University of Dhaka

Department of Computer Science and Engineering

CSE 4211: Distributed Systems Lab

**Assignment Code: A6**

**Assignment Title: Election Algorithm (Bully and wireless election algorithm)**

**Date of Assignment: 29/10/2017**

**Last Date of Submission: 5/10/2017**

**Objectives (for Bully algorithm):**

1. Write a Sync. Process that does the following:
   1. When a new process starts, saves it’s process id and address.
   2. Send the list of all active processes to the new process.
   3. Send all the other processes the process id and address of the new process.
2. Write Worker Processes to do the following tasks:
   1. Runs the Bully algorithm when:
      1. A new process arrives (new process starts the algorithm)
      2. In case of the previous coordinator is dead.
   2. Generates a random number (0~1). When value > 0.85 sends a message to check whether the coordinator is dead.
   3. All process should print the address and process id of new coordinator after running the algorithm.

**Objectives (for Wireless election algorithm):**

1. Consider a topology as given below:

W=18

W=12

W=15

P1

P1

P1

W=12

W=22

P1

P1

W=27

P1

1. Run the wireless election algorithm from any of the nodes. Each node should print the coordinator number after the election.
2. Make the weight of each node modifiable.