Socket Library

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| Course | INFO-5062 Patterns in Software |
| Professor | Garth Santor |
| Assigned | Nov. 18th 2010 |
| Due | Dec. 10th 2010 |
| Weight | 20% |
| Student Name 1 | Greg Jacobs |
| Student Name 2 | Garrett Wilson |

# Project Description

## Introduction

Build a socket library and demonstrate its use.

## Requirements

Create a socket library (.hpp/.cpp/.lib) for Win32/64. The library should implement the following features:

* Completely hide and manage the socket handle.
* Fill in as many of function parameters as possible (i.e. If the socket is created with AF\_INET, then the bind, connect, etc. are automatically AF\_INET).
* Automatic cleanup.
* Automatic WSAStartup/Cleanup.

## Note

You can use BOOST threads.

# Grading Criteria/Methodology

|  |  |  |
| --- | --- | --- |
| **Functional Requirements: Library** |  |  |
| Socket Handle completely managed | 15% |  |
| Socket handle completely hidden | 10% |  |
| No unnecessary parameter passing | 10% |  |
| Automatic socket cleanup | 10% |  |
| Automatic WSA startup/cleanup | 10% |  |
| **Functional Requirements: App** |  |  |
| Client. | 10% |  |
| Server. | 10% |  |
| Apps are threaded. | 10% |  |
| User guide (short – explains how to use applications) | 5% |  |
| **Non-functional requirements** |  |  |
| Apps build with .lib (not with socket source code). | 10% |  |
| Memory leak detected | Up to -25% |  |
| Failure to respect submission requirements | -5%/issue |  |
| Other issues | my discretion |  |
| **Total** | **100%** |  |

# Submission

1. Submit entire Visual Studio project directory compressed to a 7-zip (.7z) archive to Fanshawe Online *after* cleaning the solution with VSClean (available at www.gats.ca).

The 7-zip utility can be found at 7-zip.org.