

## Assignment 5

An  $m \times n$  **matrix** is a rectangular array containing  $m$  rows and  $n$  columns. The usual storage structure for matrices is thus quite naturally a two-dimensional array especially since arrays are provided in nearly every programming language.

**In** some applications, however (e.g., in solving differential equations), it is Necessary to process very large matrices having few nonzero entries. Using a two-dimensional array to store all the entries (including zeros) of such **sparse matrices** is not very efficient. They can be stored more efficiently using a linked structure analogous to that for sparse polynomials.

Lists in which the elements are allowed to be lists are called **generalized list**. Implement it using Generalized list.

