/BUBBLE SORT/

Code :-

#include <bits/stdc++.h>

using namespace std;

void bubbleSort(int arr[], int n)

{

    for (int i = 0; i < n - 1; i++)

    {

        for (int j = 0; j < n - i - 1; j++)

        {

            if (arr[j] > arr[j + 1])

                swap(arr[j], arr[j+1]);

        }

    }

}

int main()

{

    int key = 1;

    while (key)

    {

        int n;

        cout << "Enter the size :- ";

        cin >> n;

        clock\_t start, end;

        start = clock();

        int arr[n];

        srand(time(NULL));

        for (int i = 0; i < n; i++)

            arr[i] = rand();

        bubbleSort(arr, n);

        end = clock();

        cout << "Time taken for shorting = " << (end - start) << endl;

        cin >> key;

    }

    return 0;

}

Output :-

PS C:\Users\ASUS\Desktop\sorting\_codes> cd "c:\Users\ASUS\Desktop\sorting\_codes\Bubble\_sort\" ; if ($?) { g++ bubbleSort.cpp -o bubbleSort } ; if ($?) { .\bubbleSort }

Enter the size :- 1000

Time taken for shorting = 3

Enter the size :- 2000

Time taken for shorting = 10

Enter the size :- 3000

Time taken for shorting = 23

Enter the size :- 4000

Time taken for shorting = 39

Enter the size :- 5000

Time taken for shorting = 62

Enter the size :- 6000

Time taken for shorting = 87

Enter the size :- 7000

Time taken for shorting = 114

Enter the size :- 8000

Time taken for shorting = 156

Enter the size :- 9000

Time taken for shorting = 203

Enter the size :- 10000

Time taken for shorting = 252

Enter the size :- 11000

Time taken for shorting = 301

Enter the size :- 12000

Time taken for shorting = 367