**Array Programs - 1**

1. /\*
2. \* C program to read N integers into an array A and
3. \* a) Find the sum of negative numbers
4. \* b) Find the sum of positive numbers
5. \* c) Find the average of all numbers
6. \* Display the results with suitable headings
7. \*/
8. #include <stdio.h>
9. #define MAXSIZE 10
11. void main()
12. {
13. int array[MAXSIZE];
14. int i, num, negative\_sum = 0, positive\_sum = 0;
15. float total = 0.0, average;
17. printf ("Enter the value of N \n");
18. scanf("%d", &num);
19. printf("Enter %d numbers (-ve, +ve and zero) \n", num);
20. for (i = 0; i < num; i++)
21. {
22. scanf("%d", &array[i]);
23. }
24. printf("Input array elements \n");
25. for (i = 0; i < num; i++)
26. {
27. printf("%+3d\n", array[i]);
28. }
29. /\* Summation starts \*/
30. for (i = 0; i < num; i++)
31. {
32. if (array[i] < 0)
33. {
34. negative\_sum = negative\_sum + array[i];
35. }
36. else if (array[i] > 0)
37. {
38. positive\_sum = positive\_sum + array[i];
39. }
40. else if (array[i] == 0)
41. {
42. ;
43. }
44. total = total + array[i] ;
45. }
46. average = total / num;
47. printf("\n Sum of all negative numbers = %d\n", negative\_sum);
48. printf("Sum of all positive numbers = %d\n", positive\_sum);
49. printf("\n Average of all input numbers = %.2f\n", average);
50. }

**Output**

Enter the value of N

10

Enter 10 numbers (-ve, +ve and zero)

-8

9

-100

-80

90

45

-23

-1

0

16

Input array elements

-8

+9

-100

-80

+90

+45

-23

-1

+0

+16

Sum of all negative numbers = -212

Sum of all positive numbers = 160

Average of all input numbers = -5.20

**Array Programs - 2**

1. /\*
2. \* C program to read in four integer numbers into an array and find the
3. \* average of largest two of the given numbers without sorting the array.
4. \* The program should output the given four numbers and the average.
5. \*/
6. #include <stdio.h>
7. #define MAX 4
9. void main()
10. {
11. int array[MAX], i, largest1, largest2, temp;
13. printf("Enter %d integer numbers \n", MAX);
14. for (i = 0; i < MAX; i++)
15. {
16. scanf("%d", &array[i]);
17. }
19. printf("Input interger are \n");
20. for (i = 0; i < MAX; i++)
21. {
22. printf("%5d", array[i]);
23. }
24. printf("\n");
25. /\* assume first element of array is the first larges t\*/
26. largest1 = array[0];
27. /\* assume first element of array is the second largest \*/
28. largest2 = array[1];
29. if (largest1 < largest2)
30. {
31. temp = largest1;
32. largest1 = largest2;
33. largest2 = temp;
34. }
35. for (i = 2; i < 4; i++)
36. {
37. if (array[i] >= largest1)
38. {
39. largest2 = largest1;
40. largest1 = array[i];
41. }
42. else if (array[i] > largest2)
43. {
44. largest2 = array[i];
45. }
46. }
47. printf("n%d is the first largest \n", largest1);
48. printf("%d is the second largest \n", largest2);
49. printf("nAverage of %d and %d = %d \n", largest1, largest2,
50. (largest1 + largest2) / 2);
51. }

**Output**

Enter 4 integer numbers

80

23

79

58

Input interger are

80 23 79 58

80 is the first largest

79 is the second largest

Average of 80 and 79 = 79

**Array Programs - 3**

1. /\*
2. \* C Program to Find the Largest Number in an Array
3. \*/
4. #include <stdio.h>
6. int main()
7. {
8. int array[50], size, i, largest;
9. printf("\n Enter the size of the array: ");
10. scanf("%d", &size);
11. printf("\n Enter %d elements of the array: ", size);
12. for (i = 0; i < size; i++)
13. scanf("%d", &array[i]);
14. largest = array[0];
15. for (i = 1; i < size; i++)
16. {
17. if (largest < array[i])
18. largest = array[i];
19. }
20. printf("\n largest element present in the given array is : %d", largest);
21. return 0;
22. }

**Output**

Enter the size of the array: 5

Enter 5 elements of the array: 12

56

34

78

100

largest element present in the given array is : 100

**Array Programs - 4**

1. /\*
2. \* C program to accept an array of integers and delete the
3. \* specified integer from the list
4. \*/
5. #include <stdio.h>
7. void main()
8. {
9. int vectorx[10];
10. int i, n, pos, element, found = 0;
12. printf("Enter how many elements\n");
13. scanf("%d", &n);
14. printf("Enter the elements\n");
15. for (i = 0; i < n; i++)
16. {
17. scanf("%d", &vectorx[i]);
18. }
19. printf("Input array elements are\n");
20. for (i = 0; i < n; i++)
21. {
22. printf("%d\n", vectorx[i]);
23. }
24. printf("Enter the element to be deleted\n");
25. scanf("%d", &element);
26. for (i = 0; i < n; i++)
27. {
28. if (vectorx[i] == element)
29. {
30. found = 1;
31. pos = i;
32. break;
33. }
34. }
35. if (found == 1)
36. {
37. for (i = pos; i < n - 1; i++)
38. {
39. vectorx[i] = vectorx[i + 1];
40. }
41. printf("The resultant vector is \n");
42. for (i = 0; i < n - 1; i++)
43. {
44. printf("%d\n", vectorx[i]);
45. }
46. }
47. else
48. printf("Element %d is not found in the vector\n", element);
49. }

**Output**

Enter how many elements

4

Enter the elements

345

234

678

987

Input array elements are

345

234

678

987

Enter the element to be deleted

234

The resultant vector is

345

678

987