

COMP280 – Networking	Workshop 5
Client-Server Telephone Book App (Full-Stack) with Game Engine Clients	

Introduction

The goal of this workshop is to move your knowledge of client-server development into game engine clients (Unreal).

Previous workshop tasks

If you haven't been able to complete the tasks from the previous workshop, don't worry, you can concentrate on those first in this workshop. The tasks from the previous workshop map onto the first two criteria of worksheet 1: 'prototype python client / server' and 'SQL testbed', with a client-server-based SQL testbed effectively meeting both sets of criteria.

The sample code from lecture 5 will provide plenty of insight into the operation of SQL and python-based client-server applications, feel free to use those samples as a guide, but don't submit those applications as they stand.

Unreal telephone book

Take the unreal sample code and your telephone client/server application from last week and use the server component to create an unreal telephone book.

To do this, you will need to:

1. Create a UI in Unreal that
 - a. allows users to enter name and telephone number details
 - b. Has a button that will allow new phone numbers to be added to the phone book
 - c. Has a button that will allow all the phone details on the server to be presented into the phone book
 - d. Has a button that will return the phone number for a user
 - e. Has a text box that will display suitable outputs (list of users, confirmation of added user, returned users, error messages etc)
2. Create new functionality in MyHttpRequest.h & .cpp that:
 - a. Provides Blueprint accessible functions for the UI
 - b. Manages the GET and POST functions to the existing Python server
 - c. Provides appropriate USTRUCTs for GET and POST data
 - d. Deals with failure gracefully
3. Stitch everything together in the UI blueprint, so that buttons will call the correct MyHttpRequest methods when they are pressed.

Successfully completing this task will address the third worksheet criteria at 2:2 level.

Unreal game integration

Find or create a small Unreal game (or your previous group project if you have one) and embed our HttpRequest functionality into it.

If you are going to store 'all high scores' then remember to add some functionality so that they can be both entered and seen by users.

To make the server visible to more than just your PC, change its IP address from localhost to its actual ipconfig address (this may cause issues with the IT system – see cybersecurity, we will see what happens in the sessions).