ARRAYS DISCUSSION

Topics to be covered :

- **Introduction**

Array is a data structure which is used to store elements of same type. These elements are stored in contigous manner.

- **One Dimensional Array**

  Location of an element in one dimensional array =

  Base Address + (i - Lower Bound Index) * size of each element

- **Base address and how to compute the exact location of an array element**

  Array[25,26,.....,150]

  Base address = 500

  Each value in the array contains = 10 Byte

  Location of Array[78] :

  500 + (78 - 25) * 10 = 500 + 53 * 10 = 500 + 530 = 1030

- **Two Dimensional Array**

Matrix Computation, we need 2 dimensional array

Two Major Form :

Row Major Form : In array elements are stored in row wise manner.

Standard formula to compute exact location of an element in Row Major Form is : BA + ((r - lb1) * nc + (c - lb2)) * # bytes each element composed of

Column Major Form : In array elements are stored in column wise manner.

Standard formula to compute exact location of an element in Row Major Form is : BA + ((c - lb2) * nr + (r - lb1)) * # bytes each element composed of