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1  #include <stdio.h>
2
3  #define INT_ARRAY_SIZE 10
4  #define FLOAT_ARRAY_SIZE 5
5  #define CHAR_ARRAY_SIZE 26
6
7  #define NUM_STRINGS 10
8  #define MAX_CHARACTERS_PER_STRING 20
9
10 #define ALPHABET_BEGINNING 65 // 'A'
11
12 struct MyDataOne
13 {
14     int iArray[INT_ARRAY_SIZE];
15     float fArray[FLOAT_ARRAY_SIZE];
16 };
17
18 struct MyDataTwo
19 {
20     char cArray[CHAR_ARRAY_SIZE];
21     char strArray[NUM_STRINGS][MAX_CHARACTERS_PER_STRING];
22 };
23
24 int main(void)
25 {
26     //variable declarations
27     struct MyDataOne data_one;
28     struct MyDataTwo data_two;
29     int i;
30
31     //code
32     // *** PIECE-MEAL ASSIGNMENT (HARD-CODED) ***
33     data_one.fArray[0] = 0.1f;
34     data_one.fArray[1] = 1.2f;
35     data_one.fArray[2] = 2.3f;
36     data_one.fArray[3] = 3.4f;
37     data_one.fArray[4] = 4.5f;
38
39     // *** LOOP ASSIGNMENT (USER INPUT) ***
40     printf("\n\n");
41     printf("Enter %d Integers : \n\n", INT_ARRAY_SIZE);
42     for (i = 0; i < INT_ARRAY_SIZE; i++)
43         scanf("%d", &data_one.iArray[i]);
44
45     // *** LOOP ASSIGNMENT (HARD-CODED) ***
46     for (i = 0; i < CHAR_ARRAY_SIZE; i++)
47         data_two.cArray[i] = (char)(i + ALPHABET_BEGINNING);
48
49     // *** PIECE-MEAL ASSIGNMENT (HARD-CODED) ***
50     strcpy(data_two.strArray[0], "Welcome !!!");
51     strcpy(data_two.strArray[1], "This");
52     strcpy(data_two.strArray[2], "Is");
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53 strcpy(data_two.strArray[3], "ASTROMEDICOMP'S");
54 strcpy(data_two.strArray[4], "Real");
55 strcpy(data_two.strArray[5], "Time");
56 strcpy(data_two.strArray[6], "Rendering");
57 strcpy(data_two.strArray[7], "Batch");
58 strcpy(data_two.strArray[8], "Of");
59 strcpy(data_two.strArray[9], "2020-2021 !!!");
60
61 // *** DISPLAYING DATA MEMBERS OF 'struct DataOne' AND THEIR VALUES ***
62 printf("\n\n");
63 printf("Members Of 'struct DataOne' Alongwith Their Assigned Values Are : \n\n");
64
65 printf("\n\n");
66 printf("Integer Array (data_one.iArray[]) : \n\n");
67 for (i = 0; i < INT_ARRAY_SIZE; i++)
68     printf("data_one.iArray[%d] = %d\n", i, data_one.iArray[i]);
69
70 printf("\n\n");
71 printf("Floating-Point Array (data_one.fArray[]) : \n\n");
72 for (i = 0; i < FLOAT_ARRAY_SIZE; i++)
73     printf("data_one.fArray[%d] = %f\n", i, data_one.fArray[i]);
74
75 // *** DISPLAYING DATA MEMBERS OF 'struct DataTwo' AND THEIR VALUES ***
76 printf("\n\n");
77 printf("Members Of 'struct DataTwo' Alongwith Their Assigned Values Are : \n\n");
78
79 printf("\n\n");
80 printf("Character Array (data_two.cArray[]) : \n\n");
81 for (i = 0; i < CHAR_ARRAY_SIZE; i++)
82     printf("data_two.cArray[%d] = %c\n", i, data_two.cArray[i]);
83
84 printf("\n\n");
85 printf("String Array (data_two.strArray[]) : \n\n");
86 for (i = 0; i < NUM_STRINGS; i++)
87     printf("%s ", data_two.strArray[i]);
88
89 printf("\n\n");
90
91 return(0);
92 }
93
```