United International University
CSE 1112: Structured Programming Language Laboratory
Mid Term Examination

Marks: 30 **Time: 1h 10 Minutes**

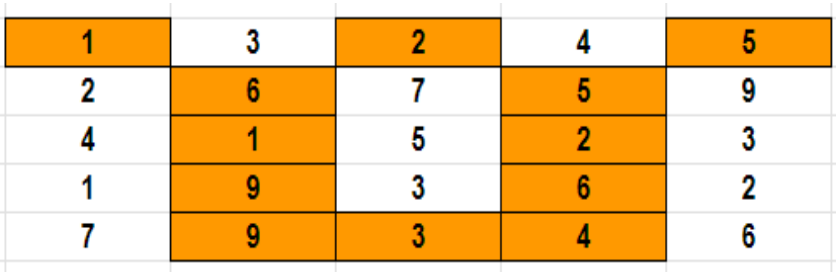
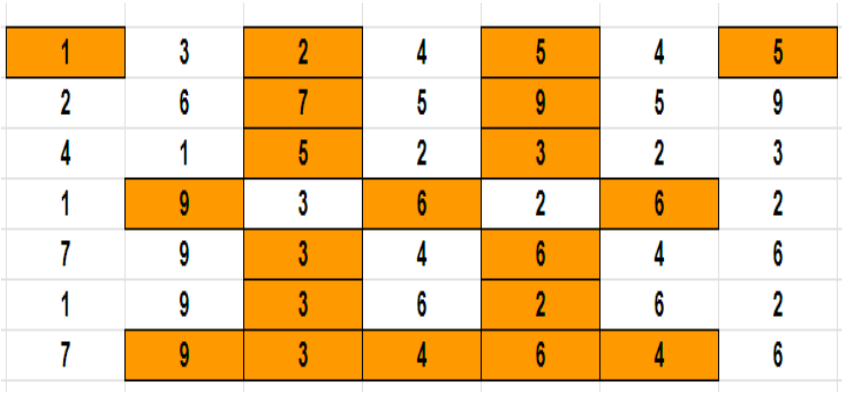
1. **Suppose, a new type of number "Super Prime" has been discovered. A number is a super prime if all the digits are odd and the sum of the digits is a prime number.**
   Write a C program that takes an integer as input and finds whether it is super prime. **[10]**

Sample Input	Sample Output
137	Super prime
359	Super prime
135	Not super prime
124	Not super prime

2. **Given an array, move all non-zero numbers at the end while maintaining the order of the elements.**
   Write a C program that takes the array size and elements as the user input and moves all zeros to the start of the array. **[10]**

Sample Input	Sample Output
Array size: 8 Elements: 1 0 3 2 0 5 0 7	0 0 0 1 3 2 5 7
Array size: 7 Elements: 2 3 0 1 5 9 7	0 2 3 1 5 9 7

3. **Write a C program that will take (n x n) integer inputs into a square matrix of dimension n (where n must be an odd number and n >= 5). Then calculate the sum of the integers based on the following position pattern (consider only the boxed position during the sum). Please see the input-output.** **[10]**

Sample Input	Sample Output
	**53**
	**98**