array

IN C PROGRAMMING
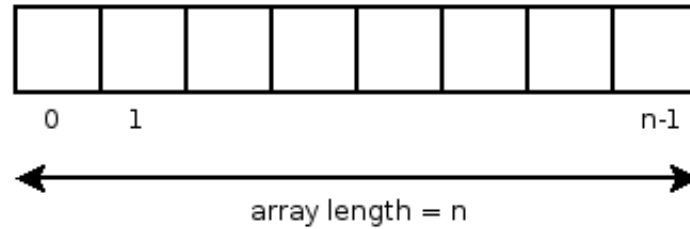
- Chiang Di

- Electronic and Information Engineering 153 OF NCIST
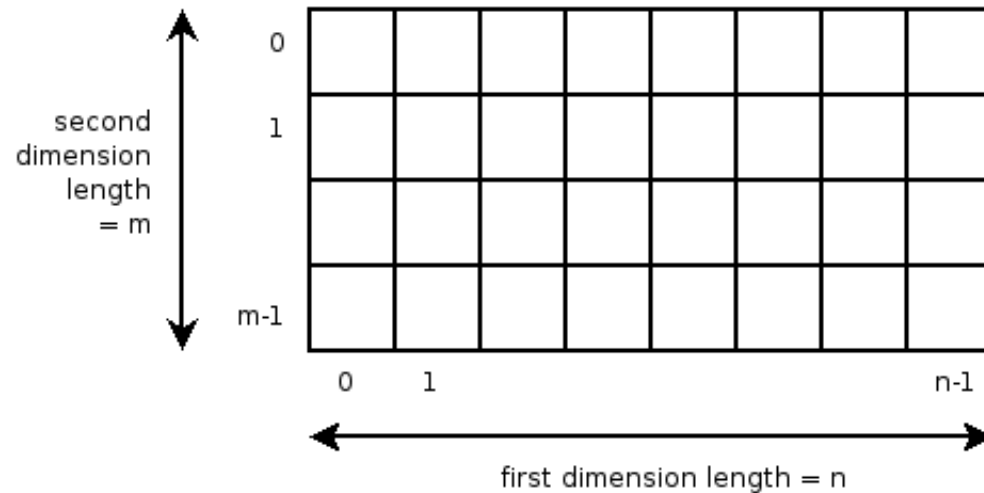
WHAT ?

One-dimensional array

- it would be convenient to have one name for a group of variables of the same type that can be accessed by a numerical index.
- One way to visualize an array is like this:
- [] [] [] [] [] []

- 名字：石原さとみ（いしはら　さとみ）
- 中文名：石原里美
- 出身地：東京都
- 生年月日：1986年12月24日
- 血液型：A型
- 身長：157cm
- 趣味・特技：お琴・テニス・ピアノ

WHY?

► The version of us.
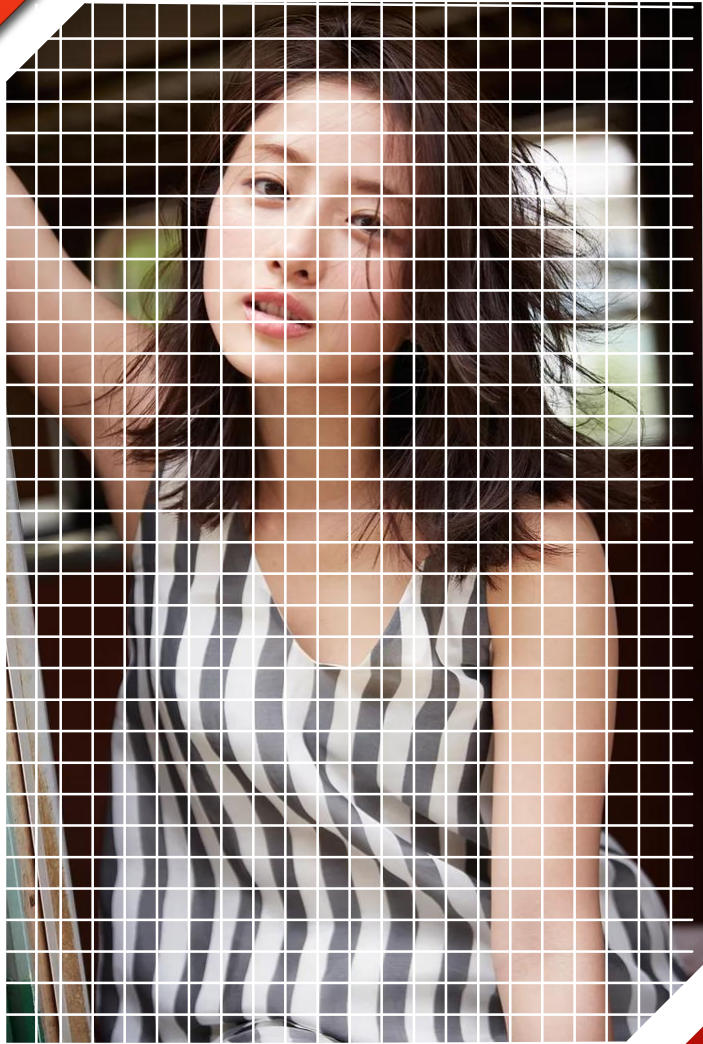
WHY?

