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MP2 Report

The programs in MP2 represent the framework for a server and client system. Two methods of performing the server's responsibilities were utilized: in the first test, the program forks off, after which the child send requests to the parent to handle specific server requests. The second method tested the same functionality of the first method, but instead of utilizing separate processes, a simple local function returns what would have be returned by the forked process. To test the efficiency of this process, two requests were tested: "hello" (simple request), and "data" (computation involved in request handling). Each request in each method was made 1,000,000 times and averaged (to find average time per request), which was repeated 10 times, the average of which determined the efficiency of each method.

For the simple request, the server requests took an average of 65.96 microseconds per request. The same test performed in the local function took an average of 3.61 microsecond per request. Similarly, the more complex request took an average of 77.24 microseconds per request, taking only 7.34 microseconds in its local function counterpart. Given the consistency of the results, it can be safely said that the local function call is faster than utilizing the simulated server structure.