

Lab 13 (31-Aug, 2021)

Task 1: You have to handle variable size list of numbers and perform following tasks:

1. take size of input from user
2. declare dynamic array according to size
3. initialize numbers by calling function to initialize array
4. print numbers by calling function to print array
5. find & print average of numbers by calling function to print array
6. print number lesser than average by calling function in single line
7. print numbers greater than by calling function in single line

To complete the task, you have to create all the required function before calling them.

Task 2: Handle square matrix. Take size of matrix as input. Declare dynamic array of size*size. Using mapping function (*i * size + j*) handle the matrix. Perform following functionalities:

- initialize matrix
- print matrix (in matrix form)
- declare two matrices of same size, print them
- print their sum
- delete both matrices
- again take size as input
- declare dynamic array of size*size
- initialize and print matrix
- print principal diagonal of matrix in single line

Task 3: Extend task 2, save your matrix with meta data in file "matrix.txt". Add functionality to read matrix from file. First read size, declare array and read matrix into array. Print matrix. Also, open matrix in notepad as well.

Task 4: Open notepad. Create file with some numbers (more than 10) separated with spaces in range 10-99 (both inclusive). Write count of numbers in the start. Write program to read number from file. Read numbers. Find their average. Create two file in program. Write numbers larger than average in one file and less than average in other file. Before writing numbers in file. First take their count and store count at the start of both files.

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