



University of Engineering and Management (UEM), Kolkata

Department of Computer Applications

Stream: MCA

Session: 2024-2026

Subject Name: Data Structures with C Laboratory

Subject Code: MCA193

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Topic: Implementation of Array

1. Write a C program to read a 2D array (with most of the elements as 0s) and then represent the same array as Sparse Metrics.
2. Write a C program to pass an array to a function using Call by Value, update the array values in the function, print the array elements both in the function and in the calling function.
3. Write a C program to pass an array to a function using Call by Reference, update the array values in the function, print the array elements both in the function and in the calling function.
4. Write a program that reads two 2D metrics from the console, verifies if metrics multiplication is possible or not. Then multiplies the metrics and prints the 3rd metrics.
5. Write a program that reads a 2D metrics and checks if the metrics is a symmetric metrics or not.
6. Write a program to display n number of elements. Memory should be allocated dynamically using malloc ().
7. Write a program to display n number of elements. Memory should be allocated dynamically using calloc ().
8. Write a program to allocate memory using malloc () and then reallocate the previously allocated memory using realloc (). Display the elements which have been taken after reallocation.
9. Write a program to allocate memory using calloc () and then reallocate the previously allocated memory using realloc (). Display the elements which have been taken after reallocation.
10. Write a C program to search an element in an Array using dynamic memory allocation.