University of Massachusetts Dartmouth
CIS 370, Fall 2013
11/19/2013, 11/21/2013
Lab 10 - Socket Programming in UNIX
Due: 11/27/2013 (Tuesday), 11/29/2013 (Thursday)

Objective

In this lab, you are going to understand and experiment with socket programming in UNIX.

Description

Use the instructions included in the attached slides, as well as the provided sample programs to write a client-server program using sockets. The server will provide the following services:

- Sin (int x)
- Cos (int x)
- Tan (int x)
- Log (int x)
- Exp (int x)

The client shall prompt the user for an integer number (x) and send this value to the server. The server will calculate the Sin(x), Cos(x), Tan(x), Log(x), and Exp(x) (all operations found in `math.h`) functions of the integer x. The server shall either return the correct result to the client or something else to indicate an invalid parameter. The user should not have any direct interaction with the server.

The server should run on 127.0.0.1, listening to port 6789. The client can run on any machine. Use the connection-oriented model discussed in the slides. Don't forget to close the sockets before the programs exit!

When compiling server, you need to include "–lm" at the end of the line for math functions.

Ex: `gcc -o lab10Server lastname_server.c -lm`

Deliverables

Submit both your client and server (`lastname_client.c` & `lastname_server.c`) programs online. Please do not zip your deliverables together. Instead, submit them as separate C file attachments through MyCourses.