

# Lab 6 - Bubble Sort Algorithm

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CS311 - Computer Architecture 1

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The sixth laboratory exercise requires you to code the bubble sort algorithm and sort a given array of integers.

Please create a file named `BubbleSort.asm` in ebe (or in any text editor of your choice).

## Question 1 - Bubble Sort Algorithm.

Write an assembly language program to sort an array ( $a$ ) of **double words** ( $a = \{ 2, 4, 1, 5, 7, 9 \}$ ) using the bubble sort algorithm. The Bubble sort algorithm is defined as:

```
do{
    swapped = false;
    for ( i = 0; i < n-1; i++ ) {
        if (a[i] > a[i+1]) {
            swap a[i] and a[i+1];
            swapped = true;
        }
    }
}
while (swapped)
```

## Submission

The files must be submitted through Canvas by 5pm November 18, 2016. The penalty for late submission is 10% for 1 day, 20% for 2 day, after which it will be zero. The grading rubric is given in Table 1.

Table 1: Grading rubric

File	Aspects	Points
BubbleSort.asm	Correct result	30
	Correct use of registers	30
	Correct labels and jump sequences	30
	Documentation	10