

1. Mapping of 2-D arrays to 1-D arrays:

Map the following 2-D arrays (matrices) to 1-D arrays (lists).

- a) Upper triangular matrix**
- b) Lower triangular matrix**
- c) Diagonal matrix**
- d) Tri-diagonal matrix**
- e) Row-major**
- f) Column-major**

Display the element at any specified position (row, column).

2. Representation of a Sparse Matrix:-

Represent a sparse matrix using 1-D array. Use this 1-D array to reconstruct the original matrix.

Additional Questions:

1) Define a class time with data members hour, min, sec .Write the user defined functions to (i) Add (ii) To find difference between two objects of class time. Functions take two time objects as argument and return time object. Also write the display and read function