Solution to Exercises in L#22

Solution to Exercise (1) on Slide 15

- Based on the following statement:

  int a[3][1]={1,2,3}, b[6], c[3][2], d[2][3];

  determines whether each of the following statements is true or false?

  a) F Array c[3][2] contains 3+2 = 5 elements

  b) T The 1-D array b[6] can be used to store all data saved in the 2-D array d[2][3]

  c) F Array c[3][2] contains six elements: c[0], c[1], c[2], c[3],c[4], c[5]

  d) T Array c[3][2] contains 3 1-D sub-arrays while array d[2][3] contains 2 1-D sub-arrays

  e) F Array d[2][3] contains six elements: d[1][1], d[1][2], d[1][3], d[2][1], d[2][2], d[2][3]

Solution to Exercise (2) on Slide 16

- Find error(s), if any, in the following statements:
  - int a[2][0];

    The minimum size is 1 not 0!
  - float city(23)(25), town(12)(21);

    float city[23][25]), town[12][21];
  - int a[2,3]=(23, 34, 45, 56);

    int a[2][3]={23, 34, 45, 56};
  - double main[4][1]= {11, 22, 33, 44};

    Cannot use the C reserved words!

Solution to Exercise (3) on Slide 18

- 3-D array:

```
int myarray[2][3][2]={1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12};
```

- What are the values of
  - myarray[1][1][1]? 10
  - myarray[0][2][1]? 6
  - myarray[2][1][0]? Out of array boundary, un-predicable!

Solution to Exercise (4) on Slide 23

```
#include <stdio.h>
void main(void)
{
   int num_array[2][3], i, j;
   printf("Read the array from the keyboard: \n");
   for(i=0; i< 2; i++) /*i is row index*/
            for (j=0; j<3; j++) /*j is column index*/
            {
                     printf("please input next array element:\n");
                     scanf_s("%d", &num_array[i][j]);
            }
   printf{"please print out the second row:\n");
   for (j=0; j<3; j++) /*j is col index*/
            printf("%d", num_array[1][j]);
}
```