

Shri Swaminarayan College of Computer Science
SY BCA: Data Structure

Lab Assignment: 1

Topic: Array

Implement below mention functions on one dimensional array.

- 1) Create ()
- 2) Traversing () or display ()
- 3) Insertion ()
- 4) Deletion ()
- 5) updation()
- 6) merging()
- 7) sorting()
- 8) seaching()

Implement below mention functions on two dimensional array.

1. Write a program to traverse 2-D array in row major and column major order.
2. Write a program to perform addition of two matrices after checking all the validation.
3. Write a program to perform subtraction of two matrices after checking all the validation.
4. Write a program to perform multiplication of two matrices after checking all the validation.
5. Write a program to transpose given matrix.
6. Write a program to check whether given matrix is orthogonal or not.
7. Write a program to check whether given matrix is symmetric or not.
8. Write a program to check whether given matrix is sparse matrix or not. And also represent it in 3- tuple row major order and 3-tuple column major order.
9. Write a program to check how many non-zero entries are there for each and every row and column in a given matrix.
10. Write a program which finds
 - (1) Number of zero elements in M.
 - (2) the summation of the diagonal elements
 - (3) the product of the diagonal elements
11. Write a program which finds summation of each element and every element in row wise and column wise.