

Deliverable #4: Phase #2 Prototype

Due: Monday, December 8, 23:59

Selected Features

Within the platform provided by the official COMP 3004 virtual machine (**32-bit** version), you will:

- Upgrade your Phase #1 prototype
 - you must restructure your Phase #1 prototype source code to match the design you described for the entire system in Deliverable #3
- Implement the complete working source code, including client GUI and server API, for the following Phase #2 features:
 - all features available to the student user
 - all features available to the content manager user

Client

On the client, you will implement:

- the GUI for all the student user features, connected to the server API developed in Phase #1
- the GUI for all content manager user features, connected to the server API

Server

On the server, you will implement the source code for the API required for all student user and content manager features.

- API:
 - you will design a set of API calls required for all *cuTPS* features available to the student and content manager users
 - the API code will allow the client process to retrieve and update data accessed by the server process
 - every user of the Phase #2 prototype must be running a separate client process, with the *cuTPS* UI
 - a server process must execute on the central host
- Data storage:
 - all data must be stored on the central host
 - the server process must manage all updates and retrievals of the data
 - data may be stored in flat files, or any other mechanism available in the COMP 3004 virtual machine
- Inter-process communications:
 - each client process must execute on a different machine and support a single user
 - the client processes communicate with the central server process using TCP/IP sockets
 - the Phase #2 prototype must be able to support a minimum of four concurrent client processes, each executing on a different host

Grading

Breakdown:

Client:	40%
Communications:	20%
Server:	30%
Demo:	10%

Format

The work submitted for this deliverable will consist of:

- the prototype source code, delivered on CD or DVD
- a revised System Design Document (Deliverable #3) that matches the prototype code
- a prototype demo to take place by appointment on Demo Day, Tuesday, December 9

The content of this deliverable will be discussed in class. The CD or DVD must be submitted on or before Monday, December 8 at 23:59, in the boxes in 3115 HP. The revised System Design Document must be uploaded in [cuLearn](#) before the same date and time.