LAB2- Bubble Sort

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4-D

```
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
int n;
void swap(int *x, int *y)
{
  int temp = *x;
  *x = *y;
  *y = temp;
}
void bubbleSort(int arr[])
{
  int i, j;
   for (i = 0; i < n-1; i++)
       for (j = 0; j < n-i-1; j++)
           if (arr[j] > arr[j+1])
              swap(&arr[j], &arr[j+1]);
}
int main()
{

  int choice,i;
  double bt;
  clock_t start, end;
```

```
  printf("Enter the number of elements of the array\n");
  scanf("%d",&n);
  int array[n],array1[n];
  for (i = 0; i < n; i++)
  {
     array[i]= rand ()%200;
     array1[i]=array[i];
     printf("%d ", array[i]);
  }
  printf("\n");

  start = clock();
  bubbleSort(array1);
  end = clock();
  bt = ((double) (end - start)) / CLOCKS_PER_SEC;
  printf("Sorted array is : ");
  for (i = 0; i < n; i++)
  {
     printf("%d ", array1[i]);
  }
  printf("\n");
  printf("\nTime taken by Bubble Sort : %lf\n", bt);
  printf("\n");

}
```