MIC0003: Computer Networking
Assignment 1: Sockets

Deadline: 07 March, 2011

The goal of the assignment is to familiarize yourselves with network socket programming, specifically Berkeley sockets over the TCP protocol.

1 Assignment

Create a basic, single threaded echo service:

- Create a TCP server socket.

- Bind the socket to a specific port.

- Accept connections, and for each echo everything back.

Implement an echo client to communicate with the server:

- Open a TCP client socket to the echo service.

- Send some text (e.g. user input) to the server.

- Wait for a responce and close the connection.

2 Notes

- Reserved ports (1-1024) require administrative privileges.

- Your own loopback IP address is 127.0.0.1 (or "localhost").

- The network byte order is always big endian.

Google is your friend.

3 Deliverables

The programming language is not fixed (i.e. you can use whatever you like), but a compilation script **must** be provided (makefile for C/C++, ant file for Java, etc).

All the source files must include your full name, user name and group identifier (the lack thereof leading to a failed assignment).

The source files, compilation script and other data files should be uploaded in a single archive to the usual location (http://www.scs.ubbcluj.ro/~labhu/laborok.php).