Usman Institute of Technology

Department of Computer Science – Fall 2018

CS-211 Data Structures and Algorithms
Lab Manual

OBJECTIVE:

1. *Enable Students to handle Matrix and its operations.*

Name : _____

Roll No. : _____

Semester : _____ Section: _____

Date : _____

Remarks : _____

Signature : _____

Lab 04: Implementation of Matrix Handling Algorithm

1. Write a function to get matrix elements from user as input and returns the matrix with data elements.

int[,] GetElements(int r, int c)

2. Write a function which returns the sum of the two matrices A and B where the size of A matrix is equal to the size of B matrix.

int[,] AddMatrix(int[,] array1, int[,] array2)

3. Write a function which returns the transpose of the matrix generated in task 1.

int[,] GenTranspose(int[,] array)

4. Write a function which checks if the matrix generated in task 1 is an identity matrix.

void CheckIdentity(int[,] array)

5. Write a function which calculates the sum of the elements of each row of the matrix generated in task 1.

void SumRow (int[,] array)

6. Write a function which calculates the sum of the elements of each column of the matrix generated in task 1.

void SumCol(int[,] array)

HOME TASK:

Implement all algorithms in Object Oriented structure using JAVA or C++ programming language