**Assignment 6a: 1-dimensional Array**

#### Write a program in C to store 20 numbers (even and odd numbers) in a 1- Dimensional Array. Calculate and display the sum of all even numbers and all odd numbers separately.

1. Write a C program to store 20 temperatures in °F in a 1- Dimensional Array and display all the temperatures after converting them into °C.  
   Hint: (c/5) = (f - 32) / 9.
2. Write a C program to store 20 numbers in a 1- Dimensional Array. Display the largest and smallest value from that array.
3. Write a C program to store 10 numbers (including positive and negative numbers) in a 1- Dimensional Array. Display all the negative numbers followed by the positive numbers without changing the order of the numbers.  
   Sample Input:

| n[0] | n[1] | n[2] | n[3] | n[4] | n[5] | n[6] | n[7] | n[8] | n[9] |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 21 | -32 | -41 | 54 | 61 | 71 | -19 | -44 | 52 |

Sample Output: -32, -41, -19, 44, 15, 21, 54, 61, 71, 52

| n[0] | n[1] | n[2] | n[3] | n[4] | n[5] | ... | n[16] | n[17] | n[18] | n[19] |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 45 | 65 | 77 | 71 | 90 | 67 | ... | 82 | 19 | 31 | 52 |

1. Write a C program to store 20 numbers in a 1- Dimensional Array. Display the numbers which are prime.  
   Sample Input:

Sample Output: 71, 67, 19, 31

1. Write a C program to accept total marks of 10 students in a 1- dimensional array totalmarks[ ].  
   Calculate and print:  
   (a) The average of the total marks obtained by 10 students.  
   [average = (sum of total marks of all the students)/10]  
   (b) Deviation of each student's total marks with the average.  
   [deviation = total marks of a student - average]
2. Write a C program to store 20 numbers in a 1-Dimensional Array. Now, display only those numbers that are perfect squares.

| n[0] | n[1] | n[2] | n[3] | n[4] | n[5] | ... | n[16] | n[17] | n[18] | n[19] |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 45 | 49 | 78 | 64 | 77 | ... | 81 | 99 | 45 | 33 |

Sample Output: 49, 64, 81