Programming with C Language

Working with Multi-Dimensional Arrays (Matrix)

Write a C program for the followings.

Declare two 3 x 3 square matrices and display the matrix sum.

The following illustration shows the process of calculating the matrix sum. The values are used as samples.

3	2	4		2	6	3		5	8	7
1	4	6	+	4	3	2	=	5	7	8
4	3	2		5	1	7		9	4	9

```
#include<stdio.h>
int main()
{
   int a[3][3],b[3][3],c,d,e[3][3];
   printf("Array 1\n");
   for(c=0;c<3;c++){
      for (d=0;d<3;d++)
      {
         printf("Enter Value For The Position [%d][%d] - ",c+1,d+1);
         scanf("%d",&a[c][d]);
      }
   }
   printf("\nArray 2\n");
   for(c=0;c<3;c++)
   {
      for (d=0;d<3;d++)
      {
         printf("Enter Value For The Position [%d][%d] - ",c+1,d+1);
         scanf("%d",&b[c][d]);
      }
   }
   for(c=0;c<3;c++)
   {
      for (d=0;d<3;d++)
      {
         e[c][d]= a[c][d] + b[c][d];
      }
   }
   for (d=0;d<3;d++)
   {
      printf("%d ",a[0][d]);
   }
   printf("   ");
   for (d=0;d<3;d++)
   {
      printf("%d ",b[0][d]);
```

```
    }
    printf("    ");
    for (d=0;d<3;d++)
    {
        printf("%d ",e[0][d]);
    }
    printf("\n");
    for (d=0;d<3;d++)
    {
        printf("%d ",a[1][d]);
    }
    printf(" + ");
    for (d=0;d<3;d++)
    {
        printf("%d ",b[1][d]);
    }
    printf(" = ");
    for (d=0;d<3;d++)
    {
        printf("%d ",e[1][d]);
    }
    printf("\n");
    for (d=0;d<3;d++)
    {
        printf("%d ",a[2][d]);
    }
    printf("    ");
    for (d=0;d<3;d++)
    {
        printf("%d ",b[2][d]);
    }
    printf("    ");
    for (d=0;d<3;d++)
    {
        printf("%d ",e[2][d]);
    }
    printf("\n");
}
```