Centre for Advance Studies

Dr. APJ Abdul Kalam Technical University

Analysis and designs of algorithm (Code: MCSC-101)

Date Monday 25th September, 2017

Time: 2 hour **Lab Sheet 1**

1. Implement Selection, Insersion, Quick and Merge sorting algorithm and print the number of comparison used in the algorithm for the givent input elements.
   note : For input (input1.txt) and output (output.txt) use files redirections, where input1.txt contains elements and output.txt should contain the number of elements and number of comparison operation used to sort these elements.

2. Execute the above algorithms with different Number of elements (N) ie.
   For N=10
   N=100
   N=1000
   N=10000
   N=100000
   N=1000000
   N=10000000
   N=100000000
   note : Element can be generated by any random function

3. Plot the number of comparison used to sort with respect to number of elements as input in a line graph **note : you can use MS excel to plot but we encourage to use** *gnuplot* **for plotting the data (This command line too is available in Ubuntu)**

Student's name: End of exam