Spring 2017 CS5320: Distributed Computing

Course Project - Submission Instructions

Deadline: 26th April 2017, 9:00 pm

Project Details:

The details of the project which were already shared earlier are again explained here. You have two options for this project:

Option 1: Implement at least **two related algorithms** – such as algorithms for mutual exclusion/leader election/graph algorithm etc. You can not implement any algorithm which is already covered or will be covered in the class. So, please avoid all the algorithms discussed in the class.
Next, you have to develop an **application** you can use to test the performance of the algorithms implemented. For distributed termination detection algorithm, it can be similar to the application developed for assignment 2. You **have to compare the performance** of the related algorithms implemented.
Note: As mention above, the algorithms that you implement have to be related. For instance, you can not implement one algorithm for termination detection and the other for leader election.

Option 2: Develop/Study a new distributed algorithm that is not covered in the literature Show that the newly developed/studied algorithm is **correct**. Then, you also have to demonstrate how this algorithm **is better than the algorithms covered so far in the literature w.r.t some metric such as throughput, latency etc**. You can demonstrate the efficiency of the newly implemented algorithm either theoretically or through experiments. Note that if you plan to show this theoretically, then you must have a formal proof showing the correctness.

Project Groups: This is a group project with a **maximum of two members** per group. Your group can choose one of the two above mentioned options for implementing the project.

Submission Documents

Submit the following documents on google classroom:

1. Design Document: It must contain all the important details of the project including the psuedocode of the algorithms developed/implemented by you.
2. Report Source Code (mandatory for option 1 and optional for option 2). Name it as **ProjectSrc-<RollNo.>.cpp**.
3. A turnitin report for your project design report. A classroom for this course has been created on turnitin. You can enroll into this classroom with these details:
   Id: 15192986
   Pass: Dist!81Comp
   Once you login and go to this classroom, you will see a CS5320 final project. You can upload your design document there and get the turnitin report. Once you have uploaded, even we will be able to see your turnitin report.

Zip all these documents. Name it as **ProjectDocs-<RollNo>.zip**. Please follow the naming convention strictly. Otherwise, your project will not be evaluated. Submit all these documents by **9:00 pm, 26th April 2017.**

A few notes on the Submissions:
- The report submitted should consist of the various results obtained. For the students implementing option 2, it should show the comparison of the two algorithms implemented.

- The report should also consist of the related work in the chosen area. Specifically, students doing option 1, should demonstrate that the novelty of their work in the report. Students doing option 2, should also discuss about the related work.

- Make sure that the code that you submit is well-documented and indented. Your evaluation has a component for code documentation and indentation.

Project Evaluation

You will be evaluated as follows. As a part of this project evaluation, there will be a viva-voce. Your evaluation is as follows: (1) Project Design Viva-Voce: 70% (2) Project Execution: 30% = 25% for code execution + 5% code documentation and indentation.

Plagiarism Policy

Plagiarism will strictly not be tolerated. In case, the code submitted by a group is found to have been copied from another group, then the members of both the groups will be awarded **FR.** No exceptions will be made.