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//write a program for sorting elements by using bubble sort
#include<stdio.h>

//for displaying elements in array
void display(int a[], int n)
{
    int i;
    printf("[ ");
    for (i = 0; i < n; i++)
    {
        printf("%d ,", a[i]);
    }
    printf(" ]\n");
}

//for sorting elements in array
void bubble_sort(int a[], int n)
{
    int i, itr,temp,swap=0;

    for (itr = 1; itr < n; itr++)
    {
        for (i = 0; i < n - itr; i++)
        {
            printf("Compared [ %d ,%d ]\n", a[i], a[i + 1]);
            if (a[i] > a[i + 1])
            {
                swap = 1;
                temp = a[i];
                a[i] = a[i + 1];
                a[i + 1] = temp;
            }
            if (swap == 0)
                break;
            printf("Swap [ %d,%d ]\n", a[i], a[i + 1]);
        }
        printf("Iteration %d :\n",itr);
        display(a, n);
    }
}

void main()
{
    int a[20], i,n;

    printf("Please enter the number of element you want to insert\n");
    scanf_s("%d", &n);

    printf("Enter the number of element in Array\n");
    for (i = 0; i < n; i++)
    {
        scanf_s("%d", &a[i]);
    }

    bubble_sort(a, n);

    printf("Sorted array is :\n");
    display(a, n);
}

```

}