


# National University of Computer and Emerging Sciences, Lahore Campus

	<b>Course:</b>	<b>Design and Analysis of Algorithms</b>	<b>Course Code:</b>	<b>CS302</b>
	<b>Program:</b>	<b>BS(Computer Science)</b>	<b>Semester:</b>	<b>Spring 2018</b>
	<b>Duration:</b>	<b>10 Minutes</b>	<b>Total Marks:</b>	<b>10</b>
	<b>Paper Date:</b>	<b>6-Feb-18</b>	<b>Weight</b>	<b>4</b>
	<b>Section:</b>	<b>C</b>	<b>Page(s):</b>	<b>1</b>
	<b>Exam:</b>	<b>Quiz 1</b>	<b>Roll No:</b>	
			<b>Section:</b>	

Write down the recurrence relation for the following algorithm and analyze its time complexity using iteration method. Show complete steps

```
SORT(A,n){  
    if n > 1{  
        SORT(A,n-1)  
        key = A[n]  
        i = n-1  
        while i > 0 and A[i] > key  
            A[i+1] = A[i]  
            i = i - 1  
        A[i + 1] = key  
    }  
}
```