
# Bubble Sort

## Data Structures Made Easy

DUBLIN CITY UNIVERSITY

# 1. ***Bubble Sort***

```
class bubble_Sort{

	private static void swap(int [] bubble_Array, int a, int b){

		int temporary = bubble_Array[a];
		bubble_Array[a] = bubble_Array[b];
		bubble_Array[b] = temporary;
	}

	public static void bubble(int [] bubble_Array, int size){

		for(int index_1 = 0; index_1 < size; index_1++){

			for(int index_2 = 1; index_2 < (size - index_1); index_2++){

				if(bubble_Array[index_2 - 1] > bubble_Array[index_2])
					swap(bubble_Array, index_2 - 1, index_2);

			}
		}
	}

	public static void main(String [] args){

		System.out.print("Enter the number of elements: ");
		int size = Console.readInt();

		int [] bubble_Array = new int[size];

		System.out.print('\n' + "Enter the elements: ");

		for(int index_1 = 0; index_1 < size; index_1++){

			int element = Console.readInt();
			bubble_Array[index_1] = element;
		}

		bubble(bubble_Array, size);

		System.out.print('\n' + "The sorted list is: ");

		for(int index_2 = 0; index_2 < size; index_2++)
			System.out.print(bubble_Array[index_2] + " ");
	}
}
```