**Top Ten Important Algorithm Machine Problem 1**

Sorting

Due Date: 11:59 am, March 9, 2017

Write an Ipython Notebook (Python 3) that contains four sorting algorithms

1. Bubble Sort
2. Merge Sort
3. Quick Sort
4. Heap Sort
5. Any sorting algorithm you are familiar with

Compare your run times for

1. Lists of 1K, 1M and 10M 32-bit integer random numbers
2. List of 1M sorted items from above

Compare your programs with Python built-in function sorted() and list class method .sort()?

Annotate your Notebook with appropriate comments and markdown cells.

Name your single uncompressed file as “Lab1\_studentid\_name.ipynb” and upload it to iLMS before the deadline.

**Hint:** This code will give you a list of 1000 random integer between 0 and 100000

import random

myList = [random.randint(0, 1000000) for i in range(1000)]