```c
#include <stdio.h>
#include <stdio.h>
#include <math.h>


/*********************************************************************

program:                detDriver.c
purpose:                recursively compute the determinant
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*********************************************************************/


//method  to get the sub matrix
void coFactor(int size, double matrix[size][size], double newMatrix[size-1][size-1],
int row, int column)
{
       //initialize variables
       int i=0;
       int j =0;
       int k= 0;
       int l= 0;

       //recopy the matrix into the new matrrix
       for ( i = 0; i < size; i++)
    {
        //if this is not the row we are covering
        if (i != row)
        {
            for ( j = 0; j < size; j++)
            {
             //if this is not the column we are covering
                if (j != column)
                {
                    newMatrix[k][l] = matrix[i][j];
                    //iterate after assignment
                    l++;
                  }
            }
            //iterate after assignment
                    k++;
                    //reset l=0 to allow iteration from start again
            l=0;
            }
        }
}

//method to calculate the determinant
double det(int size, double matrix[size][size])
{
       double result = 0;
       int i=0;
       //base case 1
```

```
	if(size == 1)
		return matrix[0][0];
	//base case 2
	else if (size== 2)
		return matrix[0][0] * matrix[1][1] - matrix[0][1] * matrix[1][0];
	else
	{
		double nextMatrix[size-1][size-1];
		for ( i =0;i<size;i++)
		{
			coFactor(size, matrix, nextMatrix, 0, i);
			//recursively call det on the coFactor
			result += matrix[0][i] * pow (-1, i) * det(size - 1,
nextMatrix);
		}
	}

	return result;
}



int main(int argc, char** argv)
{
	int n = 0;
	int i = 0;
	int j = 0;
    printf ("Enter the number of rows\n");

     scanf ("%d", &n);

     double a[n][n];
     printf ("insert numbers  \n");
      for (i = 0; i < n; i++)
    {
        for (j = 0; j < n; j++)
        {
             printf("insert at a[%d][%d] \n",i,j);
              scanf("%lf", &a[i][j]);
             }
             printf ("next line  \n");
    }
      printf("printing your inputs \n");
      for (i = 0; i < n; i++)
    {
        for (j = 0; j < n; j++)
        {
              printf("%lf ", a[i][j]);
             }
             printf("\n");
    }
    printf("%lf",det(n,a));
      return 0;
}
```