CS5280: Concurrency Control in Transactional Systems Course Project

Autumn 2019

As a part of this course, you have to do a project. You have two options for this project:

Option 1: Implement at least **two algorithms** – for implementing implementing serializability (i.e. one of its several variants) The important thing is to make sure that you do not implement any algorithm discussed in the class. You can not implement any of the algorithms from the chapters – 1, 2, 3, 4, 5, 6, 7, 11. Next, you have to develop an **application** that you can use to test the performance of the algorithms implemented. You have to compare the performance of the algorithms implemented and derive something new about the algorithms that has not yet been observed.

Option 2: Develop/Study a new algorithm for achieving serializability or one of its several variants. 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.

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

Submission Documents

As you can see, as a part of this project each group would have to submit a report consisting of the various results obtained.

- In addition to the report, groups following of option1 would also have to submit their source code which should be well-documented. Submission of source code is optional for teams that have chosen option 2 in case they decide to do some experimental work.

- The teams that have chosen of option 2 must also explain about related work in the report. They must explain the progress achieved so far in the area of the problem that they have chosen.

Submit your documents on google classroom. Corresponding items will be created on google classroom for submission. Also note that you must finally submit a turnitin report of similarity of the work that you have done.

Project Schedule

The following is the tentative schedule for the project:

- 1st November 2019, 9:00 pm: Information regarding your group and the option that you wish to choose. A corresponding google form will be created and uploaded.

- 10th April 2018, 9:00 pm: Preliminary report of your project. This report should consist of precise

problem that you will be working on.

- 26th November 2019, 9:00 pm: Submission of the final code and report. The turnitin report of your project report must also be submitted.

- 27th to 30th November 2018: Final project evaluations

The corresponding classroom pages will be created for each of the submissions.

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.