

## Lab A

### Submission Guidelines:

1. Write each source code and the paste generated output in a single text/doc/word file for all the questions in the assignment in the sequence with proper comments and space.
2. Name that file as your roll number (in caps).
3. Submit the file in this link: <https://forms.gle/r3CEAdhLmN1ovxyA7>

### Assignment:

1.	WAP to find the sum of two matrices of order 2x2 using multidimensional arrays.	Enter elements of 1st matrix Enter a11: 2; Enter a12: 0.5; Enter a21: -1.1; Enter a22: 2; Enter elements of 2nd matrix Enter b11: 0.2; Enter b12: 0; Enter b21: 0.23; Enter b22: 23;	Sum of Matrices: 2.2    0.5 -0.9   25.0
2.	WAP to multiply two matrices and display it.	<b>Ex-1:</b> Enter value of matrix A 1 1 1 1 1 1 1 1 Enter value of matrix B 2 2 2 2 2 2 2 2	<b>Ex-1</b> Value of matrix a 1 1 1 1 1 1 1 1 1

			<p>Value of matrix b</p> <p>2 2 2</p> <p>2 2 2</p> <p>2 2 2</p> <p>After Multiplication resultant matrix is</p> <p>6 6 6</p> <p>6 6 6</p> <p>6 6 6</p>
		<p><b>Ex-2:</b></p> <p>Enter value of matrix a</p> <p>2 2 2 2 2 2 2 2 2</p> <p>Enter value of matrix b</p> <p>3 3 3 3 3 3 3 3 3</p>	<p><b>Ex-2</b></p> <p>Value of matrix a</p> <p>2 2 2</p> <p>2 2 2</p> <p>2 2 2</p> <p>Value of matrix b</p> <p>3 3 3</p> <p>3 3 3</p> <p>3 3 3</p> <p>After Multiplication resultant matrix is</p> <p>18 18 18</p> <p>18 18 18</p> <p>18 18 18</p>

3	WAP by designing a recursive function to calculate the sum of the digits of any given integer until it becomes a single digit number using function.	<b>Set 1:</b> Enter a number: 589  <b>Set 2:</b> Enter a number: 25	<b>Set 1:</b> Sum of the digits (up to single digit) of 589 = 4  <b>Set 2:</b> Sum of the digits (up to single digit) of 25 = 7
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4.	WAP to sort the elements of an 1-D array in ascending order by creating a suitable function for sort operation.	<b>Set 1:</b> Enter the size of the array: 5  Enter the elements of the array: 3 5 7 2 6  <b>Set 2:</b> Enter the size of the array: 3  Enter the elements of the array: 5 0 -2	<b>Set 1:</b> Before sorting elements of the given array: 3 5 7 2 6  After sorting elements of the given array: 2 3 5 6 7  <b>Set 2:</b> Before sorting elements of the given array: 5 0 -2  After sorting elements of the given array: -2 0 5
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5	Write a C program to find the sum of only odd values in a 1-D array using a function ODDSUM.	<b>Set 1:</b> Enter the size of the array: 5  Enter the elements of the array: 3 5 7 2 6	
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		<b>Set 2:</b>  Enter the size of the array: 3  Enter the elements of the array: 5 0 -2
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6	WAP to find the factorial of a number n by writing a recursive function for it.	<b>Set 1:</b>  Enter a number: 4  <b>Set 2:</b>  Enter a number: 1	<b>Set 1:</b>  Factorial of 4 = 24  <b>Set 2:</b>  Factorial of 1 = 1
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7	Write a C program to swap the largest and smallest element of a 2-D array of using a function SWAP.	<div> <b>Ex 1:</b>   Enter the row and column size of the matrix: 3 4   Enter the matrix:   4 5 6 2   1 9 3 0   7 -2 1 8 </div> <div> <b>Ex 2:</b> </div>	<b>Ex 1:</b>  Entered matrix  4 5 6 2  1 9 3 0  7 -2 1 8  Matrix after swapping  4 5 6 2  1 -2 3 0  7 9 1 8  <b>Ex 2:</b>
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		<p>Enter the row and column size of the matrix: 5 3</p> <p>Enter the matrix:</p> <p>5 6 2</p> <p>4 3 0</p> <p>-7 1 8</p> <p>4 4 5</p> <p>0 3 0</p>	<p>Entered matrix</p> <p>5 6 2</p> <p>4 3 0</p> <p>-7 1 8</p> <p>4 4 5</p> <p>0 3 0</p> <p>Matrix after swapping</p> <p>5 6 2</p> <p>4 3 0</p> <p>8 1 -7</p> <p>4 4 5</p> <p>0 3 0</p>
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