SSN College of Engineering
Department of Information Technology

UIT2201 — Programming and Data Structures

2022 – 2023

Exercise — 03

Part A

1. Implement a Matrix ADT, in the style of the Vector class presented in the course notes. Instances of Matrix should be able to store a matrix of any size. The ADT takes the number of rows and number of columns as arguments with a default value as (0 & 0) , and sets each matrix entry to zero. Realize the matrix as a list of list Generate a function to create a matrix with random numbers, a function that multiplies two Matrix objects (checking for conformity) and returns a Matrix. Also provide functions for Addition/Subtraction of two matrices and return the resultant matrix. Provide the function to find the determinant of the Matrix Object. Pay special attention to the way you use the results of the multiplication functions! Unless you've written __eq__(self, other), you need to be very careful (i.e., use initialization to get your product matrix back to the calling environment)! Create (and submit) a small Test program to demonstrate your ADT functions