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**Assignment 3- Report**

**Introduction:**

In this program, a simple distributed computing environment is developed with the client and server using the rpcgen utility. Using remote procedure calling (RPC), a program on one system can call a subroutine on another machine without realizing it is remote. The syntax and structure of RPC are similar to C; hence it makes it easy for us to program in C using struct and Enums to declare the data types. Here, the rpcgen provides C language source code which is compiled by using the C compiler.

**Implementation:**Three programs are implemented to emphasize a bit more on RPC Principles.

Merge: The two char arrays are merged one list after the other. The initialization is done in the client using the merge\_1\_args argument. Whenever the client makes the function call, the server returns a merged char array.

Reverse: A char array/String is reversed. The initialization is done in the client using the merge\_1\_args argument. Whenever the client makes the function call, the server returns the reverse of the initialized string.

Matrix Addition: Two integer two-dimensional arrays are used for this program implementation. Whenever the client makes the function call, the server returns a result which is the addition of two matrices.

**Pros:**

* RPC supports process and thread-oriented models.
* It is easy to rewrite the code.
* Client- server communication is done using the procedure calls.

**Cons:**

* Data types are a bit tricky to declare.
* RPC calls do not support pointers.