Presentation Outline Form

Team # cd-037

Using a word-processing program, fill in this sheet in advance of your presentation. Please do not exceed a single page. At the Final Exam, on April 11, please submit this outline to the CI grading your presentation *before* your presentation begins. This form provides evidence that your team developed a plan should the presentation not go as expected for any reason.

Main Point for Presentation:

Present the challenges faced to design a storage server that shall be used to manage data like contact details, lease agreements, etc., produced in apartment buildings. The first step to managing this data involves properly processing the input from different sources using parsing techniques such as string manipulation using C string libraries. The next major part is to organize this data into structures like hash tables for fast and easy access and modification capabilities. Other features like concurrent client connections, logging of client-server processes and client-serve communication protocol is also tailored to decrease the effort and time required by the client to utilize this data.

Key Support Points:

- To decrease the time required for accessing and modifying data, there needs to be strong structure imposed on it to achieve organization
- Hash tables are fast and easy to use as a data structure to store all kinds of data
- Before data can be stored into the data structure, it must be converted into a form that the database is assumed to understand, hence parsing input data
- Data parsing must be robust to handle invalid inputs so that there is no unpredictable behavior from the server when it tries to access the data structures
- Parsing was done using built-in C libraries as the implementation of advanced parsing tools like Lex and YACC is more tedious than debugging defined code behavior
- Using these features should be intuitive, thus the system implements a user interface that allows a client to insert new data, modify or remove existing data, and query (search) the database for specific records.
- Meticulous testing using a unit test framework for each function
- Milestone 2 performance results prove hash tables are fast for our application, and evaluation after milestone 4 indicate that the performance hit due to concurrent requests is minimized because the performance of each individual request is consistently fast

Take-Away Statement:

The purpose of the storage server is to provide a centralized database for storage of various data. A structured approach to handling massive data enables positive utilization of gathered data, hence increasing the productivity of any management entity. Through better management, we can achieve higher performance or better experience in the case of residential buildings.