LAB#08 EXERCISES

INSTRUCTIONS:

NOTE: Violation of any of the following instructions may lead to the cancellation of your submission.

1) Create a folder and name it by your student id (K21-1234).
2) Paste the .c (Save as type) file for each question with the names such as Task1.c, Task2.c and so on into that folder.

2DARRAYS ARE NOT ALLOWED TO BE USED FOR SOLVING THE FOLLOWING EXERCISES.

Task 01: Write a program that reads the 10 numbers from user and store these numbers into an array of same size. You program should provide a searching mechanism in such a way that how many times a particular number occurred and then print it on screen. If number is not in array, then program should display a message "number not found".

Task 02:

write a program by declaring an array for six elements. Use for loop to assign the given set {3.14,3.24,3.34,3.44,3.54} numbers to them. Display your stored numbers in descending order as well.

Note: Use nested for loop.

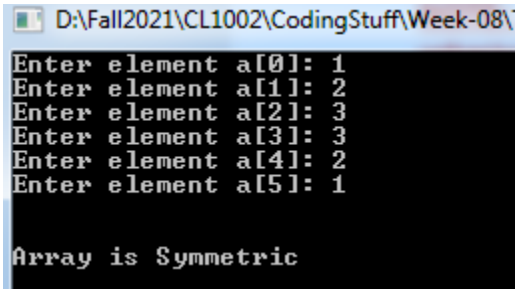
Task 03:

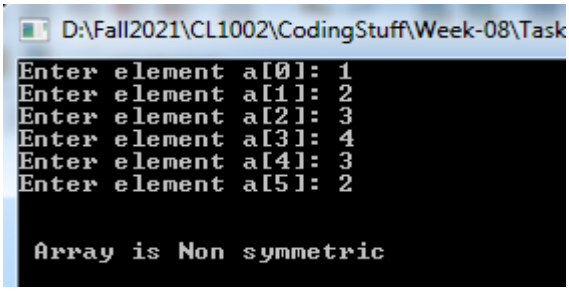
Part a)

Write a program which can stores 6 integers. Then check your stored array that it's symmetric or not. As the number of elements are even in given problem. Make sure that your code is generic and work for odd elements size as well. The array is symmetric if the value of the first element is equal to the last one, the value of the second one is equal to the value of the last but one, and so on.

(Symmetric and Asymmetric differentiated in following figures)

Note: Use Nested loop and Decision statements if required.

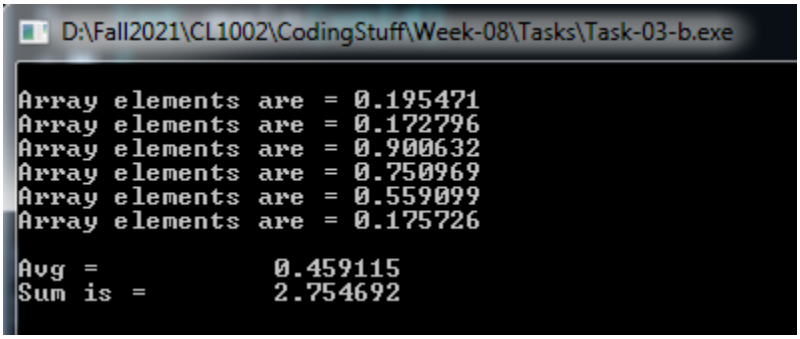




Part b)

Consider the array of same size. Now use srand(), rand() and assign the elements within range [0-1] to the array elements. Display the array elements, sum and average as well.

Your output may look as following.



Task 04:

Sir. Shahzad ask you to write you a program which can help him in storing your quiz marks for pass students within range [5-10] will be stored, consider there are 10 students registered in **Section 1C.** He wants an another array of same size where marks for failed students within range [0-5] are stored. Write a program for the given scenario. You program should exit if user enters -1 and will display the marks entered along with average of each array.

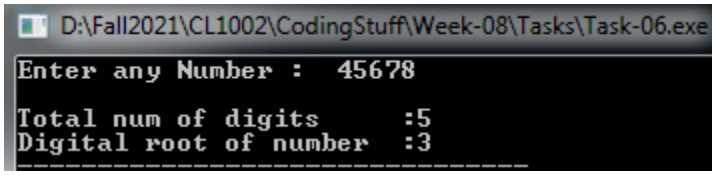
Note: Use Loops, 1D-Array and decision statement combination

Task 05:

Consider the scenario given in **Task-04** again by considering there are 10 students and you are asked to store their marks in two separate arrays 5 student's marks in each array. You should also find out common numbers if in case there is in both of the arrays and displays it. Write a program for the mention scenario.

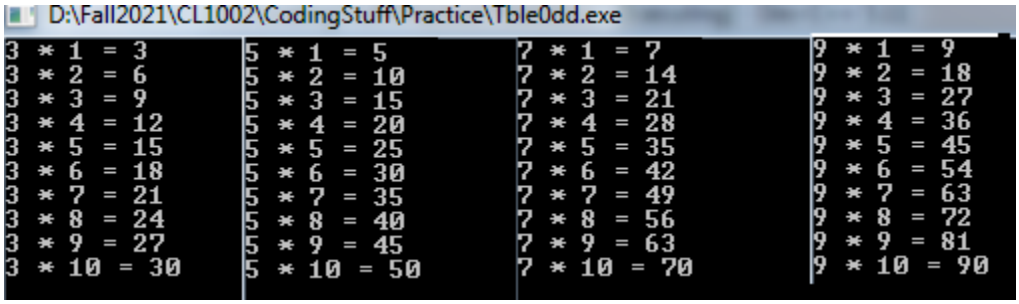
Task 06:

Write a program which ask the user to input a number as input greater than or equal to four digits. Then find the sum of entered number until the result is in single digit as follows. Note: Use Nested loops



Task 07:

Write a program which generate multiplication tables within range (3-10) for odds number only as follows.



Note: Use Nested loops

Task 08:

Consider the equation 3a + 7b -5c = 10. Where a, b, c are integers and is within range (-10,10). Write a program which can find the integer root for given problem as follows. Note: Use Nested for loop only