findAverage2D

Write a C function that takes a 4x4 two-dimensional array of floating point numbers matrix as a parameter. The function computes the average of the first three elements of each row of the array and stores it at the last element of the row. The function prototype is given as follows:

```
void findAverage2D(float matrix[4][4]);
```

A sample program template is given below to test the function:

```
#include <stdio.h>
void findAverage2D(float matrix[4][4]);
int main()
{
  float ar[4][4];
  int i,j;

  printf("Enter data: \n");
  for (i = 0; i < 4; i++) {
    for (j = 0; j < 4; j++)
      scanf("%f", &ar[i][j]);
  }
  findAverage2D(ar);
  printf("findAverage2D(): \n");
  for (i = 0; i < 4; i++) {
    for (j = 0; j < 4; j++)
      printf("%.2f ", ar[i][j]);
    printf("\n");
  }
  return 0;
}
void findAverage2D(float matrix[4][4])
{
  /* Write your code here */
}
```

Some sample input and output sessions are given below:

(1) Test Case 1:

```
Enter data:
1 2 3 0
4 5 6 0
7 8 9 0
1 2 3 0
findAverage2D():
1.00 2.00 3.00 2.00
4.00 5.00 6.00 5.00
7.00 8.00 9.00 8.00
1.00 2.00 3.00 2.00
```

(2) Test Case 2:

Enter data:
1 2 3 0
4 5 6 0
-4 -5 -6 0
1 2 3 0
findAverage2D():
1.00 2.00 3.00 2.00
4.00 5.00 6.00 5.00
-4.00 -5.00 -6.00 -5.00
1.00 2.00 3.00 2.00

(3) Test Case 3:
Enter data:
1.5 2 2.5 0
4 5 6 0
-4 -5 -6 0
1 2 3 0
findAverage2D():
1.50 2.00 2.50 2.00
4.00 5.00 6.00 5.00
-4.00 -5.00 -6.00 -5.00
1.00 2.00 3.00 2.00

```
void findAverage2D(float matrix[4][4])
{
   float sum = 0;
   float avg = 0;
   int i,j;

   for(i=0;i<4;i++)
   {
      for(j=0;j<3;j++)
      {
         sum = sum + matrix[i][j];
      }
      avg = sum/3;
      matrix[i][3] = avg;
      sum=0;
      avg = 0;
   }
}
```