December 5, 2017 Tuesday

Lab 12

Pointers and Dynamic Memory Management in C

Marks: 05

Question 01:

Write a C program to read elements in a matrix and check whether the given matrix is symmetric matrix or not using 2d dynamic allocation.

Question 02:

Write a program that dynamically allocates 2 matrices A and B of order (nxn).matrix A will be inputted by the user. Matrix B will be form as:

- First element of matrix B is the sum of first and last element of matrix A
- Second element of matrix B is the sum of second and second last element of matrix A and so on.

A

1	2	3
7	8	9
4	5	6

B

7	7	7
16	16	16
7	7	7

Question 03:

What is wrong with the following code.

a.
```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
intmain(intargc, char* argv[]){
int* ptr = malloc(4);
free(ptr);
scanf("%d",*ptr);
return EXIT_SUCCESS;}
```

b.
```
intmain(intargc, char* argv[]){
int** A;
foo(&A);
return 0;
}
foo(int*** array){
int** arrayint =
(int**)malloc(2*n*sizeof(int*));
for (i=0;i<n;i++)
arrayint[i] = (*array)[i];
free(*array);
array = &arrayint;
}
```