EECS 10 Discussion Week 7

Xu Han

hanx@uci.edu

Arrays

- Array of a sub-type
- int A[10];
- double B[10];
- Element access by index (e.g. A[6])
- Array indexing starts counting from 0.
- e.g. for int A[10];
- valid accesses are A[0] through A[9]

Arrays

- Initialization of array
- int A[3] = {1,2,3};
- int A[10] = {1,2,3};
- int A[10];   (undefined elements)
- using **for** loop for array operation,e.g.
- int i;
- int A[100];
- for (i=0; i<100; i++)
- A[i] = -1;

Arrays

- Multi-dimensional Arrays
- int M[3][2] = { {1,2},
- {3,4},
- {5,6}};
- M[2][1] is ?

Arrays

- passing array to a function:
  int temp[24];
  void modifyArray (int A[24]);

Function call:
        modifyArray (temp);
Equivalent to:
        modifyArray (&temp[0]);

HW 7

- Digital Image Processing

- Image represented by pixels

- In PPM format, each pixels represented by Red, Green , Blue or RGB
- Each element represented by a number between 0 to 255

PPM format

P6
640 480
255
RGBRGBRGBRGB…

HW7

- Demonstration

HW7

- Starting point:
- three 2-D array.

- unsigned char R[640][480];
- unsigned char G[640][480];
- unsigned char B[640][480];

Examples of array manipulation

- plusone
- reverse