▶ The Version of computer in memory?

WHY ?

WHY?

	129	156	153	171	180	149	193	111	149	136
104	181	117	179	159	192	109	152	170	184	111
149	155	143	144	110	183	193	195	102	160	114
157	171	104	194	168	175	200	165	114	163	162
123	140	163	178	156	183	168	142	100	100	133
157	101	189	193	126	106	102	184	126	105	200
183	104	103	108	163	108	130	113	191	179	107
125	142	116	124	174	137	135	145	101	142	125
120	131	162	123	134	136	163	132	120	134	124
199	137	181	159	163	152	171	162	101	190	141
198	191	197	129	103	106	122	179	181	114	167
107	181	112	189	200	200	138	159	146	135	182
167	195	112	112	151	144	157	113	175	134	135
145	186	114	161	151	125	117	183	102	170	153
140	144	166	119	157	182	117	193	122	119	192
142	183	121	135	118	166	133	174	147	154	160
190	149	195	138	141	196	102	147	167	180	168
130	135	187	103	150	154	148	148	148	114	118
159	163	106	179	114	117	198	122	191	161	156
105	100	177	116	112	176	129	133	130	183	111
151	132	149	151	140	186	154	189	196	119	118
176	162	181	124	153	124	151	151	163	155	114
186	133	136	131	181	123	195	131	198	110	134
133	166	121	156	158	163	168	176	200	200	176
166	152	124	196	193	197	177	116	178	194	163
117	116	130	175	160	166	174	131	198	162	174
169	166	161	158	192	194	185	128	103	144	161
174	175	144	200	187	108	101	114	176	126	10
119	141	116	145	139	166	174	106	173	168	
110	145	133	142	140	163	185	172	196	182	

▶ A photo in eyes of computer(in memory).

HOW?

First: Declaring Arrays

- To declare an array in C, a programmer specifies the type of the elements and the number of elements required by an array as follows

- *type arrayName [arraySize];*

- For example, to declare a 5-element array called "NCIST" of type int, use this statement

- *double NCIST[5];*

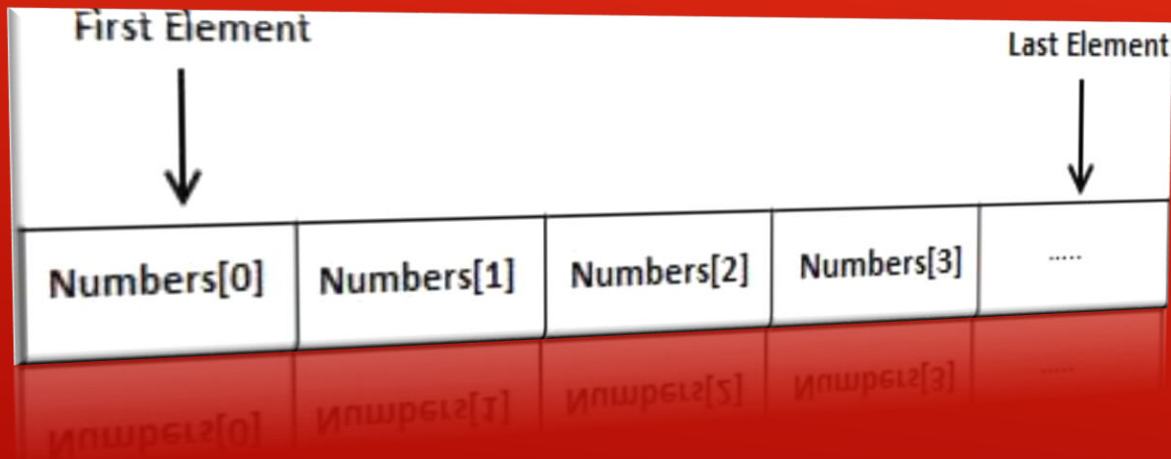- Here "NCIST" is a variable array which is sufficient to hold up to 5 int numbers.

HOW?

Second:Initializing Arrays

▸ You can initialize an array in C either one by one or using a single statement as follows

▸ *int NCIST[5] = {1024, 1566, 207, 1895, 2018};*

▸ The number of values between braces { } cannot be larger than the number of elements that we declare for the array between square brackets [ ].

HOW?

▶Third:Accessing Array Elements

▶ An element is accessed by indexing the array name. This is done by placing the index of the element within square brackets after the name of the array. For example

▶ *int NCIST[5] = {1024, 1566, 207, 1895, 2018};*

▶ *int fresh guy = NCIST[4];*

HOW?

1. #include <stdio.h>

2. int main ()

3. {

4.   int n[10]; /* n is an array of 10 integers */

5.   int i,j;

6.   /* initialize elements of array n to 0 */

7.   for (i = 0; i < 10; i++) {

8.   n[i] = i; /* set element */

9.   }

10.   /* output each array element's value */

11.   for (j = 0; j < 10; j++) {

12.   printf("Element[%d] = %d\n", j, n[j]);

13.   }

14.   return 0;

15. }

PRACTICE

► What

► Why

► How （ include a Practice ）

ARRAYS IN DETAIL :

THANK YOU