Assignment 2 – Deadline 15th Feb

For this assignment, you will write a client server program using RPC (Java RMI, or SUN RPC using C). Note that we are going to build on these programs for the remaining 2 assignments.

The server supports FileWrite and FileRead in chunks of 64KB. The APIs return an error for smaller writes/reads.

On a FileWrite() call, the server first creates a directory with the name of the file at a specified location. This location will be passed as a parameter to the server.

For each chunk, the server creates a file with name chunk<chunkNum> in the above directory and writes the 64KB data in this particular file. Once done, the server completes the call to FileWrite.

On a FileRead() call, the server determines the chunk number. Reads the appropriate chunk file and returns the data to the client.

Attached are the Java and SUN RPC interfaces for this. ReadWriteInterface.java is the java interface, and interface.x is the SUN RPC interface.

Read the below tutorial to learn how to use Java RMI or SUN RPC.

http://yallara.cs.rmit.edu.au/~s3225036/download/RPC-RMI.pdf

Evaluation is done as follows.

1) The client will be invoked with a large file. The client will write the file to server.

2) The client will then read back the entire file chunk by chunk and write it back to another file.

We will do a diff of the two files: input file provided and the file created by client when it reads the file.

Also, we will append all the chunks on the server and do a diff with the original file.

Upload Format

If the roll no. is 201001039, this is how the directory structure looks like after executing on a given input.

201001039_2_Assignment/

├── Server Programs

├── Client Programs

Compress the folder into "201001039_2_Assignment.tgz" and upload on the portal.

Since, many of you have problems with "Makefile", write a script 'run.sh'. Write separate run.sh files for server and client. Client and Server will be tested on different machines, make the script file accordingly.

If you have any other queries, feel free to post them on the courses portal.

The assignment evaluation will be automated. But, 50 randomly selected programs will be manually evaluated.

Also, we will be running MOSS. So, please do not copy.