

```
#include <stdio.h>
#include <stdlib.h>
#include <time.h>

void insertionSort(int arr[], int n)
{
    int i, key, j;
    for (i = 1; i < n; i++)
    {
        key = arr[i];
        j = i-1;

        while (j >= 0 && arr[j] > key)
        {
            arr[j+1] = arr[j];
            j = j-1;
        }
        arr[j+1] = key;
    }
}

//INSERTION
int main() {
    clock_t start_t, end_t, total_t;
    printf("Enter total numbers \t");
    int n;
    scanf("%d",&n);
    int a[n];
    int i,j,flag,temp;
    flag=1;
    for(i=0;i<n;i++) {
        a[i] = n-i; //(rand()%n*10) +1;
    }
    start_t = clock();
    int swapCount=0;
    insertionSort(a,n);

    end_t = clock();
    for(i=0;i<n;i++) {
        printf("%d \n",a[i]);
    }
    printf("Total Swapped in INSERTION: %d \n",swapCount++);
    total_t = ((double)(end_t - start_t) / CLOCKS_PER_SEC)*CLOCKS_PER_SEC;
    printf("Total time taken by CPU: %f\n", (double)total_t/(double)CLOCKS_PER_SEC
);
}
```