CS 410: Text Information Systems  
Group Project Proposal  
Team Green Koalas

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Proposal:

For this group project, Team Green Koalas will be improving the Educational Web System. The Educational Web System is a tool recently developed by some of the students in Professor Zhai’s research group that allows students to view all lecture slides from course CS 410 (Text Information Systems). This tool supports choosing a specific lecture’s worth of lecture slides, sequential navigation through individual slides, searching for relevant slides, navigating to other recommended slides, and finding term and phrase definitions from the textbook.

Specifically, we will develop the ability to allow for bulk downloading of slides. This simple enhancement would provide concrete value to future students, instructors, and other users of this system for years to come.

Understanding that the expectation is for each group member to spend around 20 hours of effort on this assignment, if we are able to complete the bulk download in less than 60 hours (which seems likely), we will then move onto another topic, such as improving performance or expanding the content to include slides and textbooks from other courses. This could potentially expand the user base to students and instructors of other courses as well.

To the best of our knowledge, no other tool of this type exists, at least specific to the lecture data for which we are using it.

In terms of existing resources, we would obviously be modifying the source code for the tool. If we do take on the task of expanding to include other courses, we will require access to the lecture slides and possibly the textbooks for any additional classes. The first step would have to be securing permission from the owner of the lectures and textbooks to use these resources, to ensure we do not violate Intellectual Property rights.

For downloading slides in batches, it should be easy enough to do through stitching individual slides into a single PDF or some other method. For improving performance, we would investigate buffering next slide and previous slide to speed up that portion of the application. If we expand to new courses, then no technology would change, we would merely be making sure the application is scalable enough to handle the new data.

It should be a trivial effort to show the usefulness of bulk downloading or improved performance through a recorded demonstration comparing the current state with the new functionality. If we expand to include other classes, perhaps we could include a student from the other class or another student from our class (if the new course is not currently in session) and record a quick usability study.

We expect to have a general understanding of the existing application by week 10. We will take weeks 11 and 12 to enable bulk download. Weeks 13 and 14 can then be used for one additional enhancement, followed by Week 15, which will be set aside for the recording the demonstration.