4) \* 2) = 20

74. Accept numbers into an array of size 4X4. Then display the diagonals and also display the sum of numbers present in the diagonal position.

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## ARRAY

- 75. Accept 10 numbers into an array. Then accept a position number and delete the number present in that position.
- 76. Accept the name, physics and chemistry and math marks of 25 students. The display a list of the given data with Total and Average.
- 77. Write a program open 3 arrays of name A, P & N. Store 15 numbers in array A. Shift all the positive even numbers in array P and all the negative odd numbers in array N. Finally print the array P & N.
- 78. There are 100 elements in an array, Write a program to arrange first 50 elements of the array in ascending order and rest 50 elements into descending order.
- 79. Write a program to accept the name and marks in computer science of forty students in an array and then print the name and marks of students according to their merit.
- 80. Write a program that reads the following list of countries and their respective cities into two separate one-dimensional arrays. The program should accept the name of a country as input and give the name of the corresponding city as an output. The program should be designed to give an error message where a city is asked for a country whose name is not given in the list. To stop the program, "XXX" is to be entered as input.

GERMANY BERLIN

NEPAL KATMANDU

JAPAN TOKYO

CANADA MONTREAL
IRAQ BAGHDAD
SRI LANKA COLOMBO
BRAZIL BRAZILIA
AUSTRALIA PERTH
INDIA DELHI

SOUTH AFRICA PRETORIA

- 81. Write a program to accept number into a 3X4 matrix. Display the original array. Then calculate and display the each row total.
- 82. Write a program to accept number into a 3X4 matrix. Display the original array. Then calculate and display the each column total.
- 83. Write a program to accept number into a 10X5 matrix. Then display the original array and the array sorted on each column.

- 84. Accept numbers into an array of size 5X5. Then display the numbers present in upper portion of the left diagonal of the matrix.
- 85. Suppose X, Y, Z are arrays of integers of sizes M,N and M+N respectively. The numbers in array X and Y appear in descending order. Write a user defined function to produce third array Z by merging array X and Y in descending order.
- 86. Write a function to combine the content of two equi-sized arrays A and B by computing their corresponding elements with the formula 2\*A[i]+3\*B[i]; Where i varies from 0 to N-1 and transfer the resultant content in the third same sized array.
- 87. Write function that accepts two equal length character arrays and compare each letter of array, display the greater letter one time more than as many times as the subscript of that element. E.g. two arrays input are Shyam and Mohan so the program produces the following output:

S

0 0

ууу

a a a a

n n n n n

88. Write a program to convert the array in such a way that double its value and replace the next number with 0 if current and next element are same and rearrange the array such that all 0's shifted to the end. The given array is: 0 3 3 3 0 0 7 7 0 9

The new array is: 6 3 14 9 0 0 0 0 0 0

- 89. Write a program to find minimum number of swaps required to gather all elements less than or equals to k. The given array is: 2 7 9 5 8 7 4 The minimum swap required is: 2
- 90. Write a program to rearrange an array such that even index elements are smaller and odd index elements are greater than their next. The array given is:6 4 2 1 8 3

The new array after rearranging:

461823

- 91. Write a program to update every array element with multiplication of previous and next numbers in array. The given array is: 1 2 3 4 5 6 The new array is: 2 3 8 15 24 30
- 92. Write a program rearrange an array in such an order that—smallest, largest, 2nd smallest, 2nd largest and on. The given array is: 5 8 1 4 2 9 3 7 6 The new array is: 1 9 2 8 3 7 4 6 5

93. Write a program to rearrange an array such that arr[i]=i. N.B.: Given array contains N elements, from 0 to N - 1. All elements within the range may not be present in the array. There will be -1 if an element within the range is not present in the array.

The given array is:

25-16-187-191

The new array is: -1 1 2 -1 -1 5 6 7 8 9

94. Write a program to return the number of clumps(a series of 2 or more adjacent elements of the same value) in a given array.

The given array is:

17 42 42 7 24 24 17 54 17

The number of clumps in the array is: 2

95. Write a program to check if an array can be splitted in such a position that, the sum of left side of the splitting is equal to the sum of the right side. Go to the editor

The given array is: 1 3 3 8 4 3 2 3 3

The array can be split in a position where the sum of both side are equal.

96. Write a program to return the largest span found in the leftmost and rightmost appearances of same value (values are inclusive) in a given array.

The given array is:

17 42 19 7 27 24 17 54 73

The span between the same values in the array is: 7

Write a program to find the index of first peak element in a given array.

The given array is:

5 12 13 20 16 19 11 7 25

The index of first peak element in the array is: 3

Write a program to segregate even and odd elements on an array.

The given array is:

17 42 19 7 27 24 30 54 73

The array after segregation is: 54 42 30 24 27 7 19 17 73

99. Write a program to segregate 0s and 1s in an array. Go to the editor

The given array is:

101001011

The array after segregation is: 0 0 0 0 1 1 1 1 1

100. Write a program to find the maximum for each and every contiguous subarray of size k from a given array.

The given array is:

1 3 6 21 4 9 12 3 16 10

The length of each subarray is: 4

The contagious subarray of length 4 and their maximum value are:

1 3 6 21 ----> 21

3 6 21 4 ----> 21

6 21 4 9 ----> 21

21 4 9 12 ----> 21

4 9 12 3 ----> 12

9 12 3 16 ----> 16

12 3 16 10 ----> 16

Write a program to rearrange positive and negative numbers alternatively in a given array.

N.B.: If positive numbers are more they appear at the end and for also negative numbers, they too appear in the end of the array.

**Expected Output:** 

The given array is:

-4 8 -5 -6 5 -9 7 1 -21 -11 19

The rearranged array is:

-47-51-215-118-919-6

102. Write a program in that checks whether the elements in an unsorted array appears consecutively or not. Go to the editor

The given array is:

743562

The appearence of elements in the array are consecutive.

The given array is:

744562

The appearence of elements in the array are not consecutive.

The given array is:

749563

The appearence of elements in the array are not consecutive.

O3 Given an unsorted array of specific size. Write a program in C to find the minimum length of subarray such that, sorting this subarray makes the whole array sorted.

The given array is: 10 12 15 17 28 32 42 18 56 59 67

The minimum length of unsorted subarray which makes the given array sorted lies between the indexes 4 and 7

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# ARRAY

104. Given an array of size n such that every element is in the range from 0 to n-1. Write a program in C to rearrange the given array so that arr[i] becomes arr[arr[i]].

The Original array is

2 1 4 3 0 The modified array is:

41032