

Name: _____ UIN: _____

1. Write the C variable declaration for a pointer to a one dimensional array of type int.

2. Write the C malloc statement that would allocate memory for an array 20 integers and store them into the array from Q1. Also, initialize all of the array locations to zero.

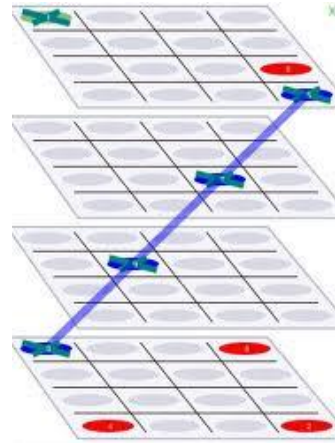
3. Write the C free statement that would deallocate the memory allocated in Q2.

4. Write the C variable declaration for a pointer to a two dimensional array of type int.

5. Write the C malloc code that would allocate memory for a 2D array of 20x30 integers and store them into the array from Q4. Also, initialize all of the array locations to zero.

6. Write the C free code that would deallocate the memory allocated in Q5.

A three dimensional array could be used for a number of applications including 3-D Tic-Tac-Toe. The picture to the right shows one way to envision a 4x4x4 grid that would be implemented using a 3-dimensional array.



7. Write the variable declaration for a pointer to a three dimensional array of type int.

8. Write the C malloc code that would allocate memory for a 3D array of 20x30x40 integers and store them into the array from Q7. Also, initialize all of the array locations to zero.

9. Write the C free code that would deallocate the memory allocated in Q8.