**EE461L Project Part A: New Feature Proposal – University of Texas at Austin**

**Team Name:**

**Team Members:**

**UT EIDs:**

**Assembla Repository URL:**

**Team Formation.** For a semester long project, you will form a team of four students. The team size cannot be changed. The instructor may make an exception under extremely necessary circumstances. If your team needs a different size, you must acquire an explicit permission **by the beginning of the third class week.**

**Instruction.** In this report, you will propose a new feature of SAROS. You can fork this version of SAROS from <https://www.assembla.com/code/ee461l-saros/subversion/nodes>. Your extension will build on the top of this version distributed by the teaching staff. Please follow the instruction specified in Tool Tutorial 1B to run and test SAROS. <http://users.ece.utexas.edu/~miryung/teaching/EE461L-Spring2012/labs/saros.html>

If a team implements a feature that already exists or is very similar to an existing feature in any past or future version of SAROS, it will be considered as plagiarism. It is each team's responsibility to demonstrate that the proposed feature is new, does not exist in any version of the project base, and **a unique creation of the team**. The team must produce a working, testable implementation of the proposed feature to receive any score for Part B and C. Thus, when proposing a feature to implement, the team must investigate whether the feature is feasible to implement and whether the team has capability to do so.  The team may receive no credit when the implementation is incomplete or fails to demonstrate the feature in a live demo during the final presentation.

**Motivation:** You must include a description on why the proposed feature is needed by the users.

**User Benefits:** You must include anticipated benefits from a SAROS user’s perspective.

**Feature Description and Requirements:** You must include a description of the feature and its requirements in English. The report must have a clear description of the required user inputs, what could be fully automated by the proposed feature, and the types of outputs seen by the users. You must also include a UML use case diagram to specify your functional requirements. You may also include state chart diagrams to specify behavioral requirements (20% Bonus). You must specify other non-functional requirements such as performance, persistence, etc in English. You must also include mock-up screen snapshots of the proposed feature and describe the associated user interaction scenarios (e.g., similar to how user manuals are written.)

**Feasibility:** You must include a detailed description of how it is feasible to implement the proposed feature by modifying the given, distributed version of SAROS. You must identify specific extension or modification points in the code base by referring to the current, reverse-engineered UML diagram of relevant classes. You do not need to include a reverse-engineered UML class diagram for the entire SAROS project. However, you must include snippets of the class diagrams for relevant classes. You must also describe your preliminary design by including new required classes and their associations (relationships) to existing extension points. In other words, you must submit a UML diagram of the current version for relevant classes, and you must submit a UML diagram for the extended version including relevant and added, new classes. If your team is leveraging existing libraries or technologies to implement the proposed feature, include specific descriptions of those libraries and technologies to be used and how they will be integrated into your extended SAROS.

**Capability:** You must include specific, detailed descriptions of how your team is capable of implementing the proposed feature. Include relevant prior project or class experiences to substantiate and justify your claims about each individual’s capability and his or her estimated role in the team.

In your report, you must specify each member’s contribution for the Part A project assignment.

**Report Format.** 11pt font, Max 5 pages including all figures, screenshots, etc.

**Presentation Format.** PPT or PDF slides. Max 5 pages including a title slide, animations, etc.

**Submission.** Your team must create a project web site on Assembla and include 461L teaching staff as a watcher (with read permission). You must submit a hard copy report in the beginning of the class (12:29 PM) on the specified due date. The submission is per team, and there is no need to submit individual reports per person. Both presentation slides and report must be submitted electronically using a blackboard before 12:29PM on the due date.