# Department of Computing

**CS250: Data Structure and Algorithms**

**Class: BSCS 5AB**

# Lab 6: Algorithms and Complexity

**Date: 15th November, 2016**

**Time: 9am- 12pm / 2pm – 5pm**

# Instructors: Shamyl Bin Mansoor / Akhtar Munir

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# Lab 6: Algorithms and Complexity

**Introduction**

Since we are discussing Algorithms and their complexities in class, in this lab we will implement a sorting algorithm and try to define its worst case complexity.

**Objectives**

To understand the complexity of a sorting algorithm

**Tools/Software Requirement**

Visual Studio c++ / Java / Python

**Lab Tasks**

You are required to upload the lab tasks on LMS and the name of that tasks must be in this format YourFullName\_reg#.cpp

Remember to comment your code properly.

**Description:**

Algorithms time complexity is defined by Big O notation, which gives its worst case scenario. We are interested in understanding the rate of growth of an algorithm which gives us its time complexity.

**Task 1**

Implement Bubble sort sorting algorithm

**Task 2**

Define the complexity of your implementation of Bubble Sort.

**Deliverable**

Students are required to upload the lab task on LMS before the deadline.