Java Homework (Chapter 8)

8.1

**import** java.util.Scanner;  
  
**public class** sumByColumn {  
  
 **public static void** main(String[] Args){  
 **double**[][] in = *getArr*();  
 **for** (**int** i = 0; i < in[0].**length**; i++){  
 System.***out***.println(**"Sum of the elements at column "** + i + **" is "** + *sumColumn*(in,i));  
 }  
 }  
  
 **public static double**[][] getArr() {  
 Scanner input = **new** Scanner(System.***in***);  
 **double**[][] arr = **new double**[3][4];  
 System.***out***.println(**"Enter the array:"**);  
 **for** (**int** n = 0; n < 3; n++){  
 **for** (**int** m = 0; m < 4; m++){  
 arr[n][m] = input.nextDouble();  
 }  
 }  
 **return** arr;  
 }  
  
 **public static double** sumColumn(**double**[][] m, **int** columnIndex){  
 **double** sum = 0;  
 **for** (**int** i = 0; i < m.**length**; i++){  
 sum += m[i][columnIndex];  
 }  
 **return** sum;  
 }  
  
}

8.13

**import** java.util.Scanner;  
  
**public class** locateLargestElement {  
  
 **public static void** main (String[] Args){  
 **double**[][] in = *getArr*();  
 **int**[] locate = *locateLargest*(in);  
 System.***out***.print(**"The location of the largest element is at ("** + locate[0] + **", "** + locate[1] + **")"**);  
 }  
  
 **public static double**[][] getArr() {  
 System.***out***.println(**"Enter the number of rows and columns of the array:"**);  
 Scanner input = **new** Scanner(System.***in***);  
 **int** i = input.nextInt();  
 **int** j = input.nextInt();  
 **double**[][] arr = **new double**[i][j];  
 System.***out***.println(**"Enter the array:"**);  
 **for** (**int** n = 0; n < i; n++){  
 **for** (**int** m = 0; m < j; m++){  
 arr[n][m] = input.nextDouble();  
 }  
 }  
 **return** arr;  
 }  
  
 **public static int**[] locateLargest(**double**[][] inArr){  
 **int** i,j;  
 **double** max = 0;  
 **int**[] outArr = **new int**[2];  
 **for** (i = 0; i < inArr.**length**; i++){  
 **for** (j = 0; j < inArr[i].**length**; j++){  
 **if** (inArr[i][j] > max){  
 max = inArr[i][j];  
 outArr[0] = i;  
 outArr[1] = j;  
 }  
 }  
 }  
 **return** outArr;  
 }  
}