Question 1

Write a program in C++ to accept 20 numbers in a single dimensional array arr[20]. Transfer and store all the even numbers in an array even [ ] and all the odd numbers in another array odd [ ]. Finally, print the elements of both the arrays

Question 2

Write a program to accept 20 integer numbers in a single Dimensional Array. Using menu driven approach display the following, as per user's choice:

1. All the perfect numbers store in the array.
2. All the Buzz numbers store in the array.

Question 3

Write a program to input 15 integer elements in an array and sort them in ascending order using the bubble sort technique.

Question 4

Write a program to input integer elements into an array of size 20 and perform the following operations:

Display the largest number from the array.

Display the smallest number from the array.

Display sum of all the elements of the array.

Question 5

Write a program to store six elements in an array P, and four elements in an array Q and produce a third array R, containing all elements of arrays P and Q. Display the resultant array.

Example: P[] = {10,20, 30, 40, 50}

Q[] = {60,70,80,90,100}

R[] = {50,100,40,90,30,80,20,70,10,60}

Question 6

Write a program to input and store n integers (n > 0) in a single subscripted variable and print each number with its frequency. The output should contain number and its frequency in two different columns.

Sample Input:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 20 | 14 | 12 | 12 | 20 | 16 | 16 | 14 | 14 | 12 | 20 | 18 | 18 |

Sample Output:

| **Number** | **Frequency** |
| --- | --- |
| 12 | 4 |
| 14 | 3 |
| 16 | 2 |
| 18 | 2 |
| 20 | 3 |

Question 7

Write a program in C++ to enter natural numbers in a double dimensional array m x n (where m is the number of rows and n is the number of columns). Display the new matrix in such a way that the new matrix is the mirror image of the original matrix.

|  |  |  |  |
| --- | --- | --- | --- |
| 8 | 15 | 9 | 18 |
| 9 | 10 | 7 | 6 |
| 10 | 8 | 11 | 13 |
| 12 | 16 | 17 | 19 |
| **Sample Input** | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| 18 | 9 | 15 | 8 |
| 6 | 7 | 10 | 9 |
| 13 | 11 | 8 | 10 |
| 19 | 17 | 16 | 12 |
| **Sample Output** | | | |

#### Question8.

Write a program in C++ to create a 4 x 4 matrix. Now, swap the elements of 0th row with 3rd row correspondingly. Display the result after swapping.

**Sample Input**

|  |  |  |  |
| --- | --- | --- | --- |
| 55 | 33 | 26 | 14 |
| 81 | 86 | 31 | 10 |
| 58 | 64 | 17 | 12 |
| 22 | 14 | 23 | 25 |

**Sample Output**

|  |  |  |  |
| --- | --- | --- | --- |
| 22 | 14 | 23 | 25 |
| 81 | 86 | 31 | 10 |
| 58 | 64 | 17 | 12 |
| 55 | 33 | 26 | 14 |