EE 2905

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Homework 6

1 – Write a single line of code to do each task   10pts

Create an array of ints, named ArrayInt, with 15 elements.

int ArrayInt[15];

Create an array with integer values 6 to 12.

int myArray[7] = {6,7,8,9,10,11,12};

Create an array of ints with 200 values, all 0 except the first 3, which are 11.

int myArray[200] = {11,11,11};

Create an array of floats with 1000 values, all 0s.

float myArray[1000] = {0.0};

Create an array of characters that can hold up to 26 letters.

char myArray[26];

2 – Given an array with the following values, evaluate each snippit of code   10pts

int myArray[15] = {1 2 3 4 5 6 7 8 9 10 11 12 13 14 15};

foo = myArray[5];

foo =   6

foo = myArray[3 + 3];

foo =   7

foo = myArray[15];

foo =   ??

foo = myArray[6] = myArray[5];

foo =   6

foo = myArray[(myArray[11] % 5)];

foo =   3

3 – Provide the values for each array after executing the following code snippits
each snippit is evaluated independently   20pts

values in array

```
for(j = 0; j < 6; j++)
    myArray[ j ] = 2 * j;
```

0 2 4 6 8 10

```
for(j = 0; j < 4; j++)
    myArray[ j+1 ] = 5;
```

? 5 5 5 5 ?

```
for(j = 3; j >=0; j--)
    myArray[ j ] = 5 – j;
```

5 4 3 2 ? ?

```
for(j = 203; j < 206; j++)
    myArray[ j – 202] = j % 2;
```

? 1 0 1 ? ?

```
int myArray2[] = {5,6,7,8,9};
for(j = 0; j < 5; j++)
    myArray2[ j ] = myArray2[ 5 – j];
```

5 6 7 8 9
? 9 8 7
   8 8

? 9 8 8 9

4 – Fill in the memory map at the end of the following code   30pts

```
int foo, boo;
int* zoo, soo;
int myArray[6] = {3,4,5};      3 4 5 0 0 0

foo = myArray[2];              foo = 5
zoo = &myArray[4];             zoo = 0x1010
myArray[2] = foo;              3 4 5 0 0 0
int j;
for(j = 3; j < 5; j++){
    myArray[ j ] = 2 * j % 3;  3 4 5 0 2 0
}
*zoo = 15;                     3 4 5 0 15 0
myArray[5] = (int)zoo;         3 4 5 0 15 0x1010
boo = myArray[6];              boo = ???
myArray[3] = boo;              3 4 5 ? 15 0x1010
```

value	address
3	0x1000
4	0x1004
5	0x1008
??	0x100C
15	0x1010
0x1010	0x1014
??	0x1018
??	0x101C

myArray

5 – Given an array with the following values, evaluate each snippit of code   30pts

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

foo = myArray[2][2];   12,11,10,9   8,7,6,5   4,3,2,1

foo =   2

[0][0-3]   [1][0-3]   [2][0-3]

foo = myArray[0][1];

foo =   11

int foo1 = 0;
int foo2 = 0;
int foo3 = 0;

foo1 =   42

for (j = 0; j < 4;j++){   0   1   2   3

foo2 =   24 + ?

foo1 += myArray[0][j];   12   11   10   9 = 42
foo2 += myArray[j][0];   12   8   4   ? = 24 + ?
foo3 *= myArray[j][j];   0 since foo3 starts at 0

foo3 =   0

}