

/* Normally, functions return only one value. When however, we want a function to return more than one values, we need to pass an array of size same as the number of elements to be returned from the function. For example, if we want a function to return 2 values, we have to pass an array of 2 elements to the function. Then, we will change the element values to the values we want the function to return.

Example: If we want a function to return the sum and mean values of the elements of array C, then together with C, we pass an array D of type float to the function. Initialize the elements of D to zero at type declaration.

Write a C program that will pass an array C of 10 integer elements to a function and modify the values of another array D which has 2 float type elements. The 0th element of the array D (i.e. D[0]) will hold the mean value and the 1st element of the array D (i.e. D[1]) will hold the average value of the array A. In effect, this will be equivalent to returning 2 values from a function.

The function prototype could have the form:

```
void FindSumAve( int C[], float D[], int size );
```

Your program should print the original array elements on the screen. Then it should print the mean value and the average value of the array elements

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Note: Please write your answer on the back of this page */

```
#include <stdio.h>
#define SIZE 10
```

```
/* function prototypes */
void FindSumAve( int c[], float d[], int size );

/* function main begins program execution */
int main()
{
    int a[ SIZE ] = { 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 }; /* initialize a */
    float b[2] = { 0, 0 };
    int i; /* counter */

    printf("The element values of the array are\n");

    for (i=0; i<SIZE; i++)
        printf("%3d", a[i]);

    printf("\n");

    /* pass array a to FindSumAve by reference */
    FindSumAve( a, b, SIZE );

    printf( "The sum is %6.4f and mean is %6.4f \n", b[0], b[1] );

    return 0; /* indicates successful termination */
} /* end main */

/* in function FindSumAve, "c" is original array, d holds the
mean and average */

void FindSumAve( int c[], float d[], int size )
{
    int j; /* counter */
    float sum=0; /* initialize sum to 0 */

    /* find sum of array elements */
    for ( j = 0; j < size; j++ )
```

```
        sum += c[j];  
    /* assign the value of sum to d[0] and average to d[1] */  
        d[ 0 ] = sum;  
        d[ 1 ] = sum/size;  
} /* end function FindSumAve */
```